Sterling B2B Integrator

IBM

Installing and upgrading (V5.2.6 or later)

5.2.6 or later

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Contents

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Guidance and instructions are provided for installing or upgrading Sterling B2B Integrator V5.2.6 or later on all supported platforms.

Installing (V5.2.6 or later)

Install the Sterling B2B Integrator V5.2.6 release.

Windows Cluster Environment Installation (V5.2.6 or later)

You will follow different installation and upgrade scenarios when you install and upgrade Sterling B2B Integrator in a Windows Cluster (multiple node) environment, depending on the version you currently have installed.

Installation Scenarios

Review the following installation scenarios and decide which one matches your current installation, and upgrade path.

Scenario	Instructions
Version 5.1.x is installed and it needs to be upgraded to V5.2.6.	See "Upgrading (V5.2.6 or later)" on page 320
Version 5.2.x is installed and it needs to be upgraded to V5.2.6.	See Applying a fix pack (V5.2.6 or later)
Version 5.2.6 is being installed as the base release.	Review this document and use the installation instructions.

Prerequisite Knowledge for Windows Installation

Before you begin the installation, you should be knowledgeable on the following topics:

- Application servers
- Database administration
- System Requirements for this release of Sterling B2B Integrator.

Intended audience:

This document can be used by different members of your organization.

This document is intended for use by:

- System administrators
- Installation engineers
- Database administrators.

Assumptions for this guide:

The procedures in this guide are accurate as of the publication date and are specific to this version of the document.

Before You Begin the Installation in a Windows Environment

Before you begin the installation, you need to:

- Perform some system verification tasks.
- Obtain the correct version of the JDK, JCE, and JDBC drivers required. Most Java files required are provided with the product download or media. See the *System Requirements* for more information.

System Verification Tasks for a Windows Environment: Before you begin an installation, you need to:

#	System Verification Items	Your Notes
1	Use the system requirements to verify that your system hardware and software meet the requirements specified for this release. Verify you have the correct: • Patches required by Java™ for the operation system • Version of the JDK • Absolute path to JDK and patches	
2	Verify the file system has adequate free disk space.	
3	Verify that your database has been installed and configured. If you are going to manually apply DDL statements, you need to complete the data base schema work before you begin the installation.	
4	If you are using a non-English environment, confirm that you are using the appropriate character set.	

Verification of the system requirements:

Before you begin the installation, verify that your system meets the hardware and software requirements that are specified for this release.

The hardware requirements that are listed in the *System Requirements* are the minimum requirements. Your system requirements might exceed these requirements if you are running other applications on the same machine as Sterling B2B Integrator.

The installation strictly enforces the following system requirements:

- Operating system version must match requirement exactly.
- The minimum patch level for the operating system is enforced, but you can apply higher patch levels.
- JDK version must match requirement exactly.
- The disk space is a minimum for the installation. The system must be separately sized to handle whatever load is going to be put on the system.
- Database version must match exactly.
- JDBC driver version supports exact matches and wildcard matches.

If any of these requirements are not met, the installation fails. If the installation fails, review the installation log for a list of non-compliant items.

Upgrading your JDK (Windows and UNIX):

Sometimes you need to upgrade your JDK version to support a new version of Sterling B2B Integrator.

About this task

If you have V5.2.4.1 or higher installed, you can use the **upgradeJDK** script to upgrade your version of the JDK. See *bin Directory Files* for more information.

If you have V5.2.4.0 or lower installed, follow the steps below to upgrade your JDK.

Procedure
1. Download the new JCE file. For example, the `UnrestrictedPolicy.zip` policy file for the IBM JDK.
2. Back up the existing JDK in `<Install Dir>`/jdk. Change the folder name to `jdk_back`)
3. Copy the new IBM JDK (1.7.0) folder to the installation Directory. Directory Name should be `jdk`)
4. Copy all the jars present in `<Install Dir >`jdk_back\jre\lib\ext to `<install Dir>`jdk\jre\lib\ext directory.
5. If your installation of V5.2.4 or lower was built using the Oracle (SUN) JDK, continue to the next step. Otherwise skip to step 6.
   a. Edit the `sandbox.cfg` property file.
   b. Set JCE_DIST_FILE=`<New Path of Supported JCE File>`. For example, `JCE_DIST_FILE=D\:\\IBM\\unrestrictedpolicyfiles.zip`.
   c. Back up the `local_policy.jar` and `US_export_policy.jar` files present in `<Install Dir>`jdk\jre\lib\security.
   d. Unzip the new JCE file. For example, `Unrestrictedpolicyfiles.zip` file. Copy `local_policy.jar` and `US_export_policy.jar` to `<Install Dir>`jdk\jre\lib\security.
6. Run `updateJavaSecurity.cmd` `<path_to_new_jdk><Install Dir>`/jdk.
7. Verify that security providers have been updated in `<Install Dir>`\jdk\jre\lib\security\java.security.
8. Follow the Upgrade Guide instructions for your upgrade scenario.

Configure the Database
You must install, create, and configure a database so that each Sterling B2B Integrator instance has a dedicated schema and login for the database.

In a clustered environment, Sterling B2B Integrator can support the following databases:
- DB2®
- Oracle®
- Microsoft SQL Server

See System Requirements for supported version information.

Required database information before you install Sterling B2B Integrator in a cluster environment:

Before you begin to install Sterling B2B Integrator, you need to install and configure your database.

Review and gather the following information. An *x* indicates that the information is required.

Information to Gather	Oracle	DB2	Microsoft SQL Server	Record Information Here
Application Instance Host				
Application Instance Port				
Database User Name	x	x	x	
Database Password	x	x	x	
Database Catalog Name	x	x	x	
Database Host	x	x	x	
Database Port	x	x	x	
JDBC Driver #1	x	x	x	
Use BLOB data?	x		x	
Enable Multibyte Support?	x	x	x	

Database sizing and capacity planning:

Database sizing is designed to give you estimates of the database growth and to help you plan the disk requirements.

There are many factors to consider when you are estimating the amount of disk space that is required for Sterling B2B Integrator. As a result, trying to consider all growth factors is impractical because the user might not know the answers to many questions that are required to do a detailed forecast. Over the years the cost of disks has dramatically decreased, and the capacity and speed of disks has increased. The method of how information system managers order disk capacity also has changed, from purchasing disk arrays that are dedicated to a particular database server and project, to the concept of SANS (storage area networks).

Consider the confidence that you have in your data estimates when you are making the final purchase decision and adjust accordingly. After the initial purchase and production deployment, disk growth should be tracked for future purchase forecasts.

You should track your actual database storage usage and the number of database records regularly. Correlating these two metrics enabled you to plan your future disk requirements. Moreover, determining the average amount of space used for each order line or shipment line, enables you to accurately predict your future growth requirements.

Database Definition Language (DDL) Statements: When you install Sterling B2B Integrator, you can manually apply Database Definition Language (DDL) statements to your database tables instead of requiring the installation process to do it directly.

This feature increases database security by reducing the database permissions of the Sterling B2B Integrator database user. The rights to database objects can be reserved for a secure user like a customer database administrator (DBA). A business can require that only a DBA with the proper permissions can make database changes.

Configuring the DB2 Database:

Before you install Sterling B2B Integrator with the DB2 database, you must configure the database.

Before you begin:
* If you do not have DB2 installed, follow the procedures in the DB2 installation manual.
* The installation script creates tables and indexes. Certain tables require a page size of 32 KB. You must have a temporary table space to accommodate such tables. DB2 automatically places tables and indexes in the available table spaces. You can move the tables to a different table space after the installation is complete.
* If you are reinstalling the software, be aware that data in your existing database is deleted. To preserve the data, either back up the existing database or save it under a different name.
* After you create and configure your database, recycle the database. Then, stop and restart the database to apply the changes.

Use the following checklist to configure DB2 for Sterling B2B Integrator:

Item	DB2 Database Configuration Checklist	Your Notes
1	Create the database. Refer to the DB2 documentation on creating the database, including creating a schema repository, login, and table space. **Important:** In V5.2.6.2 or later you must ensure that all tablespaces used by Sterling B2B Integrator tables have a minimum page size of 8K. Otherwise installation will fail. Be sure to install the correct version and patches. See the System Requirements for supported version information.	
3	Review the DB2 parameters.	
4	Ensure that the DB2 user privileges are set.	
5	Install the JDBC drivers for DB2.	

DB2 database user privileges:

The DBADM role is required to perform administrative operations in DB2 database.

DB2 parameters:

When you install Sterling B2B Integrator with the DB2 database, you must set certain DB2 parameters. Other DB2 parameter settings are recommended for the efficient performance of Sterling B2B Integrator.

When you install Sterling B2B Integrator with DB2, you must set the DB2 parameters that are listed in the following topics:

- "Mandatory settings for IBM DB2 registry variables"
- "Mandatory settings for DB CFG parameters"

After you install Sterling B2B Integrator with DB2, you can improve the DB2 database performance by setting the recommended parameters that are listed in the performance documentation for the following items:

- DB2 registry variables
- DBM CFG parameters
- DB CFG parameters
- DB2 for Linux on System z®
- DB2 for LUW configuration and monitoring

Mandatory settings for IBM DB2 registry variables:

Mandatory IBM® DB2 registry values are critical for IBM DB2 performance with Sterling B2B Integrator.

Variable	Mandatory value
DB2_SKIPDELETED	ON Allows index-range queries or table-scan queries to skip records that are in an uncommitted delete state. This reduces the amount of lock contention from Read Share and Next Key Share locks from range queries in tables with a high frequency of deletes. When enabled, DB2_SKIPDELETED allows, where possible, table or index access scans to defer or avoid row locking until a data record is known to satisfy predicate evaluation. This allows predicate evaluation to occur on uncommitted data. This variable is applicable only to statements using either Cursor Stability or Read Stability isolation levels. For index scans, the index must be a type-2 index. Deleted rows are skipped unconditionally on table scan access while deleted keys are not skipped for type-2 index scans unless DB2_SKIPDELETED is also set. Recommended value: ON
DB2_SKIPINSERTED	ON Allows SELECTs with Cursor Stability or Read Stability isolation levels to skip uncommitted inserted rows. This reduces record lock contention on tables with heavy insert rates.

Mandatory settings for DB CFG parameters:

For optimal performance, certain parameters and values are mandatory for DB2.

Parameter	Mandatory value
Database Code Set	UTF-8

Installing JDBC drivers for DB2:

When you install Sterling B2B Integrator with the DB2 database, you must install a JDBC driver for the database.

About this task

For DB2, install the appropriate DB2 JDBC Type 4 driver and any correlating patches. For the supported version information, see *System Requirements*.

You can obtain these files from the IBM website. After you obtain this JDBC driver, record the absolute path to its location on your system. You must supply this absolute path during installation.

If the JDBC driver provided by your database vendor is distributed among multiple files, you must place all the files that comprise the JDBC driver into one JAR file. Follow these steps to create one JAR file:

Procedure

To install a JDBC driver for the DB2 database:
1. Identify all the vendor database JAR files for the JDBC driver.
2. Record the absolute path to the JAR file you created on the Preinstallation Checklist.

   The Type 4 driver does not require a separate Java™ listener to be running on the database server. Instead, connect directly to the DB2 port.

Upgrading DB2 to version 10.1 or 10.5:

To upgrade from DB2 9.5 or 9.7 to 10.1 or 10.5, you must make configuration changes.

Procedure

To upgrade from DB2 9.5 or 9.7 to 10.1 or 10.5:
1. Copy your DB2 9.5 or 9.7 database content to DB2 10.1 or 10.5.

   Attention: Back up all files before you change any settings.
2. Back up the database driver in the */install_dir*/dbjar/jdbc/DB2/ directory and replace it with the DB2 10.1 or 10.5 version.
3. Update the following sandbox.cfg file fields with your environment-specific parameters:

   ```
   DB_PASS=
   DB_SCHEMA_OWNER=
   DB_DRIVERS_VERSION=
   YANTRA_DB_PORT=
   DB_DATA=
   DB_HOST=
   YANTRA_DB_USER=
   DB_PORT=
   YANTRA_DB_PASS=
   YANTRA_DB_DATA=
   YANTRA_DB_HOST=
   DB_DRIVERS=
   DB_USER=

   DB2_PORT=
   ```

```
DB2_USER=
DB2_PASS=
DB2_DATA=
DB2_HOST=
```

4. Edit the following value in the `activemq.xml` file:

   `activemq.xml: <value>jdbc:db2//DB_HOST:DB_PORT/DB_DATA</value>`

5. Run the `setupfiles` script.

6. Run the `deployer` script.

7. Start Sterling B2B Integrator.

Configuring the Oracle Database:

Before you install Sterling B2B Integrator with the Oracle database, you must configure the database.

Before you begin

- If you are reinstalling the software, be aware that data in your existing database is deleted. To prevent this deletion, either back up the existing database or save it under a different name.

- After you create and configure your database, recycle the database. Then, stop and restart to apply the changes.

About this task

Use the following checklist to configure Oracle for Sterling B2B Integrator:

Item	Oracle Database Configuration Checklist	Your Notes
1	Create the database. Refer to the Oracle documentation on creating the database, including creating a schema repository, login, and table space. Be sure to install the correct version and patches. See the *System Requirements* for the supported version information.	
2	Configure an Oracle Instance.	
3	Configure Oracle Rollback.	
4	Install the Oracle JDBC Driver.	
5	Enable Failover in a Multiple Node Oracle RAC Database Cluster.	
6	After Sterling B2B Integrator is installed, if you want to encrypt the data traffic, perform one of the following tasks: • Configure Sterling B2B Integrator for Data Traffic Encryption • Configure Sterling B2B Integrator for Data Traffic Encryption with SSL	

Configuring an Oracle instance:

An Oracle database requires certain parameter settings and other configurations.

Before you begin
- You must have the Oracle database installed. Ensure that you have installed the correct versions and patches. See *System Requirements* for supported version information.
- Ensure that the user responsible for creating and modifying the Oracle database has a specified quota (extent) assigned in the table space, even if the user was assigned an unlimited table space. Otherwise, the installer might display the error `ORA-09150: no privileges on tablespace name`.

Procedure
1. Run the create instance procedure. Use `AL32UTF8` as the character set.
2. Configure the `INIT<INSTANCE_NAME>.ORA` file with the recommended and mandatory settings in the Performance Management guide. See the Oracle init parameter configuration checklist for specific settings.

   Note: After you complete the installation of Sterling B2B Integrator with Oracle, you can improve the performance of the database with the settings listed in the Performance Management guide.
3. Identify or create a table space for user tables and indexes.
4. Create a user. Unless stated for a task, the user does not require database administrator (DBA) privileges.
5. Grant permissions to the user. The following permissions are required for the administrative user for creating and modifying the Oracle database:
   - `GRANT "CONNECT" TO SI_USER`
   - `ALTER USER SI_USER DEFAULT ROLE "CONNECT"`
   - `GRANT CREATE SEQUENCE TO SI_USER`
   - `GRANT CREATE TABLE TO SI_USER`
   - `GRANT CREATE TRIGGER TO SI_USER`
   - `GRANT SELECT ON CTXSYS.CTX_USER_INDEXES TO SI_USER`
   - `GRANT SELECT ON SYS.DBA_DATA_FILES TO SI_USER`
   - `GRANT SELECT ON SYS.DBA_FREE_SPACE TO SI_USER`
   - `GRANT SELECT ON SYS.DBA_USERS TO SI_USER`
   - `GRANT SELECT ON SYS.V_$PARAMETER TO SI_USER`
   - `GRANT SELECT ANY DICTIONARY TO SI_USER`
   - `GRANT ALTER SESSION TO SI_USER`
   - `GRANT CREATE SESSION TO SI_USER`
6. If you are using Oracle AQ, grant the AQ_ADMINISTRATOR_ROLE permission.
7. If you plan to use EBICS Client, grant the `GRANT CREATE VIEW TO SI_USER` permission.

Configuring Oracle rollback:

The configuration of rollback in an Oracle database helps you manage database transactions.

About this task

You can roll back changes in Oracle by using AUTO UNDO management. IBM recommends that you use this option. This practice avoids any manual monitoring of UNDO segments.

Installation of the Oracle JDBC driver:

Sterling B2B Integrator requires the appropriate JDBC driver for the Oracle database.

The JDBC drivers are thin client-based pure Java JDBC drivers. See *System Requirements* for supported version information. The supported versions of the JDBC driver build the correct Sterling B2B Integrator directory structure.

Enabling failover in a multiple node Oracle RAC database cluster:

You can enable failover in a multiple node Oracle RAC database cluster in UNIX/Linux by using traditional RAC or RAC with SCAN.

Procedure

To enable failover in a multiple node Oracle RAC database cluster:

1. Open the */install_dir*/install/properties directory to modify the sandbox.cfg file.
2. In the sandbox.cfg file, add a **ORACLE_JDBC_URL** property, which contains the Oracle RAC connection URL.

   Choose one of the following depending on whether you are using traditional RAC or RAC with SCAN. The property value must be one string of text that starts with ORACLE_JDBC_URL=. Your database administrator (DBA) can modify this URL as needed:

   - To configure traditional RAC, use this format:
     ```
     jdbc:oracle:thin:@
     (DESCRIPTION=
      (ADDRESS_LIST=
       (FAILOVER=ON)
       (LOAD_BALANCE=OFF)
       (ADDRESS=(PROTOCOL=TCP)(HOST=myhost1)(PORT=1521))
       (ADDRESS=(PROTOCOL=TCP)(HOST=myhost2)(PORT=1521))
      )
       (CONNECT_DATA = (SERVER = DEDICATED)(SERVICE_NAME=myservicename OR mySID))
      )
     ```

     Note: This method uses the default Oracle RAC service that is provided by Oracle.
   - To configure RAC with SCAN, use this format:
     ```
     jdbc:oracle:thin:@host:port/service
     ```
     For example:
     ```
     jdbc:oracle:thin:@RAC-SCAN:1521/ORCL
     ```
     Where:
     – RAC-SCAN is resolved to an IP address by DNS
     – 1521 = Port number
     – ORCL = the name of your Oracle RAC service

Important: To use RAC with SCAN, you must also define a new Oracle RAC service (you cannot use the default service) that defines one node as the preferred node and at least one node as a failover node.

3. Open the */install_dir*/install/bin directory.
4. Enter the command ./setupfiles.sh.

Data traffic encryption in the Oracle database:

You can encrypt transactions between Sterling B2B Integrator and the Oracle database. Encryption prevents anyone who is outside the system from viewing the data that flows between Sterling B2B Integrator and the database.

The following list describes important aspects of enabling database encryption:
- At installation, encryption is turned off by default. If you want your database transactions to be encrypted, you must enable encryption.
- The encryption can be enabled at any time.
- Encryption applies to all database transactions between Sterling B2B Integrator and the database.

System performance might be impacted when encryption is enabled. The extent of this impact depends on your hardware, database configuration, transaction volume, and the relative amount of processing time that is spent by the system against other activities.

For more information on data traffic configuration, see SSL With Oracle JDBC Thin Driver.

Before you encrypt data traffic for the Oracle database:

The decision to encrypt data traffic for the Oracle database includes several considerations.

Consider the following items when you configure database traffic encryption:
- Sterling B2B Integrator must be installed in TCP (clear) mode before you can configure encryption.
- Perform these changes to your database before you install Sterling B2B Integrator.
- Configure wallets for encryption-only mode even if the wallet that is used is empty. Enable auto login for all wallets.
- If you want to use SSL for encryption only, it is recommended to follow the instructions in the "CASE #1: USE SSL FOR ENCRYPTION ONLY" section of the Oracle documentation. It is not necessary to configure certificates for the wallet. In this mode, Diffie-Hellman ciphers are used. The server and the client are not authenticated through SSL. You must authenticate by using a user name and a password. However, if you are running Sterling B2B Integrator on an operating system that requires an IBM JDK, you cannot use this mode, as IBM JSSE TrustManager does not permit anonymous ciphers. You must configure wallets with certificates.
- If you want to use SSL for encryption and for server authentication, it is recommended to follow the instructions in the "CASE #2: USE SSL FOR ENCRYPTION AND SERVER AUTHENTICATION" section of the Oracle documentation.

- If you want to use SSL for encryption and for server authentication of both tiers, it is recommended to follow the instructions in the Oracle "CASE #3: USE SSL FOR ENCRYPTION AND AUTHENTICATION OF BOTH TIERS" section of the Oracle documentation, depending on how you intend to configure client or server authentication.
- After you configure your database for data traffic encryption, the database accepts both TCP (clear) and TCPS (encrypted) connections.
- There is a known issue in the Oracle 11g database when the listener is configured only for TCPS. The `lsnrctl` utility that is used to start and stop database listeners attempts to contact the listener, which is enabled first. You should define the address list of the listener to contact either TCP or IPC before it contacts TCPS.

Configuring Sterling B2B Integrator for data traffic encryption in Oracle:

You can enable data traffic encryption-only, with anonymous authentication, and not SSL authentication.

About this task

If you want to use SSL for encryption only, it is recommended to follow the instructions in the "CASE #1: USE SSL FOR ENCRYPTION ONLY" section of the Oracle documentation. It is not necessary to configure certificates for the wallet. In this mode, Diffie-Hellman ciphers are used, and the server and the client are not authenticated through SSL. You must authenticate by using a user name and a password.

However, if you are running Sterling B2B Integrator on a system that requires an IBM JDK, you cannot use this mode, as IBM JSSE TrustManager does not permit anonymous ciphers. You must configure wallets with certificates.

This procedure is applicable only if you are running Sterling B2B Integrator on a system that requires Sun JDK. The IBM JSSE TrustManager does not permit anonymous ciphers.

If your Sterling B2B Integrator is a cluster installation, you need to perform this procedure on each node, starting with node 1.

Procedure

To configure Sterling B2B Integrator for data traffic encryption in Oracle:
1. Install Sterling B2B Integrator in TCP (clear) mode.
2. Stop Sterling B2B Integrator.
3. Open the */install_dir*/install/properties directory.
4. Open the customer_overrides.properties file and add the following database connection information:

   ```
   jdbcService.oraclePool.prop_oracle.net.ssl_cipher_suites=
   (SSL_DH_anon_WITH_3DES_EDE_CBC_SHA, SSL_DH_anon_WITH_DES_CBC_SHA)
   jdbcService.oraclePool.prop_oracle.net.ssl_server_dn_match=false
   ```

   If you have a configured container, ensure that the same database information is added to the customer_overrides.properties.in file. To locate the file, navigate to the */install_dir*/install/properties/node*x*AC*y* directory, where *x* gives the node number and *y* gives the container number. Perform this step for all the containers configured in the system.

5. Repeat Step 4 for the following Oracle connection pools by changing only the pool name:
   - `oraclePool_local`
   - `oraclePool_NoTrans`
   - `oracleArchivePool`
   - `oracleUIPool`

   If you have any other database pools, you need to add the properties for those pools.

6. Open the `sandbox.cfg` file and change the database connection information as shown:

   ```
   ORACLE_JDBC_URL= jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS=(PROTOCOL=tcps)
   (HOST=<DB host>)(PORT=<TCPS port as configured in DB config section above>))
   (CONNECT_DATA=(SERVICE_NAME=<service name>)))
   ```

   Make sure that you enter values for the **HOST**, **PORT**, and **SERVICE_NAME** parameters.

7. Open the `activemqconfig.xml.in` file and modify the following database connection information:

   - Remove or comment out the following default ActiveMQ database configuration information:

     ```
     <bean id="gis-ds" class="org.apache.commons.dbcp.BasicDataSource"
       destroy-method="close" singleton="true" lazy-init="default"
       autowire="default" dependency-check="default"
       SCIOverrideName="persistence-bean">
     <property name="driverClassName">
     <value>oracle.jdbc.driver.OracleDriver</value>
     </property>
     <property name="url">
     #:ifdef ORACLE_JDBC_URL
     <value>&ORACLE_JDBC_URL;</value>
     #:else
     <value>jdbc:oracle:thin:@@ORA_HOST;:&ORA_PORT;:&ORA_DATA;</value>
     #:endif
     </property>
      <property name="username">
     <value>&ORA_USER;</value>
     </property>
     <property name="password">
     <value>&ORA_PASS;</value>
     </property>
     <property name="maxActive">
     <value>32</value>
     </property>
     </bean>
     ```

   - Add the following ActiveMQ database configuration information:

     ```
     <bean id="gis-ds"
     class="oracle.jdbc.pool.OracleDataSource" destroy-method="close"
     singleton="true" lazy-init="default"
     autowire="default"
     dependency-check="default">
     <property name="URL"><value>&ORACLE_JDBC_URL;</value></property>
     <property name="user"><value>&ORA_USER;</value></property>
     <property name="password"><value>&ORA_PASS;</value></property>
     <property name="connectionProperties">
       <value> oracle.net.ssl_cipher_suites:
         (SSL_DH_anon_WITH_3DES_EDE_CBC_SHA, SSL_DH_anon_WITH_DES_CBC_SHA)
         oracle.net.ssl_client_authentication: false
         oracle.net.ssl_version: 3.0
         driverClassName:oracle.jdbc.driver.OracleDriver
     ```

```
        maxActive: 32
      </value>
    </property>
  </bean>
```

8. Open the */install_dir*/install/bin directory.

9. Enter the command ./setupfiles.sh.

10. Restart Sterling B2B Integrator. All the database connections from Sterling B2B
    Integrator are now connected through TCPS (encrypted) mode.

*Configuring Sterling B2B Integrator for data traffic encryption with SSL authentication in
Oracle:*

You can enable data traffic encryption and SSL authentication.

About this task

This procedure is applicable if you are running Sterling B2B Integrator on a system
that requires either Sun JDK or IBM JDK.

The example in this procedure uses two-way SSL authentication. It is
recommended to follow the instructions in the "CASE #2: USE SSL FOR
ENCRYPTION AND SERVER AUTHENTICATION" section of the Oracle
documentation.

You can also configure one-way SSL authentication. If you want to use SSL for
encryption and for server authentication of both tiers, it is recommended to follow
the instructions in the "CASE #3: USE SSL FOR ENCRYPTION AND
AUTHENTICATION OF BOTH TIERS" section of the Oracle documentation.

If your installation of Sterling B2B Integrator is a cluster installation, you need to
perform this procedure on each node, starting with node 1.

Procedure

To configure Sterling B2B Integrator for data traffic encryption with SSL
authentication in Oracle:

1. Install Sterling B2B Integrator in TCP (clear) mode.

2. Stop Sterling B2B Integrator.

3. Open the */install_dir*/install/properties directory.

4. Open the customer_overrides.properties file and add the following database
   connection information:

   ```
   jdbcService.oraclePool.prop_javax.net.ssl.trustStore=/.../path/.../ClientKeyStore.jks
   jdbcService.oraclePool.prop_javax.net.ssl.trustStoreType=JKS
   jdbcService.oraclePool.prop_javax.net.ssl.trustStorePassword=password
   jdbcService.oraclePool.prop_oracle.net.ssl_version=3.0
   jdbcService.oraclePool.prop_javax.net.ssl.keyStore=/.../path/.../ClientKeyStore.jks
   jdbcService.oraclePool.prop_javax.net.ssl.keyStoreType=JKS
   jdbcService.oraclePool.prop_javax.net.ssl.keyStorePassword=password
   ```

5. Repeat step 4 for the following Oracle connection pools by changing only the
   pool name:

   * **oraclePool_local**
   * **oraclePool_NoTrans**
   * **oracleArchivePool**
   * **oracleUIPool**

If you have any other database pools, you need to add the properties for those pools.

6. Open the `sandbox.cfg` file and change the database connection information to the following value:

```
ORACLE_JDBC_URL= jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS=(PROTOCOL=tcps)
(HOST=<DB host>)(PORT=<TCPS port as configured in DB config section above>))
(CONNECT_DATA=(SERVICE_NAME=<service name>)))
```

7. Open the */install_dir*/install/activemq/conf directory.

8. Open the `activemqconfig.xml.in` file and modify the database connection information:

   - Remove or comment out the following default ActiveMQ database configuration information:

   ```
   #:ifdef ORACLE
   <bean id="gis-ds" class="org.apache.commons.dbcp.BasicDataSource"
       destroy-method="close" singleton="true" lazy-init="default"
       autowire="default" dependency-check="default"
     SCIOverrideName="persistence-bean">
   <property name="driverClassName">
   <value>oracle.jdbc.driver.OracleDriver</value>
   </property>
   <property name="url">
   #:ifdef ORACLE_JDBC_URL
   <value>&ORACLE_JDBC_URL;</value>
   #:else
   <value>jdbc:oracle:thin:@&ORA_HOST;:&ORA_PORT;:&ORA_DATA;</value>
   #:endif
   </property>
   <property name="username">
   <value>&ORA_USER;</value>
   </property>
   <property name="password"><value>&ORA_PASS;</value>
   </property>
   <property name="maxActive"><value>32</value>
   </property>
   </bean>
   #:endif
   ```

   - Add the following ActiveMQ database configuration information:

   ```
   <bean id="gis-ds"
   class="oracle.jdbc.pool.OracleDataSource" destroy-method="close"
   singleton="true" lazy-init="default" autowire="default"
   dependency-check="default">
   <property name="URL"><value>&ORACLE_JDBC_URL;</value></property>
   <property name="user"><value>&ORA_USER;</value></property>
   <property name="password"><value>&ORA_PASS;</value></property>
   <property name="connectionProperties"><value>
   javax.net.ssl.trustStore: /.../path/.../ClientKeyStore.jks
   javax.net.ssl.trustStoreType:JKS
   javax.net.ssl.trustStorePassword:password
   oracle.net.ssl_version:3.0
   javax.net.ssl.keyStore: /.../path/.../ClientKeyStore.jks
   javax.net.ssl.keyStoreType:JKS
   javax.net.ssl.keyStorePassword: password
   driverClassName:oracle.jdbc.driver.OracleDriver
   maxActive:32
   </value>
   </property>
   </bean>
   ```

9. Enter the command `./setupfiles.sh`.

10. Restart Sterling B2B Integrator. All the database connections from Sterling B2B Integrator are now connected through TCPS (encrypted) mode.

Configuring the Microsoft SQL Server Database:

Before you install Sterling B2B Integrator with the Microsoft SQL Server database, you must configure the database.

Before you begin
- If you are reinstalling the software, be aware that data in your existing database is deleted. To preserve your data, either back up the existing database or save it under a different name.
- After you create and configure your database, recycle the database. Then, stop and restart to apply the changes.

About this task

Use the following checklist to configure Microsoft SQL Server for Sterling B2B Integrator:

Item	Microsoft SQL Server Database Configuration Checklist	Your Notes
1	If you do not have Microsoft SQL Server installed, follow the installation procedures in the SQL Server installation manual. Refer to the Microsoft SQL Server documentation on creating the database, including creating a schema repository, login, and table space. Be sure to install the correct version and patches. See *System Requirements* for supported version information.	
3	"Microsoft SQL Server database parameters"	
4	"Microsoft SQL Server database user privileges"	
5	"Configuring the snapshot feature for Microsoft SQL Server" on page 18	

Microsoft SQL Server database user privileges:

In Microsoft SQL Server, you must grant DBO (Database Owner) permission to the user. The DB_DDLADMIN role is required for creating objects in the SQL Server database.

Microsoft SQL Server database parameters:

When you install Sterling B2B Integrator with the Microsoft SQL Server database, you must set certain Microsoft SQL Server parameters. Other Microsoft SQL Server parameter settings are recommended for the efficient performance of Sterling B2B Integrator.

When you install Sterling B2B Integrator with Microsoft SQL Server, you must set the Microsoft SQL Server parameters that are listed in "Mandatory settings for Microsoft SQL Server."

After you install Sterling B2B Integrator with Microsoft SQL Server, you can improve the database performance by setting the recommended parameters that are listed in the performance documentation for the following items:
* Instance-specific settings for Microsoft SQL Server
* Database-specific settings for Microsoft SQL Server

Mandatory settings for Microsoft SQL Server:

The default collation of Microsoft SQL Server must match the collation for the Sterling B2B Integrator database to prevent collation conversions.

The *tempdb* database that is used by Microsoft SQL Server must be created with the same collation as the default collation of Microsoft SQL Server. The Microsoft SQL Server uses the tempdb database for results that are too large to fit in memory.

If the collations of the tempdb database and the Sterling B2B Integrator database differ, the database engine must convert from the Sterling B2B Integrator collation to the tempdb collation, and then back again before it sends the results to the Sterling B2B Integrator server. These conversions might lead to severe performance issues.

The collation that is required for the Sterling B2B Integrator database is a collation that most closely matches the character set used by Java. By using this collation, you can avoid character data conversions before the data is stored in the database tables. Use the mandatory parameter that is described in the following table when you configure the collation setting:

Parameter	Value
Database Collation	SQL_Latin1_General_CP850_Bin

Additionally, you must perform these tasks:
* Allow Microsoft SQL Server to manage memory dynamically (default).
* Disable any antivirus software that is running on the Microsoft SQL Server data, transaction log, and binary files directory.

Installing the JDBC driver in Microsoft SQL Server:

The use of a SQL Server database with Sterling B2B Integrator requires the installation of a JDBC driver.

About this task

Sterling B2B Integrator requires the correct Microsoft SQL Server driver. See the *System Requirements* for the supported version information.

Download the driver and any appropriate patches from the Microsoft website.

Procedure

To install the JDBC driver in Microsoft SQL Server:
1. Download the `sqljdbc_version_language`.tar.gz file to a temporary directory.
2. To unpack the compressed TAR file, open the directory where you want the driver unpacked and type the following command:

   `gzip -d sqljdbc_version_language.tar.gz`
3. To unpack the TAR file, open the directory where you want the driver installed and type the following command:

   `tar –xf sqljdbc_version_language.tar`

   After the package unpacks, you can find out more information about using this driver by opening the JDBC Help System in the `/absolutePath/` `sqljdbc_version/language`/help/default.htm file. This file displays the help system in your web browser.
4. When the Sterling B2B Integrator installation asks for the location of the JDBC drivers, specify the extracted JAR file created after you unpack the archive, which is usually named `sqljdbc.jar`. The JDBC driver version is the same as the version of the drivers that are downloaded from Microsoft.

Configuring the snapshot feature for Microsoft SQL Server:

The snapshot feature in Microsoft SQL Server allows you to view a read-only copy of the database even when it is locked. Configuring the snapshot feature can also reduce deadlocks. To enable the snap shot feature, enter the following command:
`ALTER DATABASE db_name SET READ_COMMITTED_SNAPSHOT ON;`

Managing Database Passwords:

A password is used by the system to connect to its database. The password is stored as clear text in a system property file.

If the security policies at your company require you to encrypt these passwords, you can do so after you install the system. Encrypting these passwords is optional.

Database passwords encryption methods:

Database passwords are encrypted with one of two methods: `OBSCURED` or `ENCRYPTED`.

The encryption method is decided by the value of the **`encryptionPrefix`** property in the `propertyEncryption.properties` or the `propertyEncryption.properties_platform_security_ext` file.

Encrypting database passwords:

Use commands to encrypt database passwords.

Procedure

To encrypt the database password:
1. Stop Sterling B2B Integrator.
2. Open the `/install_dir`/install/bin directory.
3. Enter the command `./enccfgs.sh`.
4. Enter the command `./setupfiles.sh`.

5. Enter the command `./deployer.sh`.
6. Enter the command `./run.sh` to start Sterling B2B Integrator.
7. Enter your passphrase.

Decrypting database passwords:

Use properties files and commands to decrypt database passwords.

Procedure

To decrypt the database password:
1. Stop Sterling B2B Integrator.
2. Open the */install_dir*/install/properties directory.
3. Open the `sandbox.cfg` file.
4. Copy the encrypted password from the **database_PASS** property.

   Use the text that appears after the `database_PASS=`*text*. For example, if `database_PASS= OBSCURED:123ABCxyz321`, you would copy the text `OBSCURED:123ABCxyz321`. (OBSCURED is the encryption method for the password.)
5. Open the */install_dir*/install/bin directory.
6. Enter the command `./decrypt_string.sh` *encrypted_password*.

   For *encrypted_password*, use the text that you copied in Step 4. You are prompted for the system passphrase. After you enter the passphrase, your decrypted password appears.
7. Open the */install_dir*/install/properties directory.
8. Edit the `sandbox.cfg` file to replace the encrypted password with the password that was returned in Step 6.
9. You need to decrypt the entries for the **YANTRA_DB_PASS** and **DB_PASS** properties. Repeat Steps 4 - 8 to decrypt these entries. You must also decrypt any passwords present in the property files. Encrypted passwords typically exist in the following property files:
   * `sandbox.cfg`
   * `apservsetup`
   * `jdbc.properties`
   * `jdbc.properties.in`
   * `customer_overrides.properties`
   * `customer_overrides.properties.in`
10. Open the */install_dir*/install/bin directory.
11. Enter the command `./setupfiles.sh`.
12. Enter the command `./deployer.sh`.
13. Enter the command `./run.sh` to start Sterling B2B Integrator.
14. Enter your passphrase.

Preparing for Installation
To help ensure a trouble-free installation, you should complete the installation checklist and understand some concepts.

Installation Checklist for a Windows Cluster Environment: The installation checklist contains the items you need to gather and tasks you need to complete prior to installing the Sterling B2B Integrator. The checklist contains:
* Brief descriptions for tasks (detailed procedures are provided after the checklist)

- Information you need to gather to complete the installation

You may want to make a copy of the following checklist and use it to record the information you collect for each node in the cluster.

The cluster environment does not support the following items:
- MySQL database
- AS2 Edition

#	Installation Checklist for a Windows Cluster	Node 1	Node 2	Your Notes
1	Review your IBM contract to determine what software you have licensed. You need to know this *License Information* so that you can select the correct components and features to install.			
2	Determine which installation method you are going to use: • IBM Installation Manager (Graphical User Interface) • IBM Installation Manager (Response File)			
3	Decide which type of security certificates you will use: • The default self-signed SSL (Secure Sockets Layer) certificate that is automatically installed. • A Certificate Authority-related certificate that you install before installing the software.			
4	If you are using an Oracle, Microsoft SQL Server, or DB2 database, decide if you are going to manually or automatically apply Database Definition Language (DDL) Statements (schema) to the database.			
5	If you are using an Oracle 11.1 database, you must set it up for native compilation by allocating space and by setting the **plsql_native_library_dir** parameter.			
6	Determine if the database password needs to be encrypted.			
7	Record the Hostname on which you plan to install the software.			

#	Installation Checklist for a Windows Cluster	Node 1	Node 2	Your Notes
8	Record the Directory Name where you plan to install the software.			
9	Record the Login to host machine.			
10	Record the Password to the host machine.			
11	Record the path to JDK.			
12	Record the path to JCE file.			
13	Record the Host IP address.			
14	Record the Initial Port Number.			
15	Record the System passphrase.			
16	Record the Database vendor name.			
17	Record the Database user name.			
18	Record the Database password.			
19	Record the Database (catalog) name.			
20	Record the Database host name.			
21	Record the Path and file name for the JDBC Driver(s).			
22	Ensure you have read and write privileges on the parent installation directory.			

License information:

A separate license is required for each Sterling B2B Integrator feature that you purchased. During installation, you must choose the license files according to what you purchased. Product licenses do not require an activation key.

IBM assumes customers will only install and use the products they purchased. IBM reserves the right to inspect installs for compliance at any time.

After the installation finishes, if you determine that you need to modify licenses files, see "License modifications" on page 58.

Product Licenses for Sterling B2B Integrator

Sterling B2B Integrator Standard and Enterprise Edition includes:
* MESA Studio
* eInvoicing
* Report Services

- all services and adapters not listed below

Sterling B2B Integrator Standard and Enterprise Financial Edition includes everything listed above plus:
- CHIPS
- SWIFTNet
- NACHA ACH CTX adapter
- FEDWIRE
- Fin Serv XML standard
- FIPS Mode
- Image Cash Letter service
- EBICS

Multicast ports in node to node communications:

Cluster nodes are configured to communicate with each other using JGroups, an open source toolkit that provides flexibility for protocol configuration.

JGroups provides rich open management features, along with multiple protocol support. JGroups supports multicast (UDP) and TCP-based communication protocols.

When JGroups is configured to use multicast (UDP), all cluster nodes communicate with each other on a specific IP address and port. The configuration of multicast ports is based on the installation base port. All clusters that are on the same subnet that is configured on the same base port send multicasting messages on the same multicast IP address and port.

To avoid this situation, each cluster on the same subnet needs to be configured on different base ports. Install your clusters on different port ranges or on different network segments with multicast forwarding restricted, so that they do not interfere with each other. The default multicast address is 239.255.166.17. This address is configurable, with a port range of 10 ports, starting with the multicast base port for the instance.

All nodes that are participating in the same cluster must be installed on the same multicast base port (the **multicastBasePort** property in the `noapp.properties_platform_ifcresources_ext.in` file). This value is usually computed from the system base (non-multicast) port, but can be configured separately in the `noapp.properties_platform_ifcresources_ext.in` file, to allow different nodes in a cluster to be installed at different (non-multicast) port ranges. Also, all the nodes in the cluster must be installed in the same subnet.

For node to node communications, the properties are defined in the `jgroups_cluster.properties` file. The following attributes are used to define communications:
- **property_string** - default value is UDP.
- **distribution_property_string** - default value is TCP. This attribute must never be set to UDP.

If you want to change the communication for cluster multicast from the UDP protocol to TCP, you need to change the value of the **property_string** property in the `jgroups_cluster.properties.in` file (after you back up the file). Then, run the **setupfiles** command. You can change this value right after the installation or after

you start running the cluster. If you change the file after you start the cluster, you need to stop all nodes of the cluster, change the value on each node, and then restart your cluster.

To change the communication for cluster multicast from the UDP protocol to TCP, use the following value for the **property_string** property in the jgroups_cluster.properties.in file:

```
property_string=TCP(start_port=any_available_port_number):
TCPPING (initial_hosts=this_instance_host_ip[start_port_number],
theothernode_instance_host_ip[theothernode_start_port_number];port_range=2;
timeout=5000;num_initial_members=3;up_thread=true;down_thread=true):
VERIFY_SUSPECT(timeout=1500):pbcast.NAKACK(down_thread=true;up_thread=true;
gc_lag=100;retransmit_timeout=3000):pbcast.GMS(join_timeout=5000;
join_retry_timeout=2000;shun=false;print_local_addr=true;
down_thread=true;up_thread=true)
```

For more information about UDP, TCP, and JGroups communications, see the *Sterling B2B Integrator Clustering* documentation.

Port Numbers in a Windows Environment: During installation or an upgrade, you are prompted to specify the initial port number for Sterling B2B Integrator.

To specify an initial port number, follow these guidelines:
* Sterling B2B Integrator requires a range of 200 consecutive open ports between 1025 and 65535. The port range starts with the initial port number and ends with the number that equals the initial port number plus 200. For example, if you specify 10100, then you need to make sure that 10100 through 10199 are not used by any other applications on your system.

  Note: Because of RMI, on occasion, a port number outside the range may be assigned.
* The initial port number represents the beginning port number in the range.
* Make sure that port numbers in the port range are not used by any other applications on your system.

During the upgrade, about 50 default ports are pre-assigned for different services. For example, if you do not want xxx32 (10132) to be a default port, you could assign that port to xxx97 or another number within the port range.

After your installation or upgrade, refer to the *install_dir*\install\properties\ sandbox.cfg file for all of the port assignments.

Security certificates:

You can choose between different security certificates before you install Sterling B2B Integrator.

Before you begin the installation, you must decide which of the following security certificates to use:
* The default self-signed SSL (Secure Sockets Layer) certificate that is automatically generated by the installation.
* A Certificate Authority-related certificate that you generate before you install the software.

If you install with the default SSL certificate, but you later want to switch to a CA-related certificate, you can change the certificate with the **sslCert** property in the noapp.properties_platform_ifcresources_ext.in file.

Installing the Software

After you have configured the database and prepared your system, you are ready to install Sterling B2B Integrator.

General Installation Information for a Windows Cluster Environment:

CAUTION:
Sterling B2B Integrator should be installed behind a company firewall for security purposes. See the Perimeter Server and Security topics in the Sterling B2B Integrator documentation library for more information on secure deployment options.

The cluster environment does not support the following items:
- MySQL database
- AS2 Edition

Installation Scenarios

It is important to review the following installation scenarios:

Scenario	Instructions
Version 5.1.x is installed and it needs to be upgraded to V5.2.6.	See "Upgrading (V5.2.6 or later)" on page 320
Version 5.2.x is installed and it needs to be upgraded to V5.2.6.	See Applying a fix pack (V5.2.6 or later)
Version 5.2.6 is being installed as the base release.	Review this document and use the installation instructions.

Installation Methods

Use one of the following methods to install your system:
- IBM Installation Manager (Graphical User Interface)
- IBM Installation Manager (Response file)

General Installation Guidelines

General installation guidelines include the following:
- Do not create the installation directory manually before the start of the installation. If you create the installation directory before you begin, the installation will fail.
  The server on which you are installing must have adequate free disk space.
- The installation directory must have adequate free disk space.
- The name of the directory cannot include spaces and must be less than 30 characters long excluding separators. Using a directory name of more than 30 characters could create an install that is impossible to delete. An example of an installation directory is C:\SI_52\install_dir\install.
- All nodes must use the same database.
- All nodes must use the same passphrase.

- All nodes must use the same operating system.
- When installing nodes on different machines, the initial port numbers must be the same. Installing nodes are different machines helps you take advantage of cluster features such as, reliability, availability, scalability, and failover.
- When installing nodes on the same machine, you must install node 2 and higher in different directories. Each initial port must be at least 200 higher or lower than the initial port for the other nodes.
- If you need to install more than one instance of Sterling B2B Integrator on the same Windows server, you must install the second instance in a different directory.
- If you are installing Sterling B2B Integrator on VMware, provide the IP address of the virtual machine, not the IP address of the VMware host. For example, if 10.251.124.160 is the IP address of the VMware host and 10.251.124.156 is the IP address of the Windows 2003 server it is hosting, you should use 10.251.124.156 as the correct IP address to install Sterling B2B Integrator.
- Sterling B2B Integrator does not support IPv6 installation on Windows. Before applying an IPv6 address, see the *IPv6 Capabilities* section in the *System Requirements*.
- The installation creates subsequent ports based on the initial port number. For all of the port assignments, see the *install_dir*\install\properties\sandbox.cfg file.

General IBM Installation Manager information:

IBM Installation Manager V1.8.2 is required to install Sterling B2B Integrator on all supported platforms.

Installation Manager is a Java based multiplatform installation application and provides a consistent approach across various platforms. It does not rely on platform-specific installation technology or mechanism.

Installation Manager uses the local Sterling B2B Integrator offering repositories to install or update Sterling B2B Integrator and its add-on features. It determines the packages that must be installed and displays them including the products, fix packs, and interim fixes. It checks that all prerequisites and interdependencies are met before installing the selected product package and feature sets.

Important: The **Uninstall** option only unregisters Sterling B2B Integrator from Installation Manager. The uninstall procedure as described in the related sections must be performed to completely uninstall Sterling B2B Integrator.

Installation Manager must be installed on each computer on which Sterling B2B Integrator is being installed. If you already have Installation Manager installed on your computer for use with other IBM applications, it can be used with installing Sterling B2B Integrator as long as it's the correct version. If you do not have Installation Manager installed, it is provided as part of the Sterling B2B Integrator installation media.

Supported bit-versions

A 64-bit version of IBM Installation Manager V 1.8.2 is provided with the Sterling B2B Integrator installation package. However, you can also install with a 32-bit version of Installation Manager.

Before you start the installation, consider the following options:

- If you are a new customer, use the version of Installation Manager that is provided with the Sterling B2B Integrator installation package and install Sterling B2B Integrator.
- If you have an earlier version of Installation Manager, you can update it to V1.8.2 using the Installation Manager that is provided with the installation package, then install Sterling B2B Integrator .
- If you are a current customer who did not use Installation Manager earlier, install the version of Installation Manager that is provided with the installation package, then upgrade your Sterling B2B Integrator installation.
- If you have a 32-bit Installation Manager installed, you must download the 32-bit Installation Manager V1.8.2 from Fix Central or IBM Passport Advantage, upgrade it, then proceed with the installation of Sterling B2B Integrator. Ensure you have the required libraries that support screen presentation of the text.

Checking for updates

To check for Installation Manager updates, select **Search for Installation Manager updates** on the **File > Preferences > Updates** page. When the check box is selected, Installation Manager searches for updates when any one of the following pages are opened from the Installation Manager start page:
- Install Packages
- Modify Packages
- Update Packages

Installation Manager also searches for updates when you click the Check for Other Versions, Fixes, and Extensions button on the Install Packages page.

Starting Installation Manager

You should start the Installation Manager (and also install Sterling B2B Integrator) as a non-administrator user.

How you start Installation Manager depends on whether you are using the Installation Manager agent that is provided with Sterling B2B Integrator or if you have an Installation Manager instance that is installed on your system. It also depends on whether you have 32-bit or 64-bit Installation Manager.

Open a command prompt and do one of the following tasks to start the Installation Manager in GUI mode:
- Go to the `IM_<operating_system>` directory and type **`./userinst`** or **`userinst.exe`** (Windows) for the following scenario:
  - If you do not have Installation Manager installed and are using the Installation Manager agent that is provided with the Sterling B2B Integrator media.
  - If you have a 64-bit Installation Manager installed.
  - If you have Installation Manager installed on a platform that has only one download available for Installation Manager. For example, AIX, Solaris, HP, zLinux.
- Go to `<installation directory>/Installation Manager/eclipse` (for Windows system, replace / with \) and type **`./IBMIM`** or **`IBMIM.exe`** if you have 32-bit Installation Manager installed on a Linux or Windows system.

For information on starting Installation Manager in command mode for silent installation, see the Installing or updating with a response file.

For information on starting Installation Manager in command mode to record a response file, see Recording a response file.

Additional heap memory parameters

The heap memory parameters specify the amount of memory Installation Manager can use during the installation process. The heap memory pool sizes that are used by Installation Manager are hardcoded defaults. If these defaults are not sufficient for your environment, you can specify different values by adding parameters to the Installation Manager`config.ini` file.

Important: These additional parameters are required only if you are experiencing `Out Of Memory` errors during the installation process.

The following parameters can be added:
- memoryMin=user.sb.INSTALL_*<OS>*_INIT_HEAP.*<amount_of_memory>*
- memoryMax=user.sb.INSTALL_*<OS>*_MAX_HEAP.*<amount_of_memory>*

Where *<OS>* is your operating system and *<amount_of_memory>* is the specified amount of memory.

Operating System	Parameter	Example Entry
Sun-Solaris	Initial Heap Size **INSTALL_SUN_INIT_HEAP**	memoryMin=user.sb.INSTALL_SUN_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_SUN_MAX_HEAP**	memoryMax=user.sb.INSTALL_SUN_MAX_HEAP.3072m
Linux	Initial Heap Size **INSTALL_LINUX_INIT_HEAP**	memoryMin=user.sb.INSTALL_LINUX_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_LINUX_MAX_HEAP**	memoryMax=user.sb.INSTALL_LINUX_MAX_HEAP.3072m
AIX®	Initial Heap Size **INSTALL_AIX_INIT_HEAP**	memoryMin=user.sb.INSTALL_AIX_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_AIX_MAX_HEAP**	memoryMax=user.sb.INSTALL_AIX_MAX_HEAP.3072m
HP-UX	Initial Heap Size **INSTALL_HPUX_INIT_HEAP**	memoryMin=user.sb.INSTALL_HPUX_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_HPUX_MAX_HEAP**	memoryMax=user.sb.INSTALL_HPUX_MAX_HEAP.3072m
Windows	Initial Heap Size **INSTALL_WIN_INIT_HEAP**	memoryMin=user.sb.INSTALL_WIN_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_WIN_MAX_HEAP**	memoryMax=user.sb.INSTALL_WIN_MAX_HEAP.3072m

Installing or updating with a response file (V5.2.6 or later):

You can install or update (apply fix pack or interim fix) Sterling B2B Integrator with silent mode by using the sample response files or converting your existing response file to the required format.

Installing in a Windows cluster environment with the IBM Installation Manager in GUI mode:

You can install Sterling B2B Integrator in a Windows cluster environment with the IBM Installation Manager in a graphical user interface (GUI) mode.

Before you begin
- Complete the "Installation Checklist for a Windows Cluster Environment" on page 19.
- If you are use the Standards Processing Engine (SPE) application with Sterling B2B Integrator, you must install SPE before you install Sterling B2B Integrator.
- If you are using the EBICS Banking Server application with Sterling B2B Integrator, the data encryption for storage within the installation location is not supported.

About this task

To install Sterling B2B Integrator in a Windows cluster environment with the Installation Manager in GUI mode:

Important: Following is a list of changes related to installing or upgrading to Sterling B2B Integrator V5.2.6:
- You can install and upgrade through the user interface or silent installation mode (response files). Console mode installation and upgrade is not supported.
- Sterling B2B Integrator JAR file is included in the repository. Therefore it is not required to manually select the JAR file when installing or upgrading.
- You must use Installation Manager V1.8.2. to install or upgrade Sterling B2B Integrator. `InstallService` is disabled, and cannot be used. You can use `InstallService` only for a specific scenario related to Sterling File Gateway. For more information, see step 13.

Procedure
1. Close all open Windows programs and any command prompt windows.
2. From the installation media, copy the compressed installation package to a location on your desktop.
3. Decompress the installation package.
4. Open the `InstallationManager` folder in the directory structure that is created when the installation package is decompressed. Several `IM_OperatingSystem.zip` files are displayed.
5. Decompress the `IM_Win.zip` file. This action creates a new `IM_Win` folder.

   Important: Installation Manager V1.8.2 is required to install Sterling B2B Integrator V5.2.6.

6. Decompress the `Common_Repo.zip` from the installation package. The action creates two new folders `b2birepo` and `gmrepo`. The `IM_Win`, `b2birepo`, and `gmrepo` folders must be at the same level in a directory.

   Important: `gmrepo` contains the repository file required to install Global Mailbox. For information about Global Mailbox, see Global Mailbox overview.

7. Do one of the following tasks to start the Installation Manager:

   a. Go to the `IM_Win` directory and double-click **userinst.exe** for the following scenarios:
      - If you do not have the Installation Manager installed and are using the Installation Manager agent provided with V5.2.6.
      - If you have a 64-bit Installation Manager installed.

   b. Go to `<installation directory>\Installation Manager\eclipse` and double-click **IBMIM.exe**, if you have 32-bit Installation Manager installed on your Windows system.

   Important: It is suggested to record a response file. The response file can be used to install Sterling B2B Integrator after applying database schema manually or install second and subsequent nodes in a cluster. For more information, see Installing or updating with a response file.

8. On the Installation Manager home page, click **Install**.

   Important: If `IM_<operating_system>` and `b2birepo` directories are not in the same directory or if you already have Installation Manager installed, then you get a message saying that there no packages to install or Installation Manager could not connect to the repositories. You must add the Sterling B2B Integrator repository files to the Installation Manager repository. For more information about adding repository files, see Repository preferences.

9. On the Install Packages screen, select **IBM Sterling B2B Integrator**. This action selects the versions also. Click **Next**.

10. Review the license agreement and select the option **I accept the terms in the license agreement**.

    If you do not accept the agreement, the installation process does not continue.

11. Select the location for the shared resources directory and click **Next**. This directory is used by the Installation Manager for the Sterling B2B Integrator installation and other installations.

    The shared resources directory cannot be a subdirectory of the directory for the installation of Sterling B2B Integrator. The shared resources directory must be empty.

12. Choose **Create a new package group** and specify the path to Sterling B2B Integrator installation directory.

13. Select the required features to be installed. The available options are:
    - **IBM Sterling B2B Integrator**
    - **IBM Sterling File Gateway**

      Important: For Sterling B2B Integrator V5.2.6 or later, Sterling File Gateway is automatically installed if **IBM Sterling File Gateway** is selected. Any additional post installation tasks are not required to start Sterling File Gateway. It is strongly suggested to install Sterling File Gateway when installing Sterling B2B Integrator. If for any reason Sterling File Gateway is not installed with Sterling B2B Integrator, you cannot install Sterling File Gateway later using the Installation Manager. You must use `InstallService`

to install it. For information about installing Sterling File Gateway by using `InstallService`, see Installing Sterling File Gateway (V2.2.6 or later).

- **FIPS Module**
- **AS2 Edition Module**
- **Financial Services Module**
- **EBICS Banking Server Module**
- **B2B Advanced Communications Integration Module**

Important: When installing Sterling B2B Integrator, select **B2B Advanced Communications Integration Module** to install Sterling B2B Integrator bridge. Sterling B2B Integrator bridge is required for communication between Sterling B2B Integrator and B2B Advanced Communications. If you are installing Global Mailbox and Sterling B2B Integrator, then **B2B Advanced Communications Integration Module** (Sterling B2B Integrator bridge) is installed by default, because Global Mailbox uses the storage module of B2B Advanced Communications. However, you must configure the adapter containers and adapters for Sterling B2B Integrator bridge after installing.

Important: Sterling B2B Integrator is selected by default. Select only the licenses and features that were defined by your IBM contract. If you are unsure which to select, the installation can proceed without a selection and complete successfully. Startup and operation of the software however, requires one of the licenses to be selected. See "License modifications" on page 58 to apply licenses after the installation.

14. Type the path to your JDK directory and click **Next**.
15. Specify the configuration for the features to install and click **Next**.
    - **FIPS Compliance Mode (Must enable FIPS Module)**
    - **NIST 800-131a Compliance Mode**
        - **off** (default value)
        - **strict**
    - **SPE Integration Module (Requires pre-install of SPE, WTX optional)**
      If you select the SPE option, you are prompted for the following information:
        - SPE installation directory
        - (Optional) WebSphere® Transformation Extender (WTX) installation directory
        - SPE UI port
      For more information, see the documentation for the integration of Sterling B2B Integrator and SPE.
16. Type the path to the JCE policy file and click **Next**.
17. Enter the following server location information and click **Next**:
    a. Type the explicit IP address or host name for the server or use the default value of `localhost`.
    b. Type the initial port number or use the default value of 8080.

       Important: For node 2 and higher, you must use a different unique port number.
18. Enter the system passphrase information and click **Next**:
    a. Type a passphrase.
    b. Confirm the passphrase.

19. Type the email information and click **Next**:

   a. Type the email address to which you want system alert messages sent.

   b. Type the SMTP mail server (IP address or host name) that you want to use for system alert messages and other administrative notices.

20. Enter the following database information and click **Next**.

   a. Select the database vendor that you want to use:

   - Oracle

   - Microsoft SQL Server

   - DB2

   - MySQL

   Important: You cannot use a MySQL database in a cluster installation.

   b. Select all of the following options that apply to this installation:

Choices:	Action
(Not for MySQL) **This installation is for a cluster node 2 or higher**	If you are installing node 2 or higher in the cluster setup, select the check box and specify the node number. **Important:** In a cluster setup, run the **startCluster** command after installing the first node (node 1) from the \install_dir\install\bin directory, on the host where you installed the node. The syntax is startCluster.sh *nodeNumber true*. Replace *nodeNumber* with *1*. After you run the **startCluster** command for the first node, the subsequent nodes will have clustering automatically started by the installer when they are installed.
(Not for MySQL) **Apply database schema automatically?**	The default is to automatically apply the DDL (Data Definition Language) statements that apply the database schema. If you want to manually create the database schema, then clear the **Apply database schema automatically** check box and continue with the remaining installation steps. **Important:** If you manually apply the schema, the installation stops without error later in the installation process so that you can manually apply the schema.

21. Type the following database connection information. Do not click **Next** until you configure the JDBC driver in the next steps.

   - User name

   - Password (and confirmation)

   - Catalog name

   - Host

   - Port

22. Select a JDBC driver or drivers and click **Next**:

   a. Click **Add** to browse to the file location for the appropriate JDBC driver or drivers:

- (Oracle and Microsoft SQL Server only) Absolute path and file name for one JDBC driver file.
- (DB2 only) Absolute paths and file names for two JDBC driver files. Use the Type-4 JDBC driver. This type of driver converts JDBC calls into the network protocol that is used directly by DB2, allowing a direct call from the system to the DB2 server.

b. Click **Test** to confirm that the driver is supported for the database and Sterling B2B Integrator.

Tip: Make sure that you select the driver path in the **Database driver** field before you click **Test**.

The Installation Manager must successfully validate the connection to the database before you can continue with the installation. If there is a validation failure, you can view the system log to determine more information about the failure. Perform the following tasks:

1) Identify the location of the user's application directory. Click **Start** > **Run** and enter the command %APPDATA%.
2) Open the user's application directory: *local_path*\IBM\Installation Manager\logs
3) Open the index.xml file in a browser.
4) Identify the log file that is based on the time stamp of when you started the installation.
5) Click the installation file to view a listing of errors that occurred during that installation.

23. Determine which of the following options apply to this installation. Select the applicable options and click **Next**:

- **Verbose install?**
- **This installation is an upgrade from a prior version**

Do not select this option because this installation is a new installation.

Important: For node 2 and higher, this option might be selected by default. This default selection causes the display of the option **Would you like to run upgrade pre-check?**. Clear the check box before you continue.

24. Determine what performance configurations apply to this installation and click **Next**. Accept the default value or type the appropriate value.

- **Number of Processor Cores**
- **Physical Memory (MB) allocated to Sterling B2B Integrator**

25. Review the installation package summary information. Click **Install** to apply your installation settings to the installation.

If you did not select the option to automatically apply the database schema, the installation stops and you must perform these additional steps to complete the installation with manual DDL statements:

a. Open the installation directory.
b. Locate the InstallSI.log file and open it with a file editor.
c. Search the file for these error messages:
- <*SI_Install*>/repository/scripts/EFrame_IndexAdds.sql must be applied to the database.
- <*SI_Install*>//repository/scripts/EFrame_Sequence.sql must be applied to the database.

- *<SI_Install>*//repository/scripts/EFrame_TableChanges.sql must be applied to the database. Exiting installation..."

  Important: If you do not find these error messages in the log file, the installation failed because of another reason and you must resolve that error and attempt the installation again. If you find these messages, continue with the remaining steps.

  d. Edit each `.sql` script for the database. These changes might include changing the SQL delimiter or adding table space options.

  e. Log in to the database as the database schema user.

  f. Run the following SQL files manually in this order:

  Important: When you are running the scripts, you must run the SQL scripts in the specified order.
  - `EFrame_IndexDrops.sql`
  - `EFrame_TableChanges.sql`
  - `EFrame_IndexAdds.sql`
  - `EFrame_TextIndexAdds.sql`
  - `EFrame_Sequence.sql`
  - `EFrame_TextIndexModify.sql`
  - `EFrame_TextIndexUpdates.sql`
  - `EFrame_TextIndexUpgrade.sql`
  - `EFrame_Static.sql`

  Important: ActiveMQ uses dynamically generated table names that are based on the name of the installation node. Table generation is not included in these SQL scripts, but is performed automatically during the initial start of Sterling B2B Integrator or when a new cluster node is added. Table generation might fail if security restrictions reduced the Sterling B2B Integrator database user permissions. To avoid this issue, ensure that the DBADM role permissions are enabled during the initial startup. If further issues arise, contact IBM customer support for guidance.

  g. Exit from the database.

  h. Open the parent directory of the Sterling B2B Integrator installation directory.

  i. Unisntall the Sterling B2B Integrator offering to clear out the Installation Manager metadata about the installation, and the delete (or rename as a backup) the Sterling B2B Integrator installation directory.

  j. Restart the installation wizard and provide the same installation options that you provided before you cleared the **Apply database schema automatically** check box. If you have recorded a response file (as suggested in step 8), you can use the response file to install Sterling B2B Integrator.

  The Installation Progress screen indicates which component of the installation is in process.

  A status bar below the **Repository Information** heading displays the progress of the component installation. When the installation completes, a large green circle with a check mark displays with the message `The packages are installed`. A link is provided to view the installation log file.

26. Click **Finish**. The Installation Manager closes and you are returned to your desktop.

Check the `InstallSI.log` file to verify that all of the components were installed properly.

If you are installing on Windows 2008, see "Configure the Sterling B2B Integrator Desktop Icon for Windows Server 2008."

27. To install each additional node, open the Installation Manager folder and start a new installation. See step 8.

For node 2 and higher, follow the same steps as you did for node 1 until you get to the step with the **This installation is for a cluster node 2 or higher** check box. Select that box.

28. If you installed multiple nodes on the same server or used different base ports for node 2 onward, you need to complete the following steps:

Step	Action	Your Notes
1	Open the *install_dir*\install\properties directory for node 1.	
2	In the noapp.properies_platform_ifcresources_ext file, record the value for **multicastBasePort**.	
3	In thejgroup_cluster.properties file, record the values for the **mcast_port** parameters of the **property_string** and **lock.protocolStack** properties.	
4	For each subsequent node, perform the remaining steps.	
5	Open the *install_dir*\install\properties directory for each node (node 2 and higher).	
6	In thenoapp.properies_platform_ifcresources_ext.in file, update the value of the **multicastBasePort** property to match the value for node 1. For example, replace the string &MULTICAST_NODE_PORT1; with the port number 45460: • (before) multicastBasePort=&MULTICAST_NODE_PORT1; • (after) multicastBasePort=45460	
7	In the jgroups_cluster.properties.in file, update all occurrences of **mcast_port** to match the values for node 1.	
8	After you updated the attributes for all of the nodes, enter the command *install_dir*\install\bin\setupfiles.cmd for node 2 and higher.	

29. Determine whether you need to apply a fix pack or interim fix to the installation. For information about fix pack or interim fix installation, see "Applying a Fix Pack (V5.2.6 or later)" on page 625 and "Applying an interim fix (V5.2.6 or later)" on page 635.

Configure the Sterling B2B Integrator Desktop Icon for Windows Server 2008: About this task

User Access Control (UAC) is a security component in Windows Server 2008. If you enable the UAC, it affects the installation process and the daily processing for Sterling B2B Integrator. If you disable the UAC, which requires a reboot, the installation process and daily processing for Sterling B2B Integrator remains the same as in previously supported Windows version.

If you installed or upgraded Sterling B2B Integrator on a Windows Server 2008 and you created a desktop icon for Sterling B2B Integrator, you must complete this task in order for the desktop icon to work.

Procedure

1. Right-click on the Sterling B2B Integrator **desktop icon**.
2. Click **Properties**.
3. In the Shortcut tab, click **Advanced**.
4. Select the check box for **Run as Administrator**.
5. Click **OK** to apply the changes to Advanced Properties.
6. Click **OK**.

Validating the Installation

After installing Sterling B2B Integrator, you should validate the installation to ensure that everything is working according to your needs.

Validation of the installation checklist in a cluster environment:

As part of the installation, you need to run several tests to ensure that the software installation was successful.

#	Validate Installation Task	Completed
1	Configure the Nodes in the Cluster.	
2	Verify the Cluster Environment Settings in Property Files.	
3	Start the Cluster.	
4	Access Sterling B2B Integrator.	
5	Validate the Installation (Sample Business Process).	
6	Verify the Cluster is Running from the User Interface.	
7	Stop a Node (Hard Stop or Soft Stop) or Stop the Cluster.	

Verifying the cluster environment settings in the properties files:

Procedure

To verify the cluster environment is correct, check these properties file settings on node 2:

1. Verify that the value CLUSTER=true is in the sandbox.cfg property file.
2. Verify that the value CLUSTER=true is in the centralops.properties property file.
3. Verify that the value CLUSTER=true is in the noapp.properties property file.
4. Verify that the value cluster_env property=true is in the ui.properties property file.

Configure the Nodes in Windows Cluster:

The first time that you configure a cluster, you need to use the **startCluster** command with true option (startCluster.sh *nodeNumber* true).

About this task

The first time you configure a cluster, you need to use the **startCluster** command with true option (startCluster.sh *nodeNumber* true). Initial configuration should be the only time you need to use the **startCluster** command. However. if you need to use the command again, use the **startCluster** command with the false option (startCluster.sh *nodeNumber* false). The false option prevents any configuration changes from affecting the system, especially after installation of a fix pack or interim fix.

Important: For Sterling B2B Integrator V5.2.6 or later, you must run the **startCluster** command after installing the first node (node 1) on the host where you have installed the node. After you run the **startCluster** command for the first node, the subsequent nodes will have clustering automatically started by the installer when they are installed.

To configure the nodes in a Windows cluster environment, you need to perform the following task for each node, starting with node 1:

Procedure
1. Navigate to *install_dir*\install\bin for the node.
2. Enter startCluster.cmd <nodeNumber> <true or false>. Where <nodeNumber> is the number of the node, true performs database updates and false prevents database updates. For example for node 1, enter startCluster.cmd 1 true.
3. Enter startWindowsService.cmd. Perform this step for each node. The final startup processes run, concluding with the following message: Open your Web browser to http://*host:port*/dashboard where *host:port* is the IP address and port number on your system.
4. Record the URL address so that you can access Sterling B2B Integrator.

Starting Sterling B2B Integrator in a Windows cluster environment:

After you run the upgrade software, you can start Sterling B2B Integrator.

Before you begin

If you are starting Sterling B2B Integrator after you upgrade the application from version 5.1.0.4, change the values of the following properties in the centralops.properties file to 600. This action prevents the **StartWindowsService.cmd** command from timing out before Sterling B2B Integrator starts. The centralops.properties file is in the *install_dir*\install\properties directory.
- **OpsServer.commandTimeout**
- **PassPhrase.urlTimeout**

About this task

Perform this task for each node in the cluster, starting with node 1.

Procedure
1. Open the *install_dir*\install\bin directory.
2. Enter startWindowsService.cmd.
3. Enter your passphrase.

4. The final startup processes run, concluding with the following message: `Open your Web browser to http://`*`host:port`*`/dashboard`

   Where *`host:port`* is the IP address and port number where Sterling B2B Integrator is located on your system.

   Depending on system load, it might take several minutes for the UI to be ready.

5. Record the URL address so that you can access Sterling B2B Integrator.

What to do next

If you need to release all the locks in a cluster and both nodes are down, use the `restart` parameter for node 1.

Note: The `restart` parameter can be used on only node 1. It cannot be used on any other nodes.

For example:

For node 1, enter:

`startWindowsService.cmd restart`

For node 2 and higher, enter:

`startWindowsService.cmd`

Accessing Sterling B2B Integrator:

You can access Sterling B2B Integrator through a web browser.

Procedure

1. Open a browser window and enter the address that is displayed at the end of the start.
2. On the login page, enter the default user ID and password. The default login is at an administrative level. One of your first tasks as an administrator is to change the administrative password and to register other users with other levels of permission.

Validating the installation with a sample business process:

You can validate the installation by testing a sample business process.

Procedure

1. From the **Administration Menu**, click **Business Process** > **Manager**.
2. In the **Process Name** field, type `Validation_Sample_BPML` and click **Go!**
3. Click **execution manager**.
4. Click **execute**.
5. Click **Go!** The `Status: Success` message is displayed on the upper left side of the page.

Verifying from the user interface that the cluster is running:

You can use the user interface to verify that the cluster is running, including queue information and adapter status.

Procedure

1. From the **Administration Menu**, click **Operations** > **System** > **Troubleshooter**. Ensure you can view the Queue information for each node.
2. From the **Administration Menu**, click **Operations** > **System** > **Troubleshooter**. Ensure you can view the JNDI Tree for each node.
3. From the **Administration Menu**, click **Operations** > **System** > **Troubleshooter**. Ensure you can view the host, state, status, adapters, and memory usage information for each node.
4. From the **Administration Menu**, click **Operations** > **System** > **Troubleshooter**. Ensure you can view the adapter status for each node.

Stop a Node in the Windows Cluster Configuration (Hard Stop):
About this task

You can stop a single node Sterling B2B Integrator in a Windows cluster environment. To run a hardstop, perform this task for each node:

Procedure

1. Navigate to *install_dir*\install\bin.
2. Enter StopWindowsService.cmd.
3. Enter your passphrase. You can also perform this task by selecting **Operations > System > Troubleshooter**. Then click the **shutdown** link for the node you want to stop.

Stop Sterling B2B Integrator (Windows Cluster):
About this task

To stop the entire cluster in a Windows environment:

Procedure

1. From the Administration Menu, select **Operations > System > Troubleshooter**.
2. Click **Stop the System** and wait for shutdown to complete.

Stop Sterling B2B Integrator (Hardstop Windows):
About this task

To stop Sterling B2B Integrator in a Windows environment:

Procedure

1. Navigate to *install_dir*\install\bin.
2. Enter StopWindowsService.cmd. Your should receive a message that services have been stopped. Services include Noapps, Opsserver, WebDav, and Database-related service.

Stop Cluster (Softstop Windows):
About this task

Soft stop in a cluster environment suspends all scheduled bushiness processes. It is recommended to run the hardstop command on each of the nodes.

To soft stop the cluster:

Procedure

1. Navigate to *install_dir*\install\bin.

2. Enter softstop.cmd. You should receive a message that services have been stopped. Services include Noapps, Opsserver, WebDav, and Database-related service.

   For more information about the softstop command line options, refer to the performance management documentation.

Restart the Windows Cluster:
About this task

To restart the entire cluster in a Windows environment:

Procedure

1. Navigate to *install_dir*\install\bin.

2. Enter startWindowsService.cmd restart.

What to do next

If you need to release all the locks in a cluster and both nodes are down, use the restart parameter for **Node 1**.

Note: The restart parameter can only be used on **Node 1**. It cannot be used on any other nodes.

For example:

For **Node 1**, enter:

startWindowsService.cmd restart

For **Nodes 2 and higher**, enter:

startWindowsService.cmd

Post-Installation Configuration

After installing Sterling B2B Integrator and validating the installation, you may need to do additional configuration depending on your system and business needs.

Post Installation Configuration Checklist for Cluster Environment (Windows):
After you have installed the Sterling B2B Integrator, you need to complete the post installation configuration checklist. Review all of the tasks, but note, some tasks may not be required for your system installation.

#	Post Installation Configuration Checklist	Your Notes
1	Upon installation, several default user accounts are automatically created to get you started. For security purposes, the system administrator should update all default user account passwords immediately after installation is completed. See "Changing default user account passwords" on page 40.	
2	"JMS Cluster Configuration for Failover" on page 41	

#	Post Installation Configuration Checklist	Your Notes
3	Configure ActiveMQ for a cluster environment.	
4	Update the sandbox.cfg file for an IPv4 Address	
5	Download Sterling B2B Integrator Tools.	
6	Determine if you need to modify any Property Files.	
7	Configure Shared File System as Document Storage.	
8	Add host[port] from all the nodes to the jgroups_cluster.property.in for each node.	
9	"Manage Nodes in a Cluster" on page 45	
10	"Services and Adapters Associated with Node 1 in a Cluster" on page 46	
11	Configure Customer Overrides File with a Firewall between Nodes.	
12	"Configure a Non-English Environment" on page 47	
13	"Configure Browser Settings for a Different Language" on page 50	

Changing default user account passwords:

When you install Sterling B2B Integrator, several default user accounts are automatically created to get you started. One of the first actions you must take after installation is to update these accounts with unique passwords, because the default ones can be known by all Sterling B2B Integrator customers.

About this task

Default user account passwords are preset at installation. For security purposes, the system administrator should update all default user account passwords immediately after installation is completed.

Default user accounts are listed below in the same order as they appear in the UI under **Accounts > User Accounts > List All**. You can use this table to track the user accounts you want to update.

User Account Name	Update password
MBX_daemon	
admin (*)	
aft_user (*)	
anon	
as2_user	
commandlineuser	
dash_oper (*)	
dash_part (*)	
dash_prtspon (*)	
dash_sponsor (*)	

User Account Name	Update password
fg_architect	
fg_operator	
fg_provisioner	
fg_sysadmin (*)	
gmbx_user	
ja_turbine	
jane	
jane_doe	
joe_employee	
joe_manager	
joe_supplier	
john	
sd_buyer	
sd_supplier	
turbine	
ws_buyer	
ws_director	
ws_employee	
ws_finance	
ws_hr	
ws_manager	
ws_purchaser	
ws_supplier	

(*) denotes a super user

To change the password for a user account, perform the following tasks.

Procedure
1. Log into Sterling B2B Integrator using ID = admin and password = password.
2. Go to **Accounts > User Accounts**. Under the List section click **Go!** All default user account names are listed.
3. Click **Edit** next to the user account name you want to update the password for.
4. In the New Password and Confirm New Password fields, enter a new, secure password for this User ID.

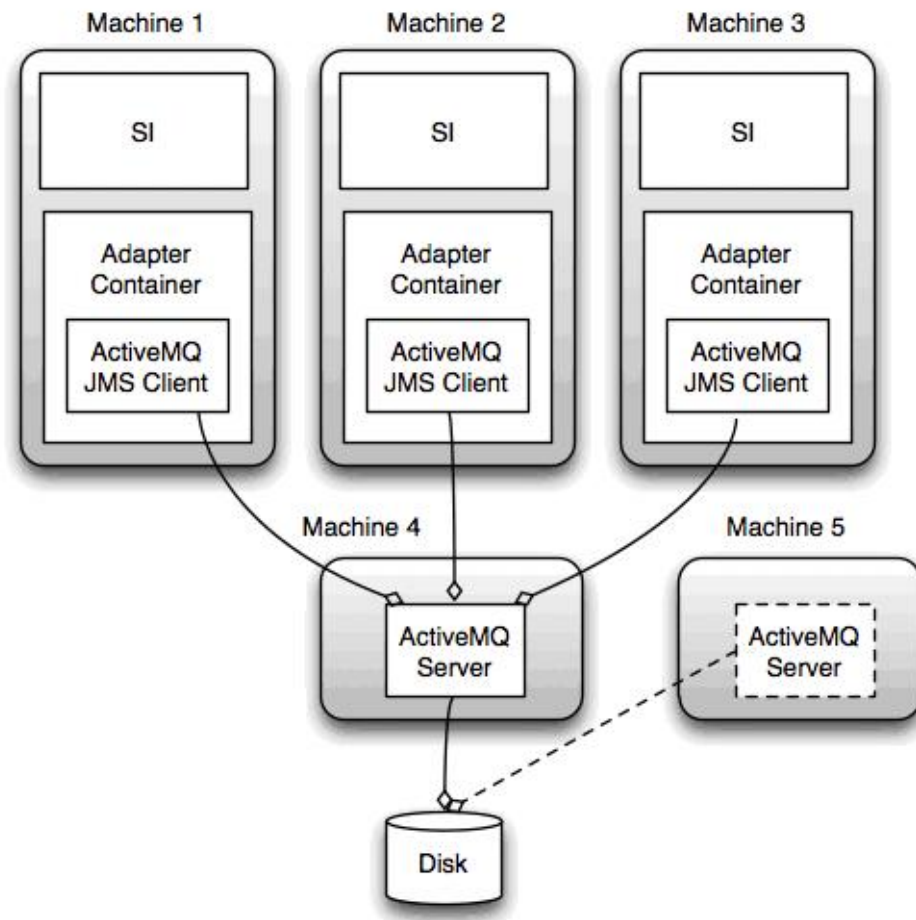   **Note:** Passwords must be at least six characters long.
5. Click **Save** and **Finish**.

What to do next

Repeat steps 3 - 5 for all user account names you want to update.

JMS Cluster Configuration for Failover: To allow proper JMS execution and failover in the Sterling B2B Integrator cluster environment, you must configure an external ActiveMQ using the *Configure ActiveMQ for a Cluster Environment* task.

The following diagram illustrates how the ActiveMQ can be configured to increase availability and failover.

Configure ActiveMQ for a Cluster Environment (Windows):
About this task

To configure ActiveMQ for the windows cluster environment:

Procedure

1. Download ActiveMQ 5.2 from http://activemq.apache.org/activemq-520-release.html for the appropriate OS.
2. Deploy an instance of ActiveMQ 5.2. This can be on the same machine as Sterling B2B Integrator or on a separate machine.
3. Navigate to *install_dir*\install\properties.
4. Copy the **activemq.xml** file to the AMQ conf directory. This file configures the ActiveMQ to:
   - Use failover clustering,
   - Use the SI database for storage
   - Configures the AMQ port usage

   By default, ActiveMQ is configured to listen at the Sterling B2B Integrator base port + 64 and the ActiveMQ interface will be at base port + 65

(http://server:base port + 66/admin). The port can be changed by editing the config file directly. The port number must be higher than 1024.

5. Navigate to *install_dir*\install\properties.

6. On each Sterling B2B Integrator node and each Sterling B2B Integrator container node, the queue configuration must be re-directed to utilize the ActiveMQ cluster. In each node, add the following to the customer_overrides.properties:

For FIFO Processing:

```
fifo.broker.username=
fifo.broker.password=
fifo.broker.url=failover:(tcp://amq_master_hostname:amq_master_port,
tcp://amq_slave_hostname:amq_slave_port)
```

For adapters running in separate JVM containers:

```
iwfcqueue.username=
iwfcqueue.password=
iwfcqueue.protocol_config=failover:(tcp://amq_master_hostname:amq_master_port,
tcp://amq_slave_hostname:amq_slave_port)
```

7. Start the ActiveMQ instances. To start ActiveMQ, it is necessary to supply the activemq.hostname property with the hostname for the current system. For example:

```
activemq.bat -Dactivemq.hostname=ExampleHostname
```

See http://activemq.org for additional information about running an ActiveMQ instance.

8. Start Sterling B2B Integrator.

Update the sandbox.cfg file for an IPv4 Address:
About this task

To update the sandbox.cfg file for an IPv4 address (complete this task for each node in the cluster):

Procedure

1. Navigate to the properties file directory for each node.

2. Open the sandbox.cfg file.

3. Add the following line to the file.

   ```
   IPV4STACK=true
   ```

4. Save and close the file.

5. Navigate to the bin directory for your installation.

6. Run `setupfiles.cmd` to update your installation.

Download of the Sterling B2B Integrator tools:

After you install Sterling B2B Integrator, you can install tools like the Map Editor and the Graphical Process Modeler (GPM).

Sterling B2B Integrator includes tools that run on a desktop or personal computer. After you install Sterling B2B Integrator, you can install the following tools:

• Map Editor and associated standards

  Note: The Map Editor requires a 32-bit JDK. This JDK is not provided with the product download or media. For more information, see *System Requirements*.

• Graphical Process Modeler (GPM)

- Web Template Designer
- (If licensed) MESA Developer Studio plug-ins, including MESA Developer Studio Software Development Kit (SDK) and MESA Developer Studio Skin Editor
- (If licensed) Reporting Services, which require MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports

Attention: Conflicting IP addresses can cause problems when you download a desktop tool.

Property files configuration in a Windows environment: Property files contain properties that control the operation of Sterling B2B Integrator. For example, the REINIT_DB property in the sandbox.cfg file controls whether or not a database is initialized when you install Sterling B2B Integrator.

By modifying the values of these properties, you can customize the Sterling B2B Integrator to suit your business and technical needs. Most property files are in the *install_dir*\install\properties directory.

After installing Sterling B2B Integrator, most property files and scripts do not need any further configuration for basic operation. However, if you want to customize any specific operations, for example setting a different logging level - you will need to edit (or in some cases, create) certain property or .xml files.

Before changing any property files, refer to the *Working with Property Files* documentation for general information about how to work with Property Files.

Areas where you might need to make specific property files changes after an installation include:
- LDAP user authentication
- Prevention of cross-site script vulnerabilities
- Logging configuration
- Process-specific property file settings

Configure Shared File Systems as Document Storage (Windows Cluster): About this task

To configure the shared file systems as document storage:

Procedure
1. Navigate to *install_dir*\install\properties.
2. Open the jdbc.properties.in file.
3. Update the value of the *document_dir* attribute to point to the shared files system directory where you store documents.
4. Save and close the file.
5. Navigate to *install_dir*\install\bin.
6. Enter `setupfiles.cmd`.
7. Restart Sterling B2B Integrator.

Add host[port] From all the Nodes to the jgroups_cluster.property.in for Each Node:

About this task

Complete this task for both vertical and horizontal clusters. You will need to complete this task for each node, starting with node 1.

Before you begin, it is important to note that you should never override mcast_addr in the jgroup_cluster.properties.

To add the host [port] to the jgroups_cluster.property.in file:

Procedure
1. Navigate to the properties file directory for the node.
2. Determine the initial_hosts port for each node:
   - Navigate to the properties file directory for the node.
   - Find the initial_hosts from the jgroups_cluster.property (initial_hosts=host{port}).
   - Record the value from the initial_hosts for each node.
3. Open the jgroups_cluster.property.in file.
4. Add the initial_hosts property to the file. For example, if node 1 is on host1 and node 2 is on host2. For node 1, you would add:

   ```
   initial_hosts=host1[port1],host2[port2]
   ```

   For node 2, you would add:

   ```
   initial_hosts=host2[port2],host1[port1]
   ```
5. Save and close the file.

Manage Nodes in a Cluster:
About this task

You can add or remove nodes in a cluster environment. The following prerequisites should be considered before performing any modification in the cluster environment:
- New nodes should have the same range of ports available as the current nodes.
- Sterling B2B Integrator license file should be updated to include the IP address of the new nodes.
- Directory structure on the new nodes should match with the directory structure of the existing nodes.
- Perimeter servers should be updated with the new IP addresses to ensure proper configuration.
- Any adapters, services, or business processes assigned to or scheduled to run on the node being removed should be assigned to run on other nodes.

Add a Node to the Cluster (Windows):

You do not need to stop the cluster environment while adding a new node.

About this task

To add a node into the cluster:

Procedure

1. Install a new Sterling B2B Integrator node to be added into the cluster during installation. Ensure that the new node being added is not a primary node.

2. Update the jgroups_cluster.properties file and the jgroups_cluster.properties.in file with the new node details.

3. Configure the new node by running the startcluster.cmd nodeNumber from the \install_dir\install\bin directory. The node number should be greater than 1.

   You should run startCluster.cmd only after you install Sterling B2B Integrator. You should not run startCluster.cmd when you restart a Sterling B2B Integrator instance.

4. Start the new node.

Remove a Node from the Cluster:
About this task

To remove a node from the cluster:

Procedure

1. Reassign or stop any adapters, services, or business processes assigned to or scheduled to run on the node being removed.

2. Perform backup of the node being removed.

3. Edit the jgroups_cluster.properties file and the jgroups_cluster.properties.in file in all nodes to remove the IP address of the node being removed.

4. Restart the cluster environment.

   Important: Start node 1 with the **restart** option to update the node information.

Services and Adapters Associated with Node 1 in a Cluster: The following services and adapters are associated with node 1 in the cluster:

• File System adapter
• Command Line 2 Adapter
• Connect::Direct Server Adapter
• Connect::Direct Requester Adapter
• Connect:Enterprise for UNIX Server Adapter
• HTTP Server adapter
• HTTP Client adapter
• FTP Client adapter
• FTP Server adapter
• SFTP Client adapter

The following services and adapters have storage set to database:

• HTTP Server adapter
• Connect:Enterprise for UNIX Extract Service
• Connect::Direct Server Adapter

The default storage for all of the workflows is set to database.

Configure Customer Overrides File with a Firewall between Nodes:

About this task

If you have configured a firewall between nodes that blocks ports outside of the port range assigned to Sterling B2B Integrator, perform the following task on all nodes:

Procedure

1. Navigate to the Sterling B2B Integrator installation directory.
2. Navigate to the properties directory and locate (or create, if necessary) the customer_overrides.properties file.
3. Open the customer_overrides.properties file using a text editor.
4. Add the following properties:

   ```
   noapp.jnp_host= <host_name>
   noapp.jnprmiport=<port_number_1>
   noapp.jnprmiport2=<port_number_2>
   noapp.useSocketFactories=true
   noapp.jndirmiport=<port_number_3>
   ops.jnp_host= <host_name>
   ops.jnprmiport=<port_number_1>
   ops.useSocketFactories=true
   ops.jndirmiport=<port_number_2>
   ops.jnprmiport2=<port_number_3>
   ```

   This increases the number of threads used by the system.
5. Save and close the customer_overrides.properties file.
6. Stop Sterling B2B Integrator and restart it to apply the changes.

Configure a Non-English Environment:

You can install Sterling B2B Integrator in an English or a non-English environment. The base language for the Configurator can be switched only once.

Use the following checklist to change to a non-English environment:

#	Non-English Environment Checklist	Your Notes
1	Install the Sterling B2B Integrator Language Pack.	
2	Load the Sterling B2B Integrator Language Pack Factory Defaults.	
3	Load the Sterling B2B Integrator Language Pack translators.	
4	Configure Encodings.	
5	Configure Locales.	

Language Settings in a Windows Environment: Language settings for Java applications involve both character sets and encoding:
- A character set is a set of characters (letters, numbers, and symbols such as #, $, and &) that are recognized by computer hardware and software.
- An encoding is a representation of data in a particular character set. An encoding set is a group of encodings.

For information about basic and extended encoding sets, see .http://download.oracle.com/javase/1.5.0/docs/guide/intl/encoding.doc.html

The default encoding set includes:

- UTF-8 (default)
- IS0-8859-1
- ISO-8859-5
- US-ASCII
- ISO_8859-1
- EUC-JP
- UTF-16
- ISO-2022-JP

Sterling B2B Integrator provides two property files that contain supported encoding sets. These properties files reside in the *install_dir*\install\properties directory.

- encodings.properties – Contains the default encoding set used in the user interface.
- encodings_large.properties – Contains all supported encoding sets.

You are not limited to the encodings in the encoding.properties file. Sterling B2B Integrator enables you to configure the encodings properties files to expand the number of encodings you can use.

Install the Language Pack (Windows):
About this task

Before installing the language pack be sure that you have successfully installed Sterling B2B Integrator.

To install Sterling B2B Integrator language pack:

Procedure
1. Insert the language CD into your CD-ROM drive.
2. Complete the following steps:
   a. Click **Start**.
   b. Right-click **Command Prompt** and select **Run as administrator**. The Administrator: Command Prompt dialog box is displayed.
   c. Navigate to Win Directory.
3. Run the `setup.exe` command.

Load the Language Pack Translations (Windows):
About this task

Prior to loading the Sterling B2B Integrator Language Pack factory defaults, be sure that you have successfully completed all instructions in the database chapter.

To load the language pack translation with custom localization literals:

Procedure
1. Complete the following steps:
   a. Click **Start**.
   b. Right-click **Command Prompt** and select **Run as administrator**. The Administrator: Command Prompt dialog box is displayed.
   c. Navigate to *install_dir*\install\bin.

2. Run the LocalizedStringReconciler tool in the IMPORT mode, enter: `ant.cmd -f localizedstringreconciler.xml import -Dsrc=`*install_dir*`\database\ FactorySetup\XMLS`

   This tool first inserts the value specified in the *<from_language>_<from_country>_ycplocalizedstrings_<to_language>_ <to_country>*.properties file present in the *install_dir*\database\FactorySetup\ XMLS\<language>_<country> directory into the database.

   The basefilename refers to the file present in the \database\FactorySetup\ XMLS directory, for which the translations are to be imported into the database.

3. Verify that your locale settings such as currency, time format, and date are correct.

Configure Encodings for Sterling B2B Integrator (Windows):
About this task

To configure your encoding set:

Procedure
1. Stop Sterling B2B Integrator and wait for shutdown to complete.
2. Complete the following steps:
   a. Click **Start**.
   b. Right-click **Command Prompt** and select **Run as administrator**. The Administrator: Command Prompt dialog box is displayed.
   c. Navigate to *install_dir*\install\bin.
3. Open the encodings_large.properties file.
4. Select the encodings you want to add to the encodings.properties file.
5. Open the encodings.properties.in file.
6. At the end of the encodings.properties.in file, add the encodings you selected from the encodings_large.properties file. When adding encodings from one file to the other, first copy the encodings as they appear in the encodings_large.properties file. After adding the new encodings, ensure that the index numbers are consecutive. If the index numbers are not consecutive, change the index number or numbers as needed. For example, encoding54 cannot follow encoding6. In this example, change encoding54 to encoding7.

   The first name in the definition (before the comma) is the name that will appear in the Sterling B2B Integrator user interface. You can change this name to make it more descriptive. For example: encoding4 = 819,ISO8859_1 may be changed to encoding4 = WesternEurope,ISO8859_1. ISO8859_1 is the Java canonical name and should not be changed.

7. Update the first line in the encodings.properties.in file (numberof). Change *numberof* to the number of encodings added to the file. For example, if the current value is numberof = 6 and you add 5 new encodings, the new value is numberof = 11.

   numberof indicates the total number of encodings located in the file. You must update numberof to ensure that the encodings you added will be visible in the user interface.

8. Complete the following steps:
   a. Click **Start**.
   b. Right-click **Command Prompt** and select **Run as administrator**. The Administrator: Command Prompt dialog box is displayed.
   c. Navigate to *install_dir*\install\bin.

9. Enter `setupfiles.cmd`.
10. Start Sterling B2B Integrator.

Configure Locales (Windows):
About this task

Sterling B2B Integrator runs in any locale that Java supports. If you want to run in a non-default locale, then configure your environment to the specific locale you want to use.

To determine and set your locale in a Windows environment:

Procedure
1. Select **Control Panel > Regional Options > General**.
2. From the Your locale (location) list, select the language and location.
3. Click **Set Default** and select the locale from the Set the appropriate locale list.
4. To configure your operating system as a non-English environment, consult your operating system's documentation.

Load the Language Pack Factory Defaults (Windows):
About this task

To load the language-specific factory defaults, use the loadDefaults.cmd script available in the *install_dir*\install\bin directory and pass the locale-specific installer file.

For example:

```
loadDefaults.cmd \install_dir\install\database\FactorySetup\install\
<language>_<country>_locale_installer.xml
```

The default locale that is shipped with the CD is ja_JP.

Configure Browser Settings for a Different Language:

Some browsers and operating systems require additional configuration in order to correctly render the Sterling B2B Integrator user interface in certain languages.

Use the procedures provided in this section to properly configure a browser to display the Sterling B2B Integrator user interface in the appropriate language.

Tip: If your browser is unable to display the user interface properly or you see a mixture of English and another language, this is an indication that the browser is configured incorrectly. You may also need to install additional fonts on the Sterling B2B Integrator server.

Support for other languages:

The Sterling B2B Integrator user interface includes support for several languages.

Attention: Sterling B2B Integrator product code is designed to work with Latin based English only input. The use of any other type of input might have uncertain results and is not supported.

The Sterling B2B Integrator user interface includes support for the following languages:
* French
* German
* Italian
* Japanese
* Korean
* Polish
* Portuguese (Brazilian)
* Simplified Chinese
* Traditional Chinese
* Dutch

Four of these languages involve expanded Unicode character sets:
* Japanese
* Korean
* Simplified Chinese
* Traditional Chinese

The implementation of these languages in your environment might require the addition of new Unicode fonts on your server:

If...	then...
Sterling B2B Integrator is on a server that already supports these languages	You do not need to install any additional fonts.
You are installing on a server that is only setup for the Latin alphabet and you have users who need to view the Sterling B2B Integrator user interface in any of the Asian languages	You need to have the fonts for these languages installed.

A way to test the implementation of a language is to create a user with one of the new languages and setup their browser to use that language as it's primary language. Log in to the system and review the user interface. If you see a mixture of English and the new language, your configuration is not correct. You need to verify that the browser is set up correctly and review the fonts that are installed on the server.

The installation of more fonts/languages on the server should be done in coordination with your technical support team. Be sure to include a Unicode Sans Serif font on your server.

Important: While multiple languages are supported, a user account should be configured to use one specific language to avoid user interface display issues.

Add a Custom Language Preference Code:
About this task

In order for your browser to display the Sterling B2B Integrator user interface and address bar text correctly in a foreign language, you must specify the appropriate language preference code for the browser.

Sterling B2B Integrator supports the following language preference codes:

- de
- en
- en-US
- es
- fr
- it
- ja
- ko
- pt-BR
- zh
- zh-TW
- du

Your browser must be configured to use one of these specific language preference codes to view the Sterling B2B Integrator user interface.

Note: Most browsers provide a default listing of language preference codes. However, Sterling B2B Integrator requires the use of the specific codes as listed here. For example, you cannot use the default German (Germany) [de-DE], you must use **[de]**.

You may need to add these supported codes as a custom language preference code in your browser.

Note: The instructions for configuring a browser's display will differ for each browser. Refer to your chosen browser's documentation for specific instructions on configuring that browser's display.

The following is an example of how to configure a client machine display for an IE window.

Procedure
1. Open a browser window.
2. Select **Tools > Internet Options**.
3. At the bottom of the window under Appearance, click **Languages**.
4. Click **Add** to display the Add Language window.
5. In the User defined: text box, enter the appropriate language preference code.
6. Click **OK**. The added code should display in the **Language: listing** in the Language Preference window. An example entry would be, **User Defined [de]**.
7. (Optional) Move the added language up to be the first one listed if there are multiple languages listed.
   a. Select the newly added language.
   b. Click **Move up**.
      The newly added language should now appear first in the Language listing.
8. Click **OK** to save your Language Preference settings.
9. Click **OK** to close the Internet Options window.
10. Close your browser window.

11. Open a new browser window and access the Sterling B2B Integrator user interface to verify your changes have been applied.

Change Default Browser Font:
About this task

Some languages require the use of special fonts to properly display the Sterling B2B Integrator user interface. The client computer must be configured to display these types of fonts. Each Windows client must be configured appropriately.

Note: The instructions for configuring a browser's display will differ for each browser. Refer to your chosen browser's documentation for specific instructions on configuring that browser's display.

The following is an example of how to change the default browser font for an Internet Explorer (IE) window.

To configure a client machines display for IE:

Procedure
1. Determine which fonts are needed to support your needed language and verify they are installed on the server.

   Note: The installation of additional fonts/languages on the server should be done in coordination with your technical support team. Be sure to include a Unicode Sans Serif font on your server.
2. Open an IE browser window.
3. Select **Tools > Internet Options**.
4. At the bottom of the window under Appearance, click **Fonts**.
5. From the Language Script drop-down menu, change the Latin based value to the appropriate script for your needed language.

   Note: If your encoding is not available, you may need to install a new version of Internet Explorer, but make sure you install the appropriate international options.
6. Select a Webpage font and a Plain text font appropriate for the new language. A Plain text font is one in which all the characters take up the same amount of space and is associated with older computer terminals.

   Note: If no fonts are listed in the menus, then you need to install fonts designed for that encoding.
7. Click **OK** to close the Fonts window.
8. Click **OK** again to close the Internet Options window.
9. Close your browser window.
10. Open a new browser window and access the Sterling B2B IntegratorSterling B2B Integrator user interface to verify your changes have been applied.

Set the Client Character Display:
About this task

To use special characters, such as for various languages, the client computer must be configured to display these types of characters. In order for Unicode characters to display correctly in the application, each Windows client must be configured appropriately.

Note: The instructions for configuring a browser's display will differ for each browser. Refer to your chosen browser's documentation for specific instructions on configuring that browser's display.

The following is an example of how to configure a client machine display for an Internet Explorer (IE) window.

To configure a client machines display for IE:

Procedure
1. Open an IE browser window.
2. Select **View > Encoding > Auto-Select**.

Clearing Browser and Java Plugin Caches Before Initial Deployment:
About this task

Once the Sterling B2B Integrator is ready for deployment, each user must clear the browser and Java Plugin caches on their client machines before launching Sterling B2B Integrator. This requirement applies to all browsers.

To clear the browser and java caches, do the following:

Procedure
1. From the browser menu bar, select **Settings > Control Panel > Internet Options**.
2. Select the General tab, and in the Temporary Internet Files panel, click **Delete Files**. The Delete Files dialog displays.
3. Check the **Delete All Offline Content** checkbox. Click **OK** until the Internet Properties window closes. The browser cache is cleared.
4. From the Windows start menu, select **Settings > Control Panel > Java**.
5. Select the General tab, and in the Temporary Internet Files panel, click **Settings**. The Temporary Files Settings dialog displays.
6. In the Disk Space panel, click **Delete Files**. The Delete Temporary Files pop-up window displays.
7. Click **OK** until the Java Control Panel window closes.

General Internet Explorer Browser Settings: When using Sterling B2B Integrator without any customizations, you need to set the General Browser settings for your Internet Explorer in order to obtain the best browser performance.

Note: This can impact the display of reports and search listings.

To set your general browser settings:
1. From the Internet Explorer menu, select **Tools > Internet Options**.
   The Internet Options window opens to the General tab.
2. Locate the Browsing history section and click **Settings**.
   The Temporary Internet Files and History Settings window opens.
3. Below Check for newer versions of stored pages: select the **Everytime I visit the webpage** option.
4. Click **OK** to save your changes.
5. Click **OK** to apply the changes.
6. Close the browser window and re-open it.

The browser is now set to check for updates to pages everytime a page is accessed rather than relying upon a cached version.

Internet Explorer Security Settings:
About this task

When using Sterling B2B Integrator without any customizations, you need to set security settings for your Internet Explorer to obtain the best browser performance.

To configure the Internet Explorer security and privacy settings:

Procedure
1. From the Internet Explorer menu, select **Tools > Internet Options**.
2. Click the **Security** tab.
3. Select the Web content zone from which Sterling B2B Integrator is accessed.
4. Set the security level to **Medium-low**.
5. Click **Custom Level** and set your security settings according to the following table:

Internet Explorer Security Setting	Sterling B2B Integrator
.NET Framework	
Loose XAML	Enable
XAML browser applications	Enable
XPS documents	Enable
.NET Framework-reliant Components	
Permissions for components with manifests	High Safety
Run components not signed with Authenticode	Enable
Run components signed with Authenticode	Enable
ActiveX Controls and Plugins	
Allow previously unused ActiveX controls to run without prompt	Enable
Allow Scriptlets	Enable
Automatic prompting for ActiveX controls	Enable
Binary and script behaviors	Enabled
Display video and animation on a webpage that does not use external media player	Disable
Download signed ActiveX controls	Prompt
Download unsigned ActiveX controls	Prompt
Initialize and script ActiveX controls not marked as safe for scripting	Prompt
Run ActiveX controls and plugins	Prompt/Enable
Script ActiveX controls marked as safe for scripting	Enable
Downloads	
Automatic prompting for file downloads	Enable
File download	Enable
Font download	Prompt
Enable .NET Framework setup	Enable

Internet Explorer Security Setting	Sterling B2B Integrator
Java VM	
Java permissions	Medium safety
Miscellaneous	
Access data sources across domains	Enable
Allow META REFRESH	Enable
Allow scripting of Internet Explorer web browser control	Enable
Allow script-initiated windows without size or position constraints	Enable
Allow webpages to use restricted protocols for active contents	Prompt
Allow websites to open windows without address or status bars	Enable
Display mixed content	Prompt
Do not prompt for client certificate selection when no certificates or only one certificate exists	Enable
Drag and drop or copy and paste files	Prompt
Include local directory path when uploading files to a server	Enable
Installation of desktop items	Prompt
Launching applications and unsafe files	Prompt
Launching programs and files in an IFRAME	Prompt
Navigate sub-frames across different domains	Enable
Open files based on content, not file extension	Enable
Software channel permissions	Medium safety
Submit non-encrypted form data	Prompt
Use Phishing Filter	Disable
Use Pop-up Blocker	Disable
Userdata persistence	Enable
Websites in less privilged web content zone can navigate into this zone	Prompt
Scripting	
Active scripting	Enable
Allow Programmatic clipboard access	Prompt
Allow status bar updates via script	Enable
Allow websites to prompt for information using scripted windows	Enable
Scripting of Java applets	Enable
User Authentication	
Logon	Prompt for user name and password

6. Click **OK** to save your settings.
7. Click **OK** to save the new settings and **Apply** to implement the settings. The new settings are applied when a new browser window is opened.

System Maintenance

From time to time, you might need to perform system maintenance activities.

These activities might include:
* Performing a Checksum
* Adding or removing a license

System Maintenance:

From time to time, you may need to perform system maintenance activities.

These activities might include any or all of the following:
* Performing a Checksum
* Adding or removing a license

DB Checksum Tool:

A checksum is a simple redundancy check used to detect errors in data. The DB Checksum tool generates the difference in resource checksum between the default resource and the latest system resource from the database.

In Sterling B2B Integrator, a verification process compares the checksum between the existing default resource and the resource that was added after applying a fix pack or upgrading. The DB Checksum tool, a resource difference tool generates a granular report of the changes in the system that was not permitted to be set as defaults.

Perform a Checksum (Windows):
About this task

To run the DB Checksum tool in the Windows environment:

Procedure

1. Navigate to *install_dir*\\bin.
2. Enter db_checksum_tool.cmd [-d] [-i [1 | 2 | 3 | 4 | 5]] [-r [wfd | map | schema | sii | template]] [-o <output file>] [-g]

   Where:

   -d is the mode to dump the difference of resource checksum between the default resource and latest system resource.

   -i is the resource type integer (optional).

   1 is WFD.

   2 is MAP.

   3 is SCHEMA.

   4 is SII.

   5 is TEMPLATE.

   -r is the resource name (optional). For example, wfd, map, schema, sii, or template.

   -o is the file name to output all the messages (optional).

   -g is the file name that lists all the ignored resources (optional).

   -h is the help screen.

The DB Checksum tool performs the relevant checksum operation based on the command options and generates the output message.

License modifications:

After the installation finishes, you can modify the software licenses that you loaded with the **AddLicenseSet** command.

The **AddLicenseSet** command is in the `bin` directory of your UNIX or Windows installation. After the initial installation, the license files are in the following directories:

- UNIX - */install_dir*/install/properties/licensefiles
- Windows - *install_dir*\install\properties\licensefiles
- iSeries - */install_dir*/properties/licensefiles

You can add licenses or review the license list from the UI. On the Administration Menu, click **System** > **B2B Console** > **Operations** > **System** > **Licenses**.

AddLicenseSet Command Parameters

Use the **AddLicenseSet** command to modify a single license file or the entire license file directory.

To use the **AddLicenseSet** command, you must do the following:
- Open the `bin` directory
- Include the absolute path to the license file directory or to a license file

The **AddLicenseSet** command has the following parameters:

AddLicenseSet Parameter	Description
-reload	Use this parameter to reload the license files. This parameter deletes all of the license files from the database before the new files are loaded. The old license files are saved to the following locations: • UNIX - */install_dir*/install/logs/security/ old_licenses • Windows - *install_dir*\install\logs\security\ old_licenses • iSeries - */install_dir*/logs/security/old_licenses
-upgrade	Use this parameter during an upgrade only. This parameter deletes all of the old license files from the database and installs the new license files. The old license files are saved to the following locations: • UNIX - */install_dir*/install/logs/security/upgrade • Windows -*install_dir*\install\logs\security\upgrade • iSeries -/*install_dir*/logs/security/old_licenses

The **AddLicenseSet** command will check if Sterling B2B Integrator is running. If it is running, the command will call the Ops server to refresh the license from the database. If you have any problems with your licenses after running the **AddLicenseSet** command, stop and restart Sterling B2B Integrator.

License Modification: Examples:

There are several different ways you can use the **AddLicenseSet** command to modify your licenses.

UNIX Examples

From the *install_dir*/bin directory:

Scenario	Command usage (UNIX example)
Reload a single license file	`./AddLicenseSet.sh /`*install_dir*`/install/properties/` `licensefiles/SI_SFG_License.xml -reload`
Reload all of the license files in the directory	`./AddLicenseSet.sh /`*install_dir*`/install/properties/` `licensefiles/ -reload`
Upgrade a single license file	`./AddLicenseSet.sh /`*install_dir*`/install/properties/` `licensefiles/SI_SFG_License.xml -upgrade`
Upgrade all of the license files in the directory	`./AddLicenseSet.sh /`*install_dir*`/install/properties/` `licensefiles/ -upgrade`

Windows Examples

From the *install_dir*\bin directory:

Scenario	Command usage (Windows example)
Reload a single license file	`AddLicenseSet.cmd\`*install_dir*`\install\properties\` `licensefiles\SI_SFG_License.xml -reload`
Reload all of the license files in the directory	`AddLicenseSet.cmd\`*install_dir*`\install\properties\` `licensefiles\ -reload`
Upgrade a single license file	`AddLicenseSet.cmd\`*install_dir*`\install\properties\` `licensefiles\SI_SFG_License.xml -upgrade`
Upgrade all of the license files in the directory	`AddLicenseSet.cmd\`*install_dir*`\install\properties\` `licensefiles\ -upgrade`

Installing and Configuring Perimeter Servers

A perimeter server is an optional software tool for communications management. A perimeter server can be installed in a demilitarized zone (DMZ). A DMZ is a computer host or small network inserted as a neutral zone between a company's private network and their public network. A perimeter server requires a corresponding perimeter client.

The perimeter server manages the communications flow between outer layers of your network and the TCP-based transport adapters. A perimeter server can solve problems with network congestion, security, and scalability, especially in high-volume, Internet-gateway environments.

Installation Guidelines for Perimeter Servers with Sterling B2B Integrator: The installation program installs a perimeter client and a local mode server. The local mode server is useful for testing purposes or in environments that do not require a secure solution. However, if you require high-volume, secure connections, you must install a perimeter server in a remote zone, either a more secure or less secure network than your integration server.

Consider the following before you install a perimeter server:

- Licensing for a perimeter server is determined by the licensing restrictions on the corresponding B2B adapters.
- Each perimeter server is limited to two TCP/IP addresses:
  - Internal interface is the TCP/IP address that the perimeter server uses to communicate with Sterling B2B Integrator.
  - External interface is the TCP/IP address that the perimeter server uses to communicate with trading partners. To use additional TCP/IP addresses, install additional perimeter servers.
- You can have multiple perimeter servers installed on the same computer interacting with one instance of Sterling B2B Integrator. To install a perimeter server on a computer with an existing instance, install the new perimeter server in a different installation directory.
- The combination of internal TCP/IP address and port must be unique for all perimeter servers installed on one computer.
  - If a perimeter server is installed using the wildcard address, then all ports must be unique. The assigned ports are not available for use by adapters that use the server or any other perimeter server on that computer.
  - The internal and external interface may use the same TCP/IP address. However, the port used by the perimeter server is not available to the adapters that use the server.

Perimeter Server Installation Methods: You can install perimeter server either in silent mode or in interactive mode. The default installation mode is silent. In the silent mode, you should specify the details in a silent file, whereas in the interactive mode, you should enter the value each time a prompt appears.

Perimeter Server Information Gathering Checklist: Before you install the perimeter server, you need to gather the following information and answer the following questions:

Perimeter Server Information Gathering Checklist	Your Notes
Path to java	
Path to the Sterling B2B Integrator installation directory	
Will this perimeter server be installed in a less secure network?	
TCP/IP address or the DNS address that the perimeter server will listen on.	
Listening port for the perimeter server.	
Local port that the perimeter server will use to connect to Sterling B2B Integrator. Port number must be higher than 1024.	

Perimeter Server Security Vulnerabilities: When Sterling B2B Integrator is deployed with a remote perimeter server in a more secure network zone, there is a security vulnerability. An intruder may compromise the host where the proxy resides, and take over the persistent connection to the perimeter server residing in the more secure zone. If this happens, the perimeter server will relay all the intruder's network requests past the firewall into this internal zone.

To prevent an intrusion, limit the activities the remote perimeter server can perform on behalf of the proxy to specifically those activities that the proxy needs to do for its operation.

Control these limitations by using a configuration residing in the secure network zone with the remote perimeter server, inaccessible by the proxy that could become compromised.

Installing a perimeter server in a less secure network (Windows):
About this task

Install a perimeter server in a Windows environment in interactive mode.

Procedure
1. Close all open Windows programs.
2. Copy the .jar installation files from the installation media to a Windows directory. If you are using FTP to copy the file, make sure that your session is set to binary mode.
3. Complete the following steps:
   a. Click **Start**.
   b. Right-click **Command Prompt** and select **Run as administrator**. The Administrator: Command Prompt dialog box is displayed.
   c. Enter the following command:`\`*path_to_java*`\java -jar \`*install_dir*`\install\packages\`*ps_filename*`.jar —interactive`
4. Enter the full path name of the installation directory.
5. If there is an existing installation in the directory you specify, you can update it using the same settings. Answer the question:

   `There is an existing install at that location, update it while keeping existing settings?`

   If **yes**, the installation proceeds without more entries.

   Note: If you want to change any of the settings, you must use a new directory, or delete the old installation before you reinstall the perimeter server. You cannot overwrite an existing installation, and you cannot use an existing directory that does not contain a valid installation. The existing installation must be Sterling B2B Integrator V5.2.x or later.
6. Confirm that the installation directory is correct.

   The program verifies the amount of available disk space.
7. Answer the question:

   `Is this server in a less secure network than the integration server?`

   Yes
8. Answer the question:

   `Will this server need to operate on specific network interfaces?`

   If **yes**, the program returns a list of the network interfaces available on your host. Select the interfaces for the server to use.
9. Enter the TCP/IP address or DNS name for the internal interface to use to communicate with the integration server (Sterling B2B Integrator). Press **Enter** to use a wildcard for this address.
10. Verify the TCP/IP address or DNS name for the internal interface.

11. Enter the TCP/IP address or DNS name for the external interface to use to communicate with trading partners. Press Enter to use a wildcard for this address.

12. Verify the TCP/IP address or DNS name for the external interface.

13. Enter the port that the perimeter server listens on for the connection from the integration server (Sterling B2B Integrator). The port number must be higher than 1024.

14. Verify the port.

    When the perimeter server is installed, the following message is displayed:

    `Installation of Perimeter Service is finished`

15. Change to the installation directory.

16. Enter `startupPs.cmd` to start the perimeter server.

Installing a perimeter server in a more secure network (Windows):

Install a perimeter server in a more secure network in a Windows environment in interactive mode.

Before you begin
- Sterling B2B Integrator must be installed.
- Complete the Perimeter Server information gathering checklist.

Procedure
1. Close all open Windows programs.

2. Copy the .jar installation files from the installation media to a Windows directory. If you are using FTP to copy the file, be sure that your session is set to binary mode.

3. Complete the following steps:
   a. Click **Start**.
   b. Right-click **Command Prompt** and select **Run as administrator**. The Administrator: Command Prompt dialog box is displayed.
   c. Enter the following command:`\`*`path_to_java`*`\java -jar` `\`*`install_dir`*`\install\packages\`*`ps_filename`*`.jar —interactive`

4. Enter the full path name for the Sterling B2B Integrator installation directory and press **Enter**.

   If there is an existing installation in the directory you specify, you can update it using the same settings. Enter yes, and the installation proceeds without more entries.

5. Enter yes to confirm that the installation directory is correct.

   The program verifies the amount of available disk space.

6. Answer the question:

   `Is this server in a less secure network than the integration server?`
   Yes

7. Answer the question: `Will this server need to operate on specific network interfaces?`
   - Enter yes to select from a list network interfaces available.
   - Enter no.

8. Enter the TCP/IP address or DNS name that the integration server listens on for the connection from this perimeter server.

9. Enter yes to confirm the TCP/IP address or DNS name.

10. Enter the port that the integration server listens on for the connection from this server. The port number must be higher than 1024.

11. Enter the local port number that the perimeter server uses for the connection to the integration server.

    The port number must be higher than 1024. Specify a port of zero for the operating system to select any unused port.

12. Enter yes to confirm the port number.

    After the installation is complete, the following messages are displayed:

    `Installation of Perimeter Service is finished`

    `To start this Perimeter Server change to the install directory and run the startup script.`

    `You will also need to configure this server in your integration server (SI) UI.`

Silent Installation Method for an External Perimeter Server: You can install an external perimeter server using a silent install file. The perimeter server can be installed on the same machine where you have installed Sterling B2B Integrator or on a separate machine. It is recommended to install the perimeter server on an separate machine.

To use the silent installation method, you first create the silent install file and then you use to complete the installation.

Create the Silent Installation File for an External Perimeter Server:
About this task

Create a silent installation file with the following variables:

Entry	Description
INSTALL_DIR	(Required) The installation directory that stores perimeter server files and related directories. This directory must exist prior to running the silent install.
REVERSE_CONNECT	(Optional) Determines if the perimeter server is to be installed in a more secure network zone. Valid values: • Y - more secure network zone • N - less secure network zone
PS_PORT	(Required) Determines the perimeter server port to interact with the system.
PS_SECURE_IF	(Required) Determines the TCP/IP address or DNS name for the internal interface to communicate with the integration server (Sterling B2B Integrator). You can use a wildcard (*) for this address.
PS_EXTERNAL_IF	(Required) Determines the TCP/IP address or DNS name for the external interface to communicate with the trading partners. You can use a wildcard (*) for this address.
REMOTE_ADDR	(Optional) Determines the remote perimeter server address. (Not required if REVERSE_CONNECT=N)
REMOTE_PORT	(Optional) Determines the remote perimeter server port. (Not required if REVERSE_CONNECT=N)

Entry	Description
MAX_JVM_HEAP	(Required) Determines the maximum Java heap size allocated to the JVM.

Installing an external perimeter server with a silent installation file (Windows):

Install an external perimeter server with a silent installation file.

About this task

Before you begin, create the silent installation file.

Procedure
1. From the installation media, copy `SI.jar` to a Windows directory.
2. Set up your silent installation file and record the file location.
3. Complete the following steps:
   a. Click **Start**.
   b. Right-click **Command Prompt** and select **Run as administrator**. The Administrator: Command Prompt dialog box is displayed.
   c. Enter the following command:`\`*`path_to_java`*`\java -Xmx512m -jar` `\`*`install_dir`*`\install\packages\`*`ps_filename`*`.jar -f silent.txt`

Install a Fix Pack in a Remote Perimeter Server (Windows):
About this task

Remote perimeter servers are not automatically updated by a fix pack. You must reinstall the perimeter server using the new perimeter server installation file supplied with the fix pack.

To update a Remote Perimeter Server:

Procedure
1. Update your installation with the latest fix pack. Obtain the fix pack from the Support Center web site.
2. Locate your perimeter server file in the *install_dir*\install\packages directory of your installation. For fix packs, obtain the file from the Support Center web site. These files have a name that identifies a version number. For example, ps_2006.jar.
3. Copy the file to a directory on the remote server.
4. Stop the perimeter server.
5. Complete the following steps:
   a. Click **Start**.
   b. Right-click **Command Prompt** and select **Run as administrator**. The Administrator: Command Prompt dialog box is displayed.
   c. Enter the following command:`\`*`absolutePath`*`\bin\java -jar` *`filename`*`.jar` `-interactive`

   Where the *absolutePath* is the directory name where the Java version is installed.
6. Enter the full path to the installation directory. If you do not want to change any settings for your perimeter server, specify the same directory where the remote perimeter server was originally installed.

7. Answer the question:

   `There is an existing install at that location, update it while keeping existing settings?`

   If **yes**, the installation will proceed without additional entries.

   Note: If you want to change any of the settings, you must use a new directory, or delete the old installation before performing the new installation. You cannot overwrite an existing installation, and you cannot use an existing directory that does not contain a valid installation. The existing installation must be V5.2 or later.

   When the perimeter server is installed, the following message is displayed:

   `Installation of Perimeter Service is finished`

8. Change to the installation directory.
9. Start the perimeter server.

**Grant Permissions for Specific Activities for a Perimeter Server:
About this task**

Before you begin:
- Remote perimeter server must be installed for a more secure zone.
- Know what permissions you want to grant
- Understand the content of the restricted.policy file. The first two grant sections in the restricted.policy file are required for correct perimeter server operation. Do not modify these sections.

Procedure

1. Install a remote perimeter server, choosing the option for a more secure network zone.
2. At the installation prompt *Is this server in a less secure network than the integration server?*, select **No**, which is the option for a more secure network zone.
3. Navigate to the perimeter server installation directory.
4. Open the restricted.policy file.
5. Add permission lines for each back-end server that you intend to allow the proxy to access. There are commented out examples for each type of server.

   The first two grant sections are required for correct perimeter server operation. Do not modify these sections.

   For example, you can grant permission to a target FTP Server. In the example, servers are configured to listen on the following ports: 33001 (for FTP), 33002 (for HTTP), and 1364 (for C:D). These port numbers can be edited.

   ```
   // To restrict or permit the required Host/Server to communicate with the
   PS, update the "ftphost/htttphost/snode" with that of the Server IP and
   provide the appropriate PORT number where the Server will listen. //
    // For each target FTP Server
    // permission java.net.SocketPermission "10.117.15.87:33001", "connect"; //
    Control connection.
    // permission java.net.SocketPermission "10.117.15.87:lowPort-highPort",
   "connect"; // Passive data connections.
    // 10.117.15.87 indicates IP of the FTP Server for which the permission is
   granted by PS for communicating with client //
    // For each target HTTP Server
    //
    // permission java.net.SocketPermission "10.117.15.87:33002", "connect";
    // 10.117.15.87 indicates IP of the HTTP Server for which the permission
   is granted by PS for communicating with client //
   ```

```
 // For each target C:D snode
 //
 // permission java.net.SocketPermission "snode:1364", "connect";
 //  10.117.15.87 indicates IP of the Connect Direct Node for which
the permission is granted by PS for communication //
```

6. In the perimeter server installation directory, there is the perimeter server settings file called remote_perimeter.properties. Edit it to change the "restricted" setting to a value of true to turn on restrictions.

7. In the future, any attempt by the perimeter server to access disallowed network resources will be rejected and logged in the perimeter server log written to the perimeter server installation directory.

Perform DNS Lookup on Remote Perimeter Server:
About this task

By default, a perimeter server performs DNS lookup in the main server JVM. If you have limited DNS in your secure area, you can configure the remote perimeter server to look up trading partner addresses in the DMZ.

To enable DNS lookup, add the following property to customer_overrides.properties. Set the value to *true*:

Property Name	Description
perimeter.*.forceRemoteDNS=true	Forces resolution of DNS names at remote perimeter server.
	Set the value to *true* to configure remote perimeter servers to look up trading partner addresses.

Start Perimeter Servers (Windows):
About this task

To start a perimeter server in Windows:

Procedure
1. Navigate to the perimeter server installation directory.
2. Complete the following steps:
    a. Click **Start**.
    b. Right-click **Command Prompt** and select **Run as administrator**. The Administrator: Command Prompt dialog box is displayed.
3. Enter startPSService.cmd.

Stop Perimeter Servers in (Windows):
About this task

To stop a perimeter server in Windows:

Procedure
1. Complete the following steps:
    a. Click **Start**.
    b. Right-click **Command Prompt** and select **Run as administrator**. The Administrator: Command Prompt dialog box is displayed.

2. Enter `stopPSService.cmd`.

Uninstall Sterling B2B Integrator from a Windows Cluster Environment
Before you begin

If you have installed Sterling B2B Integrator software using IIM, then perform these steps to unregister Sterling B2B Integrator packages from the IIM registry:

- Launch IIM.
- Click **Uninstall** and select the required Sterling B2B Integrator package (Media, FixPack, or Interim Fix).
- Confirm and click **Uninstall**.

About this task

To uninstall Sterling B2B Integrator from a Windows environment, perform the following steps for each node:

Procedure
1. Navigate to *install_dir*\install\bin.
2. Enter `StopWindowsService.cmd`. Wait for the shutdown to complete. If you begin removing files before all business processes and the system is stopped, you may be unable to remove the software successfully.
3. Back up the file system and database.

   This step is optional. However, by backing up the file system and database, you are ensured that Sterling B2B Integrator is completely recoverable.
4. Remove the installation directory by entering the following command in the parent directory of your installation directory: rd /s /q *install_dir*\install
5. If you use an Oracle, Microsoft SQL Server, or DB2 database, these remain intact even after you remove Sterling B2B Integrator from the server. If you no longer want to reference the data, contact your database administrator about removing unwanted tables and recovering the database space where Sterling B2B Integrator used to reside.
6. Navigate into the _uninst subdirectory of your JDK installation directory.
7. To manually remove the JDK, enter `uninstall.cmd`.
8. After you remove Sterling B2B Integrator from the server, you can remove Eclipse, and any tools that were downloaded to the desktop, including the following:
   - Map Editor and associated standards

     Refer to the *Map Editor Guide* for information about removing the Map Editor.
   - Graphical Process Modeler

     Refer to the *Graphical Process Modeler Guide* for information about removing the Graphical Process Modeler.
   - Web Template Designer

     Refer to the *Web Extensions Guide* for information about removing the Web Template Designer.
   - (If licensed) MESA Developer Studio plug-ins, including:
     - MESA Developer Studio Software Development Kit (SDK)
     - MESA Developer Studio Skin Editor

Refer to the *MESA Developer Studio* guide for information about removing MESA Developer Studio.
- (If licensed) Reporting Services, which requires MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports. Refer to the *MESA Developer Studio* guide for information about removing Reporting Services.

User Documentation

The user documentation is available from an online documentation site on the web.

Providing the documentation in an online environment allows for frequent updates of content that is based on user feedback and usability.

If you need a printed copy of the documentation, you can print topics of information through your Internet browser, or you can download documents in PDF format, after you add it to a collection on IBM Knowledge Center.

To access the documentation site from within Sterling B2B Integrator or one of its tools, select the help ⊘ icon. The system must reside on a computer that supports Internet access and an Internet browser.

Improving your access to online documentation:

You can improve your access to online documentation by using several methods.

About this task

After you access the IBM Knowledge Center, you can perform the following tasks:
- Enter a word or phrase and search the entire library for information.
- Move through a hierarchy of contents pages to identify the topic you want to read or print.
- Print topics by using your browser's Print function.
- Add documents to your collection and download them in PDF format.

Troubleshooting Tips for Windows Environment

Situation	Message or Symptom	Explanation/Resolution
Installing	You encounter errors or problems during installation.	**Explanation** The installation creates several log files that you can use to diagnose problems like the failure of an installation. **Resolution** Examine the log files generated during installation: • ant.install.log (in the *install_dir* directory) • *install_dir*\PreInstallSI.log

Situation	Message or Symptom	Explanation/Resolution
Installing	When you entered an absolute path during installation, a message indicated that the command was not found.	**Explanation** You entered an incorrect path. Check the information entered. **Resolution** Enter the correct path.
Installing	IM is installed successfully, but SI Fails to install.	Go to Start Open IM select Help and then Export logs to a file for analysis.

Installing a desktop tool or resource	Cannot download any of the following:
	• Map Editor and associated standards
	• Graphical Process Modeler
	• Web Template Designer
	• (If licensed) MESA Developer Studio plug-ins, including:
	  – MESA Developer Studio Software Development Kit (SDK)
	  – MESA Developer Studio Skin Editor
	• (If licensed) Reporting Services, which requires MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports.
		Explanation
		
		When you install Sterling B2B Integrator, system files are created that contain an internal IP address. If you install Sterling B2B Integrator behind a firewall, and your firewall is configured to accept an external IP address from a client computer, you may not be able to download the desktop tools and resources. The firewall will reject the internal IP address from a client residing outside of the firewall.
		
		Resolution
		
		Modify the system files that contain the invalid IP address. Follow these steps:
		1. Navigate to *install_dir*\install\bin.
		2. Stop Sterling B2B Integrator.
		3. Enter the following command followed by the external IP address:
		`patchJNLP.cmd external_IP_address`
		4. Restart Sterling B2B Integrator.

Cluster Installation or Upgrade	When configuring TCPS the following warning can be found in the activemqbroker.log: sun.security.provider.certpath. SunCertPathBuilderException: unable to find valid certification path to requested target	**Resolution** Add the system certificate to the trust store using the KeyTool command.
Cluster Installation or Upgrade	When configuring TCPS the following warning can be found in the activemqbroker.log: Do not mention any SSL cipher in the ActiveMQconfig. xml. oracle.net.ns.NetException: Invalid cipher suites specified.	**Resolution** Do not mention any SSL cipher in the ActiveMQconfig.xml.

Situation	Message or Symptom	Explanation/Resolution
e-Invoice Upgrade: Oracle Add Constraint Error	When you upgrade Sterling e-Invoicing and are using an Oracle database, if the upgrade fails with the error message `name is already used by an existing object`, this occurs because the default behavior for the `drop constraint` command changed in Oracle 10.	**Explanation** The index that is used to support the constraint is now only removed if the index was generated by the `create constraint` command. The indexes for Sterling e-Invoicing are always generated from constraints during an install. If you receive this error during a Sterling e-Invoicing upgrade, it is because of how the database was restored, the version of Oracle you are using, and because the Oracle `imp` command exported the indexes and constraints separately. There is no way to determine when the imp command will not add a create index command to the export file if it was generated by a constraint – but if it does add the command, the database restore process loses the association of the constraint and its underlying index. The database script that runs during a Sterling e-Invoicing upgrade executes two steps: 1. First, it drops the unique constraint so the next step can redefine it using additional columns. However, the drop constraint command does not remove the underlying index if the association with its index was lost. 2. The next command that redefines this constraint requires a different index definition, but in this scenario the name of the index the constraint wants to use already exists, which causes the `name is already used by an existing object` error. **Resolution** If you receive this error message, the solution for this problem is to drop the index and rerun the Sterling e-Invoicing upgrade. The drop index command you should use is: `drop index UNQ_EINV_CANON`

Situation	Message or Symptom	Explanation/Resolution
Apply a fix pack or Upgrade	The *install_dir*\install\installed_data directory is created (if clustered, on each node) during an upgrade or applying a fix pack. This directory can become very large and take up needed space on the file system.	**Explanation** The information in this directory is used during upgrade or applying a fix pack, but is not required afterward. The deployment/cleanup tasks for the upgrade or fix pack do not remove this directory. **Resolution** The directory can be manually removed to increase the available space for the file system: 1. Navigate to *install_dir*\install 2. Enter `rd /S installed_data` 3. If prompted to confirm deletion, enter Y for yes.

Windows Non-Cluster Environment Installation (V5.2.6 or later)

You may follow different installation and upgrade scenarios when you install and upgrade Sterling B2B Integrator in a Windows Non-Cluster (single node) environment.

Installation Scenarios

It is important to review the following installation scenarios:

Scenario	Instructions
Version 5.1.x is installed and it needs to be upgraded to V5.2.6.	See "Upgrading (V5.2.6 or later)" on page 320
Version 5.2.x is installed and it needs to be upgraded to V5.2.6.	See Applying a fix pack (V5.2.6 or later)
Version 5.2.6 is being installed as the base release.	Review this document and use the installation instructions.

Prerequisite Knowledge for Windows Installation

Before you begin the installation, you should be knowledgeable on the following topics:

- Application servers
- Database administration
- System Requirements for this release of Sterling B2B Integrator.

Intended audience:

This document can be used by different members of your organization.

This document is intended for use by:
- System administrators
- Installation engineers
- Database administrators.

Assumptions for this guide:

The procedures in this guide are accurate as of the publication date and are specific to this version of the document.

Before You Begin the Installation in a Windows Environment

Before you begin the installation, you need to:

- Perform some system verification tasks.
- Obtain the correct version of the JDK, JCE, and JDBC drivers required. Most Java files required are provided with the product download or media. See the *System Requirements* for more information.

System Verification Tasks for a Windows Environment: Before you begin an installation, you need to:

#	System Verification Items	Your Notes
1	Use the system requirements to verify that your system hardware and software meet the requirements specified for this release. Verify you have the correct: • Patches required by Java™ for the operation system • Version of the JDK • Absolute path to JDK and patches	
2	Verify the file system has adequate free disk space.	
3	Verify that your database has been installed and configured. If you are going to manually apply DDL statements, you need to complete the data base schema work before you begin the installation.	
4	If you are using a non-English environment, confirm that you are using the appropriate character set.	

Verification of the system requirements:

Before you begin the installation, verify that your system meets the hardware and software requirements that are specified for this release.

The hardware requirements that are listed in the *System Requirements* are the minimum requirements. Your system requirements might exceed these requirements if you are running other applications on the same machine as Sterling B2B Integrator.

The installation strictly enforces the following system requirements:

- Operating system version must match requirement exactly.
- The minimum patch level for the operating system is enforced, but you can apply higher patch levels.
- JDK version must match requirement exactly.
- The disk space is a minimum for the installation. The system must be separately sized to handle whatever load is going to be put on the system.

- Database version must match exactly.
- JDBC driver version supports exact matches and wildcard matches.

If any of these requirements are not met, the installation fails. If the installation fails, review the installation log for a list of non-compliant items.

Upgrading your JDK (Windows and UNIX):

Sometimes you need to upgrade your JDK version to support a new version of Sterling B2B Integrator.

About this task

If you have V5.2.4.1 or higher installed, you can use the **upgradeJDK** script to upgrade your version of the JDK. See *bin Directory Files* for more information.

If you have V5.2.4.0 or lower installed, follow the steps below to upgrade your JDK.

Procedure
1. Download the new JCE file. For example, the `UnrestrictedPolicy.zip` policy file for the IBM JDK.
2. Back up the existing JDK in *<Install Dir>*/jdk. Change the folder name to `jdk_back`)
3. Copy the new IBM JDK (1.7.0) folder to the installation Directory. Directory Name should be `jdk`)
4. Copy all the jars present in *<Install Dir >*jdk_back\jre\lib\ext to *<install Dir>*jdk\jre\lib\ext directory.
5. If your installation of V5.2.4 or lower was built using the Oracle (SUN) JDK, continue to the next step. Otherwise skip to step 6.
   a. Edit the `sandbox.cfg` property file.
   b. Set JCE_DIST_FILE=*<New Path of Supported JCE File>*. For example, `JCE_DIST_FILE=D\:\\IBM\\unrestrictedpolicyfiles.zip`.
   c. Back up the `local_policy.jar` and `US_export_policy.jar` files present in *<Install Dir>*jdk\jre\lib\security.
   d. Unzip the new JCE file. For example, `Unrestrictedpolicyfiles.zip` file. Copy `local_policy.jar` and `US_export_policy.jar` to *<Install Dir>*jdk\jre\lib\security.
6. Run `updateJavaSecurity.cmd` *<path_to_new_jdk><Install Dir>*/jdk.
7. Verify that security providers have been updated in *<Install Dir>*\jdk\jre\lib\security\java.security.
8. Follow the Upgrade Guide instructions for your upgrade scenario.

Configure the Database
You must install, create, and configure a database so that each Sterling B2B Integrator instance has a dedicated schema and login for the database.

In a non-clustered environment, the Sterling B2B Integrator can support the following databases:
- DB2
- Oracle®
- Microsoft SQL Server

- MySQL

    Attention: MySQL will not be supported in Sterling B2B Integrator after V5.2.6. See http://www.ibm.com/support/knowledgecenter/SS3JSW_5.2.0/ com.ibm.help.sb2bi_overview.doc/com.ibm.help.whats_new.doc/ 526_next_retirement_list.html for more information.

    See System Requirements for supported version information.

    Database Information You Need Before You Install Sterling B2B Integrator in a Non-Cluster Environment: Before you begin to install Sterling B2B Integrator, you need to install and configure your database. Review and gather the following information. An "x" indicates the information is required.

Information to Gather	Oracle	DB2	Microsoft SQL Server	MySQL	Record Information Here
Database User Name	x	x	x	x	
Database Password	x	x	x	x	
Database Catalog Name	x	x	x	x	
Database Host	x	x	x	x	
Database Port	x	x	x	x	
JDBC Driver #1	x	x	x	x	
Use BLOB data?	x		x		
Enable Multibyte Support?	x	x	x		

Database sizing and capacity planning:

Database sizing is designed to give you estimates of the database growth and to help you plan the disk requirements.

There are many factors to consider when you are estimating the amount of disk space that is required for Sterling B2B Integrator. As a result, trying to consider all growth factors is impractical because the user might not know the answers to many questions that are required to do a detailed forecast. Over the years the cost of disks has dramatically decreased, and the capacity and speed of disks has increased. The method of how information system managers order disk capacity also has changed, from purchasing disk arrays that are dedicated to a particular database server and project, to the concept of SANS (storage area networks).

Consider the confidence that you have in your data estimates when you are making the final purchase decision and adjust accordingly. After the initial purchase and production deployment, disk growth should be tracked for future purchase forecasts.

You should track your actual database storage usage and the number of database records regularly. Correlating these two metrics enabled you to plan your future disk requirements. Moreover, determining the average amount of space used for each order line or shipment line, enables you to accurately predict your future growth requirements.

Database Definition Language (DDL) Statements: When you install Sterling B2B Integrator, you can manually apply Database Definition Language (DDL) statements to your database tables instead of requiring the installation process to do it directly.

This feature increases database security by reducing the database permissions of the Sterling B2B Integrator database user. The rights to database objects can be reserved for a secure user like a customer database administrator (DBA). A business can require that only a DBA with the proper permissions can make database changes.

Configuring the DB2 Database:

Before you install Sterling B2B Integrator with the DB2 database, you must configure the database.

Before you begin:
- If you do not have DB2 installed, follow the procedures in the DB2 installation manual.
- The installation script creates tables and indexes. Certain tables require a page size of 32 KB. You must have a temporary table space to accommodate such tables. DB2 automatically places tables and indexes in the available table spaces. You can move the tables to a different table space after the installation is complete.
- If you are reinstalling the software, be aware that data in your existing database is deleted. To preserve the data, either back up the existing database or save it under a different name.
- After you create and configure your database, recycle the database. Then, stop and restart the database to apply the changes.

Use the following checklist to configure DB2 for Sterling B2B Integrator:

Item	DB2 Database Configuration Checklist	Your Notes
1	Create the database. Refer to the DB2 documentation on creating the database, including creating a schema repository, login, and table space. **Important:** In V5.2.6.2 or later you must ensure that all tablespaces used by Sterling B2B Integrator tables have a minimum page size of 8K. Otherwise installation will fail. Be sure to install the correct version and patches. See the System Requirements for supported version information.	
3	Review the DB2 parameters.	
4	Ensure that the DB2 user privileges are set.	
5	Install the JDBC drivers for DB2.	

DB2 database user privileges:

The DBADM role is required to perform administrative operations in DB2 database.

DB2 parameters:

When you install Sterling B2B Integrator with the DB2 database, you must set certain DB2 parameters. Other DB2 parameter settings are recommended for the efficient performance of Sterling B2B Integrator.

When you install Sterling B2B Integrator with DB2, you must set the DB2 parameters that are listed in the following topics:
- "Mandatory settings for IBM DB2 registry variables" on page 6
- "Mandatory settings for DB CFG parameters" on page 6

After you install Sterling B2B Integrator with DB2, you can improve the DB2 database performance by setting the recommended parameters that are listed in the performance documentation for the following items:
- DB2 registry variables
- DBM CFG parameters
- DB CFG parameters
- DB2 for Linux on System z
- DB2 for LUW configuration and monitoring

Mandatory settings for IBM DB2 registry variables:

Mandatory IBM DB2 registry values are critical for IBM DB2 performance with Sterling B2B Integrator.

Variable	Mandatory value
DB2_SKIPDELETED	ON Allows index-range queries or table-scan queries to skip records that are in an uncommitted delete state. This reduces the amount of lock contention from Read Share and Next Key Share locks from range queries in tables with a high frequency of deletes. When enabled, DB2_SKIPDELETED allows, where possible, table or index access scans to defer or avoid row locking until a data record is known to satisfy predicate evaluation. This allows predicate evaluation to occur on uncommitted data. This variable is applicable only to statements using either Cursor Stability or Read Stability isolation levels. For index scans, the index must be a type-2 index. Deleted rows are skipped unconditionally on table scan access while deleted keys are not skipped for type-2 index scans unless DB2_SKIPDELETED is also set. Recommended value: ON
DB2_SKIPINSERTED	ON Allows SELECTs with Cursor Stability or Read Stability isolation levels to skip uncommitted inserted rows. This reduces record lock contention on tables with heavy insert rates.

Mandatory settings for DB CFG parameters:

For optimal performance, certain parameters and values are mandatory for DB2.

Parameter	Mandatory value
Database Code Set	UTF-8

Installing DB2 client components, compilers, and fix pack:

The use of Sterling B2B Integrator with the DB2 database requires the installation of different items for the database.

About this task

Sterling B2B Integrator uses stored procedures for DB2. For more information about these tasks, see the IBM documentation for DB2.

Procedure

You must install or set up the following DB2 components to use Sterling B2B Integrator with DB2:
1. Install the Administration client.
2. Install the necessary fix pack after you install the client components and compilers. Otherwise, the clients overwrite the fix pack binary files.
3. Set the path for the compiler by entering the `db2set` command.

Installing JDBC drivers for DB2:

When you install Sterling B2B Integrator with the DB2 database, you must install a JDBC driver for the database.

About this task

For DB2, install the appropriate DB2 JDBC Type 4 driver and any correlating patches. For the supported version information, see *System Requirements*.

You can obtain these files from the IBM website. After you obtain this JDBC driver, record the absolute path to its location on your system. You must supply this absolute path during installation.

If the JDBC driver provided by your database vendor is distributed among multiple files, you must place all the files that comprise the JDBC driver into one JAR file. Follow these steps to create one JAR file:

Procedure

To install a JDBC driver for the DB2 database:
1. Identify all the vendor database JAR files for the JDBC driver.
2. Record the absolute path to the JAR file you created on the Preinstallation Checklist.

   The Type 4 driver does not require a separate Java listener to be running on the database server. Instead, connect directly to the DB2 port.

Upgrading DB2 to version 10.1 or 10.5:

To upgrade from DB2 9.5 or 9.7 to 10.1 or 10.5, you must make configuration changes.

Procedure

To upgrade from DB2 9.5 or 9.7 to 10.1 or 10.5:
1. Copy your DB2 9.5 or 9.7 database content to DB2 10.1 or 10.5.

    Attention: Back up all files before you change any settings.
2. Back up the database driver in the */install_dir*/dbjar/jdbc/DB2/ directory and replace it with the DB2 10.1 or 10.5 version.
3. Update the following sandbox.cfg file fields with your environment-specific parameters:
   ```
   DB_PASS=
   DB_SCHEMA_OWNER=
   DB_DRIVERS_VERSION=
   YANTRA_DB_PORT=
   DB_DATA=
   DB_HOST=
   YANTRA_DB_USER=
   DB_PORT=
   YANTRA_DB_PASS=
   YANTRA_DB_DATA=
   YANTRA_DB_HOST=
   DB_DRIVERS=
   DB_USER=

   DB2_PORT=
   DB2_USER=
   DB2_PASS=
   DB2_DATA=
   DB2_HOST=
   ```
4. Edit the following value in the activemq.xml file:
   ```
   activemq.xml: <value>jdbc:db2//DB_HOST:DB_PORT/DB_DATA</value>
   ```
5. Run the setupfiles script.
6. Run the deployer script.
7. Start Sterling B2B Integrator.

Configuring the Oracle Database:

Before you install Sterling B2B Integrator with the Oracle database, you must configure the database.

Before you begin
- If you are reinstalling the software, be aware that data in your existing database is deleted. To prevent this deletion, either back up the existing database or save it under a different name.
- After you create and configure your database, recycle the database. Then, stop and restart to apply the changes.

About this task

Use the following checklist to configure Oracle for Sterling B2B Integrator:

Item	Oracle Database Configuration Checklist	Your Notes
1	Create the database. Refer to the Oracle documentation on creating the database, including creating a schema repository, login, and table space. Be sure to install the correct version and patches. See the *System Requirements* for the supported version information.	
2	Configure an Oracle Instance.	
3	Configure Oracle Rollback.	
4	Install the Oracle JDBC Driver.	
5	Enable Failover in a Multiple Node Oracle RAC Database Cluster.	
6	After Sterling B2B Integrator is installed, if you want to encrypt the data traffic, perform one of the following tasks: • Configure Sterling B2B Integrator for Data Traffic Encryption • Configure Sterling B2B Integrator for Data Traffic Encryption with SSL	

Configuring an Oracle instance:

An Oracle database requires certain parameter settings and other configurations.

Before you begin
- You must have the Oracle database installed. Ensure that you have installed the correct versions and patches. See *System Requirements* for supported version information.
- Ensure that the user responsible for creating and modifying the Oracle database has a specified quota (extent) assigned in the table space, even if the user was assigned an unlimited table space. Otherwise, the installer might display the error `ORA-09150: no privileges on tablespace name`.

Procedure
1. Run the create instance procedure. Use `AL32UTF8` as the character set.
2. Configure the `INIT<INSTANCE_NAME>.ORA` file with the recommended and mandatory settings in the Performance Management guide. See the Oracle init parameter configuration checklist for specific settings.

Note: After you complete the installation of Sterling B2B Integrator with Oracle, you can improve the performance of the database with the settings listed in the Performance Management guide.

3. Identify or create a table space for user tables and indexes.
4. Create a user. Unless stated for a task, the user does not require database administrator (DBA) privileges.
5. Grant permissions to the user. The following permissions are required for the administrative user for creating and modifying the Oracle database:
   - GRANT "CONNECT" TO SI_USER
   - ALTER USER SI_USER DEFAULT ROLE "CONNECT"
   - GRANT CREATE SEQUENCE TO SI_USER
   - GRANT CREATE TABLE TO SI_USER
   - GRANT CREATE TRIGGER TO SI_USER
   - GRANT SELECT ON CTXSYS.CTX_USER_INDEXES TO SI_USER
   - GRANT SELECT ON SYS.DBA_DATA_FILES TO SI_USER
   - GRANT SELECT ON SYS.DBA_FREE_SPACE TO SI_USER
   - GRANT SELECT ON SYS.DBA_USERS TO SI_USER
   - GRANT SELECT ON SYS.V_$PARAMETER TO SI_USER
   - GRANT SELECT ANY DICTIONARY TO SI_USER
   - GRANT ALTER SESSION TO SI_USER
   - GRANT CREATE SESSION TO SI_USER
6. If you are using Oracle AQ, grant the AQ_ADMINISTRATOR_ROLE permission.
7. If you plan to use EBICS Client, grant the GRANT CREATE VIEW TO SI_USER permission.

Configuring Oracle rollback:

The configuration of rollback in an Oracle database helps you manage database transactions.

About this task

You can roll back changes in Oracle by using AUTO UNDO management. IBM recommends that you use this option. This practice avoids any manual monitoring of UNDO segments.

Installation of the Oracle JDBC driver:

Sterling B2B Integrator requires the appropriate JDBC driver for the Oracle database.

The JDBC drivers are thin client-based pure Java JDBC drivers. See *System Requirements* for supported version information. The supported versions of the JDBC driver build the correct Sterling B2B Integrator directory structure.

Enabling failover in a multiple node Oracle RAC database cluster:

You can enable failover in a multiple node Oracle RAC database cluster in UNIX/Linux by using traditional RAC or RAC with SCAN.

Procedure

To enable failover in a multiple node Oracle RAC database cluster:
1. Open the */install_dir*/install/properties directory to modify the sandbox.cfg file.
2. In the sandbox.cfg file, add a **ORACLE_JDBC_URL** property, which contains the Oracle RAC connection URL.

   Choose one of the following depending on whether you are using traditional RAC or RAC with SCAN. The property value must be one string of text that starts with ORACLE_JDBC_URL=. Your database administrator (DBA) can modify this URL as needed:
   - To configure traditional RAC, use this format:

     ```
     jdbc:oracle:thin:@
     (DESCRIPTION=
      (ADDRESS_LIST=
       (FAILOVER=ON)
       (LOAD_BALANCE=OFF)
       (ADDRESS=(PROTOCOL=TCP)(HOST=myhost1)(PORT=1521))
       (ADDRESS=(PROTOCOL=TCP)(HOST=myhost2)(PORT=1521))
      )
      (CONNECT_DATA = (SERVER = DEDICATED)(SERVICE_NAME=myservicename OR mySID))
     )
     ```

     Note: This method uses the default Oracle RAC service that is provided by Oracle.
   - To configure RAC with SCAN, use this format:

     `jdbc:oracle:thin:@host:port/service`

     For example:

     `jdbc:oracle:thin:@RAC-SCAN:1521/ORCL`

     Where:
     - RAC-SCAN is resolved to an IP address by DNS
     - 1521 = Port number
     - ORCL = the name of your Oracle RAC service

       Important: To use RAC with SCAN, you must also define a new Oracle RAC service (you cannot use the default service) that defines one node as the preferred node and at least one node as a failover node.
3. Open the */install_dir*/install/bin directory.
4. Enter the command ./setupfiles.sh.

Data traffic encryption in the Oracle database:

You can encrypt transactions between Sterling B2B Integrator and the Oracle database. Encryption prevents anyone who is outside the system from viewing the data that flows between Sterling B2B Integrator and the database.

The following list describes important aspects of enabling database encryption:
- At installation, encryption is turned off by default. If you want your database transactions to be encrypted, you must enable encryption.
- The encryption can be enabled at any time.
- Encryption applies to all database transactions between Sterling B2B Integrator and the database.

System performance might be impacted when encryption is enabled. The extent of this impact depends on your hardware, database configuration, transaction volume, and the relative amount of processing time that is spent by the system against other activities.

For more information on data traffic configuration, see SSL With Oracle JDBC Thin Driver.

Before you encrypt data traffic for the Oracle database:

The decision to encrypt data traffic for the Oracle database includes several considerations.

Consider the following items when you configure database traffic encryption:
- Sterling B2B Integrator must be installed in TCP (clear) mode before you can configure encryption.
- Perform these changes to your database before you install Sterling B2B Integrator.
- Configure wallets for encryption-only mode even if the wallet that is used is empty. Enable auto login for all wallets.
- If you want to use SSL for encryption only, it is recommended to follow the instructions in the "CASE #1: USE SSL FOR ENCRYPTION ONLY" section of the Oracle documentation. It is not necessary to configure certificates for the wallet. In this mode, Diffie-Hellman ciphers are used. The server and the client are not authenticated through SSL. You must authenticate by using a user name and a password. However, if you are running Sterling B2B Integrator on an operating system that requires an IBM JDK, you cannot use this mode, as IBM JSSE TrustManager does not permit anonymous ciphers. You must configure wallets with certificates.
- If you want to use SSL for encryption and for server authentication, it is recommended to follow the instructions in the "CASE #2: USE SSL FOR ENCRYPTION AND SERVER AUTHENTICATION" section of the Oracle documentation.
- If you want to use SSL for encryption and for server authentication of both tiers, it is recommended to follow the instructions in the Oracle "CASE #3: USE SSL FOR ENCRYPTION AND AUTHENTICATION OF BOTH TIERS" section of the Oracle documentation, depending on how you intend to configure client or server authentication.
- After you configure your database for data traffic encryption, the database accepts both TCP (clear) and TCPS (encrypted) connections.
- There is a known issue in the Oracle 11g database when the listener is configured only for TCPS. The **lsnrctl** utility that is used to start and stop database listeners attempts to contact the listener, which is enabled first. You should define the address list of the listener to contact either TCP or IPC before it contacts TCPS.

Configuring Sterling B2B Integrator for data traffic encryption in Oracle:

You can enable data traffic encryption-only, with anonymous authentication, and not SSL authentication.

About this task

If you want to use SSL for encryption only, it is recommended to follow the instructions in the "CASE #1: USE SSL FOR ENCRYPTION ONLY" section of the Oracle documentation. It is not necessary to configure certificates for the wallet. In this mode, Diffie-Hellman ciphers are used, and the server and the client are not authenticated through SSL. You must authenticate by using a user name and a password.

However, if you are running Sterling B2B Integrator on a system that requires an IBM JDK, you cannot use this mode, as IBM JSSE TrustManager does not permit anonymous ciphers. You must configure wallets with certificates.

This procedure is applicable only if you are running Sterling B2B Integrator on a system that requires Sun JDK. The IBM JSSE TrustManager does not permit anonymous ciphers.

If your Sterling B2B Integrator is a cluster installation, you need to perform this procedure on each node, starting with node 1.

Procedure

To configure Sterling B2B Integrator for data traffic encryption in Oracle:
1. Install Sterling B2B Integrator in TCP (clear) mode.
2. Stop Sterling B2B Integrator.
3. Open the */install_dir*/install/properties directory.
4. Open the customer_overrides.properties file and add the following database connection information:

   ```
   jdbcService.oraclePool.prop_oracle.net.ssl_cipher_suites=
   (SSL_DH_anon_WITH_3DES_EDE_CBC_SHA, SSL_DH_anon_WITH_DES_CBC_SHA)
   jdbcService.oraclePool.prop_oracle.net.ssl_server_dn_match=false
   ```

   If you have a configured container, ensure that the same database information is added to the customer_overrides.properties.in file. To locate the file, navigate to the */install_dir*/install/properties/node*x*AC*y* directory, where *x* gives the node number and *y* gives the container number. Perform this step for all the containers configured in the system.
5. Repeat Step 4 for the following Oracle connection pools by changing only the pool name:
   - oraclePool_local
   - oraclePool_NoTrans
   - oracleArchivePool
   - oracleUIPool

   If you have any other database pools, you need to add the properties for those pools.
6. Open the sandbox.cfg file and change the database connection information as shown:

   ```
   ORACLE_JDBC_URL= jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS=(PROTOCOL=tcps)
   (HOST=<DB host>)(PORT=<TCPS port as configured in DB config section above>))
   (CONNECT_DATA=(SERVICE_NAME=<service name>)))
   ```

   Make sure that you enter values for the **HOST**, **PORT**, and **SERVICE_NAME** parameters.

7. Open the `activemqconfig.xml.in` file and modify the following database connection information:

- Remove or comment out the following default ActiveMQ database configuration information:

```
<bean id="gis-ds" class="org.apache.commons.dbcp.BasicDataSource"
  destroy-method="close" singleton="true" lazy-init="default"
  autowire="default" dependency-check="default"
  SCIOverrideName="persistence-bean">
<property name="driverClassName">
<value>oracle.jdbc.driver.OracleDriver</value>
</property>
<property name="url">
#:ifdef ORACLE_JDBC_URL
<value>&ORACLE_JDBC_URL;</value>
#:else
<value>jdbc:oracle:thin:@&ORA_HOST;:&ORA_PORT;:&ORA_DATA;</value>
#:endif
</property>
 <property name="username">
<value>&ORA_USER;</value>
</property>
<property name="password">
<value>&ORA_PASS;</value>
</property>
<property name="maxActive">
<value>32</value>
</property>
</bean>
```

- Add the following ActiveMQ database configuration information:

```
<bean id="gis-ds"
class="oracle.jdbc.pool.OracleDataSource" destroy-method="close"
singleton="true" lazy-init="default"
autowire="default"
dependency-check="default">
<property name="URL"><value>&ORACLE_JDBC_URL;</value></property>
<property name="user"><value>&ORA_USER;</value></property>
<property name="password"><value>&ORA_PASS;</value></property>
<property name="connectionProperties">
  <value> oracle.net.ssl_cipher_suites:
    (SSL_DH_anon_WITH_3DES_EDE_CBC_SHA, SSL_DH_anon_WITH_DES_CBC_SHA)
    oracle.net.ssl_client_authentication: false
    oracle.net.ssl_version: 3.0
    driverClassName:oracle.jdbc.driver.OracleDriver
    maxActive: 32
  </value>
</property>
</bean>
```

8. Open the */install_dir*/install/bin directory.
9. Enter the command ./setupfiles.sh.
10. Restart Sterling B2B Integrator. All the database connections from Sterling B2B Integrator are now connected through TCPS (encrypted) mode.

Configuring Sterling B2B Integrator for data traffic encryption with SSL authentication in Oracle:

You can enable data traffic encryption and SSL authentication.

About this task

This procedure is applicable if you are running Sterling B2B Integrator on a system that requires either Sun JDK or IBM JDK.

The example in this procedure uses two-way SSL authentication. It is recommended to follow the instructions in the "CASE #2: USE SSL FOR ENCRYPTION AND SERVER AUTHENTICATION" section of the Oracle documentation.

You can also configure one-way SSL authentication. If you want to use SSL for encryption and for server authentication of both tiers, it is recommended to follow the instructions in the "CASE #3: USE SSL FOR ENCRYPTION AND AUTHENTICATION OF BOTH TIERS" section of the Oracle documentation.

If your installation of Sterling B2B Integrator is a cluster installation, you need to perform this procedure on each node, starting with node 1.

Procedure

To configure Sterling B2B Integrator for data traffic encryption with SSL authentication in Oracle:

1. Install Sterling B2B Integrator in TCP (clear) mode.
2. Stop Sterling B2B Integrator.
3. Open the */install_dir*/install/properties directory.
4. Open the customer_overrides.properties file and add the following database connection information:

   ```
   jdbcService.oraclePool.prop_javax.net.ssl.trustStore=/.../path/.../ClientKeyStore.jks
   jdbcService.oraclePool.prop_javax.net.ssl.trustStoreType=JKS
   jdbcService.oraclePool.prop_javax.net.ssl.trustStorePassword=password
   jdbcService.oraclePool.prop_oracle.net.ssl_version=3.0
   jdbcService.oraclePool.prop_javax.net.ssl.keyStore=/.../path/.../ClientKeyStore.jks
   jdbcService.oraclePool.prop_javax.net.ssl.keyStoreType=JKS
   jdbcService.oraclePool.prop_javax.net.ssl.keyStorePassword=password
   ```

5. Repeat step 4 for the following Oracle connection pools by changing only the pool name:

   - **oraclePool_local**
   - **oraclePool_NoTrans**
   - **oracleArchivePool**
   - **oracleUIPool**

   If you have any other database pools, you need to add the properties for those pools.

6. Open the sandbox.cfg file and change the database connection information to the following value:

   ```
   ORACLE_JDBC_URL= jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS=(PROTOCOL=tcps)
   (HOST=<DB host>)(PORT=<TCPS port as configured in DB config section above>))
   (CONNECT_DATA=(SERVICE_NAME=<service name>)))
   ```

7. Open the */install_dir*/install/activemq/conf directory.
8. Open the activemqconfig.xml.in file and modify the database connection information:

   - Remove or comment out the following default ActiveMQ database configuration information:

   ```
   #:ifdef ORACLE
   <bean id="gis-ds" class="org.apache.commons.dbcp.BasicDataSource"
      destroy-method="close" singleton="true" lazy-init="default"
      autowire="default" dependency-check="default"
    SCIOverrideName="persistence-bean">
   <property name="driverClassName">
   <value>oracle.jdbc.driver.OracleDriver</value>
   </property>
   <property name="url">
   ```

```
#:ifdef ORACLE_JDBC_URL
<value>&ORACLE_JDBC_URL;</value>
#:else
<value>jdbc:oracle:thin:@&ORA_HOST;:&ORA_PORT;:&ORA_DATA;</value>
#:endif
</property>
<property name="username">
<value>&ORA_USER;</value>
</property>
<property name="password"><value>&ORA_PASS;</value>
</property>
<property name="maxActive"><value>32</value>
</property>
</bean>
#:endif
```

- Add the following ActiveMQ database configuration information:

```
<bean id="gis-ds"
class="oracle.jdbc.pool.OracleDataSource" destroy-method="close"
singleton="true" lazy-init="default" autowire="default"
dependency-check="default">
<property name="URL"><value>&ORACLE_JDBC_URL;</value></property>
<property name="user"><value>&ORA_USER;</value></property>
<property name="password"><value>&ORA_PASS;</value></property>
<property name="connectionProperties"><value>
javax.net.ssl.trustStore: /.../path/.../ClientKeyStore.jks
javax.net.ssl.trustStoreType:JKS
javax.net.ssl.trustStorePassword:password
oracle.net.ssl_version:3.0
javax.net.ssl.keyStore: /.../path/.../ClientKeyStore.jks
javax.net.ssl.keyStoreType:JKS
javax.net.ssl.keyStorePassword: password
driverClassName:oracle.jdbc.driver.OracleDriver
maxActive:32
</value>
</property>
</bean>
```

9. Enter the command `./setupfiles.sh`.
10. Restart Sterling B2B Integrator. All the database connections from Sterling B2B Integrator are now connected through TCPS (encrypted) mode.

Configuring the Microsoft SQL Server Database:

Before you install Sterling B2B Integrator with the Microsoft SQL Server database, you must configure the database.

Before you begin
- If you are reinstalling the software, be aware that data in your existing database is deleted. To preserve your data, either back up the existing database or save it under a different name.
- After you create and configure your database, recycle the database. Then, stop and restart to apply the changes.

About this task

Use the following checklist to configure Microsoft SQL Server for Sterling B2B Integrator:

Item	Microsoft SQL Server Database Configuration Checklist	Your Notes
1	If you do not have Microsoft SQL Server installed, follow the installation procedures in the SQL Server installation manual. Refer to the Microsoft SQL Server documentation on creating the database, including creating a schema repository, login, and table space. Be sure to install the correct version and patches. See *System Requirements* for supported version information.	
3	"Microsoft SQL Server database parameters" on page 16	
4	"Microsoft SQL Server database user privileges" on page 16	
5	"Configuring the snapshot feature for Microsoft SQL Server" on page 18	

Microsoft SQL Server database user privileges:

In Microsoft SQL Server, you must grant DBO (Database Owner) permission to the user. The DB_DDLADMIN role is required for creating objects in the SQL Server database.

Microsoft SQL Server database parameters:

When you install Sterling B2B Integrator with the Microsoft SQL Server database, you must set certain Microsoft SQL Server parameters. Other Microsoft SQL Server parameter settings are recommended for the efficient performance of Sterling B2B Integrator.

When you install Sterling B2B Integrator with Microsoft SQL Server, you must set the Microsoft SQL Server parameters that are listed in "Mandatory settings for Microsoft SQL Server" on page 17.

After you install Sterling B2B Integrator with Microsoft SQL Server, you can improve the database performance by setting the recommended parameters that are listed in the performance documentation for the following items:
• Instance-specific settings for Microsoft SQL Server
• Database-specific settings for Microsoft SQL Server

Mandatory settings for Microsoft SQL Server:

The default collation of Microsoft SQL Server must match the collation for the Sterling B2B Integrator database to prevent collation conversions.

The *tempdb* database that is used by Microsoft SQL Server must be created with the same collation as the default collation of Microsoft SQL Server. The Microsoft SQL Server uses the tempdb database for results that are too large to fit in memory.

If the collations of the tempdb database and the Sterling B2B Integrator database differ, the database engine must convert from the Sterling B2B Integrator collation to the tempdb collation, and then back again before it sends the results to the Sterling B2B Integrator server. These conversions might lead to severe performance issues.

The collation that is required for the Sterling B2B Integrator database is a collation that most closely matches the character set used by Java. By using this collation, you can avoid character data conversions before the data is stored in the database tables. Use the mandatory parameter that is described in the following table when you configure the collation setting:

Parameter	Value
Database Collation	SQL_Latin1_General_CP850_Bin

Additionally, you must perform these tasks:
- Allow Microsoft SQL Server to manage memory dynamically (default).
- Disable any antivirus software that is running on the Microsoft SQL Server data, transaction log, and binary files directory.

Installing the JDBC driver in Microsoft SQL Server:

The use of a SQL Server database with Sterling B2B Integrator requires the installation of a JDBC driver.

About this task

Sterling B2B Integrator requires the correct Microsoft SQL Server driver. See the *System Requirements* for the supported version information.

Download the driver and any appropriate patches from the Microsoft website.

Procedure

To install the JDBC driver in Microsoft SQL Server:
1. Download the `sqljdbc_version_language.tar.gz` file to a temporary directory.
2. To unpack the compressed TAR file, open the directory where you want the driver unpacked and type the following command:

   `gzip -d sqljdbc_version_language.tar.gz`
3. To unpack the TAR file, open the directory where you want the driver installed and type the following command:

   `tar –xf sqljdbc_version_language.tar`

   After the package unpacks, you can find out more information about using this driver by opening the JDBC Help System in the `/absolutePath/sqljdbc_version/language/help/default.htm` file. This file displays the help system in your web browser.
4. When the Sterling B2B Integrator installation asks for the location of the JDBC drivers, specify the extracted JAR file created after you unpack the archive, which is usually named `sqljdbc.jar`. The JDBC driver version is the same as the version of the drivers that are downloaded from Microsoft.

Configuring the snapshot feature for Microsoft SQL Server:

The snapshot feature in Microsoft SQL Server allows you to view a read-only copy of the database even when it is locked. Configuring the snapshot feature can also reduce deadlocks. To enable the snap shot feature, enter the following command:
`ALTER DATABASE db_name SET READ_COMMITTED_SNAPSHOT ON;`

Configuring the MySQL Database:

You can use a MySQL database for maintaining information on Sterling B2B Integrator. Only non-clustered installations of Sterling B2B Integrator can use the MySQL database.

MySQL is case-insensitive for searches with string values. For example, the search results will be the same when you search for users 'Admin' and 'admin'. As a result, it impacts searches for maps, business processes, services, mailboxes, user names, and other data stored in the database.

Use the following checklist to configure the MySQL database for Sterling B2B Integrator:

#	MySQL Database Configuration Checklist	Your Notes
1	Install MySQL database. Refer to MySQL documentation for information about installing the MySQL database. Be sure to install correct version and patches. See *System Requirements* for supported version information.	
2	Set the MySQL Parameters.	
3	Create the database. For example, you can run the following command to create the database: `CREATE DATABASE database_name` Refer to MySQL documentation for more information about creating the database.	
4	Create a user account and grant permissions.	
5	Install the JDBC Drivers for MySQL.	

If you need additional MySQL database information, see the documentation provided by the vendor at http:////dev.mysql.com/doc/refman/5.0/en/.

Update the MySQL Parameters: Sterling B2B Integrator requires the following parameter settings in your MySQL database.

The parameter values recommended are minimum values. You can increase the values based on your requirements or if the database server is used by more than one instance of Sterling B2B Integrator.

It is recommended to configure a data file for auto extension (innodb_data_file_path = ibdata1:400M:autoextend).

Parameter	Value
max_connections	500
max_allowed_packet	100M
default-table-type	INNODB
wait_timeout	31536000
max_write_lock_count	500000
transaction-isolation	READ-COMMITTED
character-set-server	utf8
binlog_format	mixed
table_open_cache	512
key_buffer_size	384M
sort_buffer	512K
connect_timeout	15
innodb_data_file_path	ibdata1:400M:autoextend
innodb_data_home_dir	/*install_dir*/mysql/var/
innodb_log_group_home_dir	/*install_dir*/mysql/var/
innodb_flush_log_at_trx_commit	1
innodb_mirrored_log_groups	1
innodb_log_files_in_group	3
innodb_file_io_threads	4
innodb_lock_wait_timeout	600
innodb_log_file_size	5M
innodb_log_buffer_size	8M
innodb_buffer_pool_size	128M
innodb_additional_mem_pool_size	32M

Review the innodb_buffer_pool_size and the innodf_additional_mem_pool_size in the /*install_dir*/install/mysql/data my.cnf. If the values from the previous Sterling B2B Integrator tuning.properties are larger than what is in your new my.ini file, you need to adjust them accordingly.

Install the JDBC Drivers for MySQL:
About this task

Sterling B2B Integrator requires appropriate JDBC driver for MySQL database. These drivers are platform independent and architecture independent drivers. See *System Requirements* for supported version information.

After obtaining the correct JDBC driver, record the absolute path to its location on your system. You must supply this absolute path when installing Sterling B2B Integrator.

Create User Account and Grant MySQL Database User Privileges:

About this task

You must grant all privileges on the MySQL database to the Sterling B2B Integrator administrative user. The following example creates and grants all privileges to the user in the MySQL database:

```
GRANT ALL PRIVILEGES ON database_name.* TO user@localhost IDENTIFIED BY 'password'
WITH GRANT OPTION
```

Where:
- database_name - refers to the name of the database created.
- user - refers to the database user account that will be used by Sterling B2B Integrator.
- password - refers to the password associated with the database user account.

Once you have granted all the privileges, you will need to FLUSH the privileges to complete the setup. For example, run this command from the SQL prompt:

```
FLUSH PRIVILEGES;
```

Managing Database Passwords:

A password is used by the system to connect to its database. The password is stored as clear text in a system property file.

If the security policies at your company require you to encrypt these passwords, you can do so after you install the system. Encrypting these passwords is optional.

Database passwords encryption methods:

Database passwords are encrypted with one of two methods: OBSCURED or ENCRYPTED.

The encryption method is decided by the value of the **encryptionPrefix** property in the propertyEncryption.properties or the propertyEncryption.properties_platform_security_ext file.

Encrypt Database Passwords (Windows):
About this task

To encrypt the database password:

Procedure
1. Stop Sterling B2B Integrator.
2. Complete the following steps:
   a. Click **Start**.
   b. Right-click **Command Prompt** and select **Run as administrator**. The Administrator: Command Prompt dialog box is displayed.
   c. Navigate to *install_dir*\install\bin.
3. Enter enccfgs.cmd.
4. Enter setupfiles.cmd.
5. Enter deployer.cmd.
6. Enter startWindowsService.cmd to start Sterling B2B Integrator.
7. Enter your passphrase.

Decrypt Database Passwords (Windows):
About this task

To decrypt the database password:

Procedure
 1. Stop Sterling B2B Integrator.
 2. Complete the following steps:
    a. Click **Start**.
    b. Right-click **Command Prompt** and select **Run as administrator**. The
       Administrator: Command Prompt dialog box is displayed.
    c. Navigate to *install_dir*\install\properties.
 3. Open the sandbox.cfg file.
 4. Copy encrypted password from the database_PASS property.

    Use the text that appears after the database_PASS= text. For example, if
    database_PASS= OBSCURED:123ABCxyz321, you would copy the text
    OBSCURED:123ABCxyz321. (OBSCURED is the encryption method for the
    password.)
 5. Complete the following steps:
    a. Click **Start**.
    b. Right-click **Command Prompt** and select **Run as administrator**. The
       Administrator: Command Prompt dialog box is displayed.
    c. Navigate to *install_dir*\install\bin.
 6. Enter `decrypt_string.cmd encrypted _password`.

    For encrypted_password, use the text that you copied in Step 4.

    You are prompted for the system passphrase.

    Your decrypted password appears.
 7. Complete the following steps:
    a. Click **Start**.
    b. Right-click **Command Prompt** and select **Run as administrator**. The
       Administrator: Command Prompt dialog box is displayed.
    c. Navigate to *install_dir*\install\properties.
 8. Edit the sandbox.cfg file to replace the encrypted password with the password
    that was returned in Step 6.
 9. You need to decrypt the entries for YANTRA_DB_PASS and DB_PASS. Repeat
    Steps 4 to 8 to decrypt these entries. You should also decrypt any passwords
    present in the property files. Encrypted passwords typically reside in the
    following property files:
    • sandbox.cfg
    • apservsetup
    • jdbc.properties/.in
    • customer_overrides.properties/.in
 10. Complete the following steps:
    a. Click **Start**.
    b. Right-click **Command Prompt** and select **Run as administrator**. The
       Administrator: Command Prompt dialog box is displayed.
    c. Navigate to *install_dir*\install\bin.
 11. Enter `setupfiles.cmd`.

12. Enter `deployer.cmd`.
13. Enter `startWindowsService.cmd` to start Sterling B2B Integrator.

Preparing for Installation

To help ensure a trouble-free installation, you should complete the installation checklist and understand some concepts.

Installation Checklist for a Windows Non-Cluster Environment: The installation checklist contains the items you need to gather and tasks you need to complete prior to installing Sterling B2B Integrator. The checklist contains:

- Brief descriptions for tasks (detailed procedures are provided after the checklist)
- Information you need to gather to complete the installation

You may want to make a copy of the following checklist and use it to record the information you collect.

#	Installation Checklist for Windows	Your Notes
1	Review your IBM contract to determine what software you have licensed. You need to know this *License Information* so that you can select the correct components/features to install.	
2	Determine which installation method you are going to use: • IBM Installation Manager (Graphical User Interface) • IBM Installation Manager (Response File)	
3	Decide which type of security certificates you will use: • The default self-signed SSL (Secure Sockets Layer) certificate that is automatically installed. • A Certificate Authority-related certificate that you install before installing Sterling B2B Integrator.	
4	If you are using an Oracle, Microsoft SQL Server, or DB2 database, decide if you are going to manually or automatically apply Database Definition Language (DDL) Statements (schema) to the database.	
5	If you are using an Oracle 11.1 database, you must set it up for native compilation by allocating space and by setting the **plsql_native_library_dir** parameter.	
6	Determine if the database password needs to be encrypted.	
7	Record the Hostname on which you plan to install the software.	
8	Record the Directory Name where you plan to install the software.	
9	Record the Login to host machine.	
10	Record the Password to the host machine.	
11	Record the path to the Installation Manager and the installation package file name.	
12	Record the path to JDK.	
12	Record the path to JCE file.	

#	Installation Checklist for Windows	Your Notes
14	Record the Host IP address.	
15	Record the Initial Port Number.	
16	Record the System passphase.	
17	Record the Database vendor name.	
18	Record the Database user name.	
19	Record the Database password.	
20	Record the Database (catalog) name.	
21	Record the Database host name.	
22	Record the Path and file name for the JDBC Driver(s).	
23	Ensure you have read and write privileges on the parent installation directory.	

License information:

A separate license is required for each Sterling B2B Integrator feature that you purchased. During installation, you must choose the license files according to what you purchased. Product licenses do not require an activation key.

IBM assumes customers will only install and use the products they purchased. IBM reserves the right to inspect installs for compliance at any time.

After the installation finishes, if you determine that you need to modify licenses files, see "License modifications" on page 58.

Product Licenses for Sterling B2B Integrator

Sterling B2B Integrator Standard and Enterprise Edition includes:
- MESA Studio
- eInvoicing
- Report Services
- all services and adapters not listed below

Sterling B2B Integrator Standard and Enterprise Financial Edition includes everything listed above plus:
- CHIPS
- SWIFTNet
- NACHA ACH CTX adapter
- FEDWIRE
- Fin Serv XML standard
- FIPS Mode
- Image Cash Letter service
- EBICS

Port Numbers in a Windows Environment: During installation or an upgrade, you are prompted to specify the initial port number for Sterling B2B Integrator.

To specify an initial port number, follow these guidelines:

- Sterling B2B Integrator requires a range of 200 consecutive open ports between 1025 and 65535. The port range starts with the initial port number and ends with the number that equals the initial port number plus 200. For example, if you specify 10100, then you need to make sure that 10100 through 10199 are not used by any other applications on your system.

  Note: Because of RMI, on occasion, a port number outside the range may be assigned.
- The initial port number represents the beginning port number in the range.
- Make sure that port numbers in the port range are not used by any other applications on your system.

During the upgrade, about 50 default ports are pre-assigned for different services. For example, if you do not want xxx32 (10132) to be a default port, you could assign that port to xxx97 or another number within the port range.

After your installation or upgrade, refer to the *install_dir*\install\properties\ sandbox.cfg file for all of the port assignments.

Security certificates:

You can choose between different security certificates before you install Sterling B2B Integrator.

Before you begin the installation, you must decide which of the following security certificates to use:
- The default self-signed SSL (Secure Sockets Layer) certificate that is automatically generated by the installation.
- A Certificate Authority-related certificate that you generate before you install the software.

If you install with the default SSL certificate, but you later want to switch to a CA-related certificate, you can change the certificate with the **sslCert** property in the `noapp.properties_platform_ifcresources_ext.in` file.

Installing the Software

After you have configured the database and prepared your system, you are ready to install Sterling B2B Integrator.

General Installation/Upgrade Information for a Non-Cluster Environment:

CAUTION:
Sterling B2B Integrator should be installed behind a company firewall for security purposes. See the Perimeter Server and Security topics in the Sterling B2B Integrator documentation library for more information on secure deployment options.

Installation Scenarios

It is important to review the following installation scenarios:

Scenario	Instructions
Version 5.1.x is installed and it needs to be upgraded to V5.2.6.	See "Upgrading (V5.2.6 or later)" on page 320

Scenario	Instructions
Version 5.2.x is installed and it needs to be upgraded to V5.2.6.	See Applying a fix pack (V5.2.6 or later)
Version 5.2.6 is being installed as the base release.	Review this document and use the installation instructions.

Installation Methods

Use one of the following methods to install your system:
- IBM Installation Manager (Graphical User Interface)
- IBM Installation Manager (Response file)

General Installation Guidelines

General installation guidelines include the following:
- Do not create the installation directory manually before the start of the installation. If you create the installation directory before you begin, the installation will fail. The directory name provided during the installation process is used to create the new installation directory.
- The name of the directory cannot include spaces and must be less than 30 characters long excluding separators. Using a directory name of more than 30 characters could create an install that is impossible to delete. An example of an installation directory is `C:\SI_52\install`.
- The server on which you are installing must have adequate free disk space.
- *install_dir* refers to the installation directory where the new software will be installed. Do not use any pre-existing directory name or an old version of the Sterling B2B Integrator installation directory. If you do, you could inadvertently overwrite the existing installation. You should create a new installation directory before you begin the installation.
- *parent_install* is the directory one level above the *install_dir* directory.
- Ensure that the *parent_install* directory has the proper read/write permissions.
- If you need to install more than one instance of Sterling B2B Integrator on the same Windows server, you must install the second instance in a different directory.
- If you are installing Sterling B2B Integrator on VMware, provide the IP address of the virtual machine, not the IP address of the VMware host. For example, if 10.251.124.160 is the IP address of the VMware host and 10.251.124.156 is the IP address of the Windows 2003 server it is hosting, you should use 10.251.124.156 as the correct IP address to install Sterling B2B Integrator.
- Sterling B2B Integrator does not support IPv6 installation on Windows. Before applying an IPv6 address, see the *IPv6 Capabilities* section in *System Requirements*.
- The installation creates subsequent ports based on the initial port number. For all of the port assignments, see the `\`*install_dir*`\install\properties\sandbox.cfg` file.

General IBM Installation Manager information:

IBM Installation Manager V1.8.2 is required to install Sterling B2B Integrator on all supported platforms.

Installation Manager is a Java based multiplatform installation application and provides a consistent approach across various platforms. It does not rely on platform-specific installation technology or mechanism.

Installation Manager uses the local Sterling B2B Integrator offering repositories to install or update Sterling B2B Integrator and its add-on features. It determines the packages that must be installed and displays them including the products, fix packs, and interim fixes. It checks that all prerequisites and interdependencies are met before installing the selected product package and feature sets.

Important: The **Uninstall** option only unregisters Sterling B2B Integrator from Installation Manager. The uninstall procedure as described in the related sections must be performed to completely uninstall Sterling B2B Integrator.

Installation Manager must be installed on each computer on which Sterling B2B Integrator is being installed. If you already have Installation Manager installed on your computer for use with other IBM applications, it can be used with installing Sterling B2B Integrator as long as it's the correct version. If you do not have Installation Manager installed, it is provided as part of the Sterling B2B Integrator installation media.

Supported bit-versions

A 64-bit version of IBM Installation Manager V 1.8.2 is provided with the Sterling B2B Integrator installation package. However, you can also install with a 32-bit version of Installation Manager.

Before you start the installation, consider the following options:
- If you are a new customer, use the version of Installation Manager that is provided with the Sterling B2B Integrator installation package and install Sterling B2B Integrator.
- If you have an earlier version of Installation Manager, you can update it to V1.8.2 using the Installation Manager that is provided with the installation package, then install Sterling B2B Integrator .
- If you are a current customer who did not use Installation Manager earlier, install the version of Installation Manager that is provided with the installation package, then upgrade your Sterling B2B Integrator installation.
- If you have a 32-bit Installation Manager installed, you must download the 32-bit Installation Manager V1.8.2 from Fix Central or IBM Passport Advantage, upgrade it, then proceed with the installation of Sterling B2B Integrator. Ensure you have the required libraries that support screen presentation of the text.

Checking for updates

To check for Installation Manager updates, select **Search for Installation Manager updates** on the **File > Preferences > Updates** page. When the check box is selected, Installation Manager searches for updates when any one of the following pages are opened from the Installation Manager start page:
- Install Packages
- Modify Packages
- Update Packages

Installation Manager also searches for updates when you click the Check for Other Versions, Fixes, and Extensions button on the Install Packages page.

Starting Installation Manager

You should start the Installation Manager (and also install Sterling B2B Integrator) as a non-administrator user.

How you start Installation Manager depends on whether you are using the Installation Manager agent that is provided with Sterling B2B Integrator or if you have an Installation Manager instance that is installed on your system. It also depends on whether you have 32-bit or 64-bit Installation Manager.

Open a command prompt and do one of the following tasks to start the Installation Manager in GUI mode:

- Go to the `IM_<operating_system>` directory and type **./userinst** or **userinst.exe** (Windows) for the following scenario:
    - If you do not have Installation Manager installed and are using the Installation Manager agent that is provided with the Sterling B2B Integrator media.
    - If you have a 64-bit Installation Manager installed.
    - If you have Installation Manager installed on a platform that has only one download available for Installation Manager. For example, AIX, Solaris, HP, zLinux.
- Go to `<installation directory>/Installation Manager/eclipse` (for Windows system, replace / with \) and type **./IBMIM** or **IBMIM.exe** if you have 32-bit Installation Manager installed on a Linux or Windows system.

For information on starting Installation Manager in command mode for silent installation, see the Installing or updating with a response file.

For information on starting Installation Manager in command mode to record a response file, see Recording a response file.

Additional heap memory parameters

The heap memory parameters specify the amount of memory Installation Manager can use during the installation process. The heap memory pool sizes that are used by Installation Manager are hardcoded defaults. If these defaults are not sufficient for your environment, you can specify different values by adding parameters to the Installation Manager`config.ini` file.

Important: These additional parameters are required only if you are experiencing `Out Of Memory` errors during the installation process.

The following parameters can be added:
- `memoryMin=user.sb.INSTALL_<OS>_INIT_HEAP.<amount_of_memory>`
- `memoryMax=user.sb.INSTALL_<OS>_MAX_HEAP.<amount_of_memory>`

Where *<OS>* is your operating system and *<amount_of_memory>* is the specified amount of memory.

Operating System	Parameter	Example Entry
Sun-Solaris	Initial Heap Size **INSTALL_SUN_INIT_HEAP**	memoryMin=user.sb.INSTALL_SUN_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_SUN_MAX_HEAP**	memoryMax=user.sb.INSTALL_SUN_MAX_HEAP.3072m
Linux	Initial Heap Size **INSTALL_LINUX_INIT_HEAP**	memoryMin=user.sb.INSTALL_LINUX_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_LINUX_MAX_HEAP**	memoryMax=user.sb.INSTALL_LINUX_MAX_HEAP.3072m
AIX	Initial Heap Size **INSTALL_AIX_INIT_HEAP**	memoryMin=user.sb.INSTALL_AIX_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_AIX_MAX_HEAP**	memoryMax=user.sb.INSTALL_AIX_MAX_HEAP.3072m
HP-UX	Initial Heap Size **INSTALL_HPUX_INIT_HEAP**	memoryMin=user.sb.INSTALL_HPUX_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_HPUX_MAX_HEAP**	memoryMax=user.sb.INSTALL_HPUX_MAX_HEAP.3072m
Windows	Initial Heap Size **INSTALL_WIN_INIT_HEAP**	memoryMin=user.sb.INSTALL_WIN_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_WIN_MAX_HEAP**	memoryMax=user.sb.INSTALL_WIN_MAX_HEAP.3072m

Installing or updating with a response file (V5.2.6 or later):

You can install or update (apply fix pack or interim fix) Sterling B2B Integrator with silent mode by using the sample response files or converting your existing response file to the required format.

Installing in a Windows non-cluster environment with the IBM Installation Manager in GUI mode:

You can install Sterling B2B Integrator in a Windows non-cluster environment with the IBM Installation Manager in a graphical user interface (GUI) mode.

Before you begin
- Complete the "Installation Checklist for a Windows Non-Cluster Environment" on page 93.
- If you are using the Standards Processing Engine (SPE) application with Sterling B2B Integrator, you must install SPE before you install Sterling B2B Integrator.
- If you are using the EBICS Banking Server application with Sterling B2B Integrator, the data encryption for storage within the installation location is not supported.

About this task

To install Sterling B2B Integrator in a Windows non-cluster environment with the Installation Manager in GUI mode:

Important: Following is a list of changes related to installing or upgrading to Sterling B2B Integrator V5.2.6:

- You can install and upgrade through the user interface or silent installation mode (response files). Console mode installation and upgrade is not supported.
- Sterling B2B Integrator JAR file is included in the repository. Therefore it is not required to manually select the JAR file when installing or upgrading.
- You must use Installation Manager V1.8.2 to install or upgrade Sterling B2B Integrator. `InstallService` is disabled, and cannot be used. You can use `InstallService`, only for a specific scenario related to Sterling File Gateway. For more information, see step 13.

Procedure

1. Close all open Windows programs and any command prompt windows.
2. From the installation media, copy the compressed installation package to a location on your desktop.
3. Decompress the installation package.
4. Open the `InstallationManager` folder in the directory structure that is created when the installation package is decompressed. Several `IM_OperatingSystem.zip` files are displayed.
5. Decompress the `IM_Win.zip` file. This action creates a new `IM_Win` folder.

   Important: Installation Manager V1.8.2 is required to install Sterling B2B Integrator V5.2.6.
6. Decompress the `Common_Repo.zip` from the installation package. The action creates two new folders `b2birepo` and `gmrepo`. The `IM_Win`, `b2birepo`, and `gmrepo` folders must be at the same level in a directory.

   Important: `gmrepo` contains the repository file required to install Global Mailbox. For information about Global Mailbox, see Global Mailbox overview.
7. Do one of the following tasks to start the Installation Manager:
   a. Go to the `IM_Win` directory and double-click **userinst.exe** for the following scenarios:
      - If you do not have the Installation Manager installed and are using the Installation Manager agent provided with V5.2.6.
      - If you have a 64-bit Installation Manager installed.
   b. Go to `<installation directory>\Installation Manager\eclipse` and double-click **IBMIM.exe**, if you have 32-bit Installation Manager installed on your Windows system.
8. On the Installation Manager home page, click **Install**.

   Important: If `IM_<operating_system>` and `b2birepo` directories are not in the same directory or if you already have Installation Manager installed, then you get a message saying that there no packages to install or Installation Manager could not connect to the repositories. You must add the Sterling B2B Integrator repository files to the Installation Manager repository. For more information about adding repository files, see Repository preferences.

9. On the Install Packages screen, select **IBM Sterling B2B Integrator**. This action selects the versions also. Click **Next**.

10. Review the license agreement and select the option **I accept the terms in the license agreement**.

   If you do not accept the agreement, the installation process does not continue.

11. Select the location for the shared resources directory and click **Next**. This directory is used by the Installation Manager for the Sterling B2B Integrator installation and other installations.

   The shared resources directory cannot be a subdirectory of the directory for the installation of Sterling B2B Integrator. The shared resources directory must be empty.

12. Choose **Create a new package group** and specify the path to Sterling B2B Integrator installation directory.

13. Select the required features to be installed. The available options are:

   • **IBM Sterling B2B Integrator**
   • **IBM Sterling File Gateway**

   Important: For Sterling B2B Integrator V5.2.6 or later, Sterling File Gateway is automatically installed if **IBM Sterling File Gateway** is selected. Any additional post installation tasks are not required to start Sterling File Gateway. It is strongly suggested to install Sterling File Gateway when installing Sterling B2B Integrator. If for any reason Sterling File Gateway is not installed with Sterling B2B Integrator, you cannot install Sterling File Gateway later using the Installation Manager. You must use `InstallService` to install it. For information about installing Sterling File Gateway by using `InstallService`, see Installing Sterling File Gateway (V2.2.6 or later).

   • **FIPS Module**
   • **AS2 Edition Module**
   • **Financial Services Module**
   • **EBICS Banking Server Module**
   • **B2B Advanced Communications Integration Module**

   Important: When installing Sterling B2B Integrator V5.2.6, select **B2B Advanced Communications Integration Module** to install Sterling B2B Integrator bridge. Sterling B2B Integrator bridge is required for communication between Sterling B2B Integrator and B2B Advanced Communications. If you are installing Global Mailbox and Sterling B2B Integrator, then **B2B Advanced Communications Integration Module** (Sterling B2B Integrator bridge) is installed by default, because Global Mailbox uses the storage module of B2B Advanced Communications. However, you must configure the adapter containers and adapters for Sterling B2B Integrator bridge after installing.

   Important: Sterling B2B Integrator is selected by default. Select only the licenses and features that were defined by your IBM contract. If you are unsure which to select, the installation can proceed without a selection and complete successfully. Startup and operation of the software, however, requires one of the licenses to be selected. See "License modifications" on page 58 to apply licenses after the installation.

   Important: If you are upgrading to Sterling B2B Integrator from a previous version, you must manually install the EBICS client. For more information about installing the EBICS Client manually, see the *EBICS Client User Guide.*

14. Type the path to your JDK directory and click **Next**.
15. Specify the configuration for the features to install and click **Next**.
    - **FIPS Compliance Mode (Must enable FIPS Module)**
    - **NIST 800-131a Compliance Mode**
        - **off** (default value)
        - **strict**
    - **SPE Integration Module (Requires pre-install of SPE, WTX optional)**

      If you select the SPE option, you are prompted for the following information:
        - SPE installation directory
        - (Optional) WebSphere Transformation Extender (WTX) installation directory
        - SPE UI port

      For more information, see the documentation for the integration of Sterling B2B Integrator and SPE.
16. Type the path to the JCE policy file and click **Next**.
17. Enter the following server location information and click **Next**:
    a. Type the explicit IP address or host name for the server or use the default value of `localhost`.
    b. Type the initial port number or use the default value of `8080`.
18. Enter the system passphrase information and click **Next**:
    a. Type a passphrase.
    b. Confirm the passphrase.
19. Type the email information and click **Next**:
    a. Type the email address to which you want system alert messages sent.
    b. Type the SMTP mail server (IP address or host name) that you want to use for system alert messages and other administrative notices.
20. Enter the following database information and click **Next**.
    a. Select the database vendor that you want to use:
        - Oracle
        - Microsoft SQL Server
        - DB2
        - MySQL
    b. Select all of the following options that apply to this installation:

Choices:	Action
(Not for MySQL) **This installation is for a cluster node 2 or higher**	Do not select this option because this installation is a non-cluster installation.

Choices:	Action
(Not for MySQL) **Apply database schema automatically?**	The default is to automatically apply the DDL (Data Definition Language) statements that apply the database schema. If you want to manually create the database schema, then clear the **Apply database schema automatically** check box and continue with the remaining installation steps. **Important:** If you manually apply the schema, the installation stops without error later in the installation process so that you can manually apply the schema.

21. Type the following database connection information. Do not click **Next** until you configure the JDBC driver in the next steps.

    - User name
    - Password (and confirmation)
    - Catalog name
    - Host
    - Port

22. Select a JDBC driver or drivers and click **Next**:

    a. Click **Add** to browse to the file location for the appropriate JDBC driver or drivers:

       - (Oracle, Microsoft SQL Server, and MySQL only) Absolute path and file name for one JDBC driver file.
       - (DB2 only) Absolute paths and file names for two JDBC driver files. Use the Type-4 JDBC driver. This type of driver converts JDBC calls into the network protocol that is used directly by DB2, allowing a direct call from the system to the DB2 server.

    b. Click **Test** to confirm that the driver is supported for the database and Sterling B2B Integrator.

       Tip: Make sure that you select the driver path in the **Database driver** field before you click **Test**.

       The Installation Manager must successfully validate the connection to the database before you can continue with the installation. If there is a validation failure, you can view the system log to determine more information about the failure. Perform the following tasks:

       1) Identify the location of the user's application directory. Click **Start** > **Run** and enter the command %APPDATA%.

       2) Open the user's application directory: *local_path*\IBM\Installation Manager\logs

       3) Open the index.xml file in a browser.

       4) Identify the log file that is based on the time stamp of when you started the installation.

       5) Click the installation file to view a listing of errors that occurred during that installation.

23. Determine which of the following options apply to this installation. Select the applicable options and click **Next**:

    - **Verbose install?**

- **This installation is an upgrade from a prior version**

    Do not select this option because this installation is a new installation.

24. Determine what performance configurations apply to this installation and click **Next**. Accept the default value or type the appropriate value.

    - **Number of Processor Cores**
    - **Physical Memory (MB) allocated to Sterling B2B Integrator**

25. Review the installation package summary information. Click **Install** to apply your installation settings to the installation.

    If you did not select the option to automatically apply the database schema, the installation stops and you must perform these additional steps to complete the installation with manual DDL statements:

    a. Open the installation directory.

    b. Locate the `InstallSI.log` file and open it with a file editor.

    c. Search the file for these error messages:

       - `<SI_Install>/repository/scripts/EFrame_IndexAdds.sql must be applied to the database.`
       - `<SI_Install>//repository/scripts/EFrame_Sequence.sql must be applied to the database.`
       - `<SI_Install>//repository/scripts/EFrame_TableChanges.sql must be applied to the database. Exiting installation..."`

       Important: If you do not find these error messages in the log file, the installation failed because of another reason and you must resolve that error and attempt the installation again. If you find these messages, continue with the remaining steps.

    d. Edit each `.sql` script for the database. These changes might include changing the SQL delimiter or adding table space options.

    e. Log in to the database as the database schema user.

    f. Run the following SQL files manually in this order:

       Important: When you are running the scripts, you must run the SQL scripts in the specified order.

       - `EFrame_IndexDrops.sql`
       - `EFrame_TableChanges.sql`
       - `EFrame_IndexAdds.sql`
       - `EFrame_TextIndexAdds.sql`
       - `EFrame_Sequence.sql`
       - `EFrame_TextIndexModify.sql`
       - `EFrame_TextIndexUpdates.sql`
       - `EFrame_TextIndexUpgrade.sql`
       - `EFrame_Static.sql`

       Important: ActiveMQ uses dynamically generated table names that are based on the name of the installation node. Table generation is not included in these SQL scripts, but is performed automatically during the initial start of Sterling B2B Integrator or when a new cluster node is added. Table generation might fail if security restrictions reduced the Sterling B2B Integrator database user permissions. To avoid this issue, ensure that the DBADM role permissions are enabled during the initial startup. If further issues arise, contact IBM customer support for guidance.

g. Exit from the database.

   h. Open the parent directory of the Sterling B2B Integrator installation directory.

   i. Delete (or rename as a backup) the installation directory.

   j. Unisntall the Sterling B2B Integrator offering to clear out the Installation Manager metadata about the installation, and the delete (or rename as a backup) the Sterling B2B Integrator installation directory.

   k. Restart the installation wizard and provide the same installation options that you provided before you cleared the **Apply database schema automatically** check box. If you have recorded a response file (as suggested in step 8), you can use the response file to install Sterling B2B Integrator.

   The Installation Progress screen indicates which component of the installation is in process.

   A status bar below the **Repository Information** heading displays the progress of the component installation. When the installation completes, a large green circle with a check mark displays with the message `The packages are installed`. A link is provided to view the installation log file.

26. Click **Finish**. The Installation Manager closes and you are returned to your desktop.

   Check the `InstallSI.log` file to verify that all of the components were installed properly.

   If you are installing on Windows 2008, see "Configure the Sterling B2B Integrator Desktop Icon for Windows Server 2008" on page 34.

27. Determine whether you need to apply a fix pack or interim fix to the installation. For information about fix pack or interim fix installation, see "Applying a Fix Pack (V5.2.6 or later)" on page 625 and "Applying an interim fix (V5.2.6 or later)" on page 635.

Configure the Sterling B2B Integrator Desktop Icon for Windows Server 2008: About this task

User Access Control (UAC) is a security component in Windows Server 2008. If you enable the UAC, it affects the installation process and the daily processing for Sterling B2B Integrator. If you disable the UAC, which requires a reboot, the installation process and daily processing for Sterling B2B Integrator remains the same as in previously supported Windows version.

If you installed or upgraded Sterling B2B Integrator on a Windows Server 2008 and you created a desktop icon for Sterling B2B Integrator, you must complete this task in order for the desktop icon to work.

Procedure
1. Right-click on the Sterling B2B Integrator **desktop icon**.
2. Click **Properties**.
3. In the Shortcut tab, click **Advanced**.
4. Select the check box for **Run as Administrator**.
5. Click **OK** to apply the changes to Advanced Properties.
6. Click **OK**.

Validating the Installation

After installing Sterling B2B Integrator, you should validate the installation to ensure that everything is working according to your needs.

Installation validation checklist:

As part of the installation, you need to run validation tests to ensure that the software installation was successful.

Complete the following tasks:

#	Validate Installation Checklist	Your Notes
1	Start Sterling B2B Integrator.	
2	Access Sterling B2B Integrator.	
3	Validate the installation.	
4	Stop Sterling B2B Integrator.	

Starting Sterling B2B Integrator in a Windows non-cluster environment:

After you install the software, you can start Sterling B2B Integrator.

Before you begin

If you are starting Sterling B2B Integrator after you upgrade the application from V5.1, change the values of the following properties in the `centralops.properties` file to 600. This action prevents the **StartWindowsService.cmd** command from timing out before Sterling B2B Integrator starts. The `centralops.properties` file is in the *install_dir*\install\properties directory.
- **OpsServer.commandTimeout**
- **PassPhrase.urlTimeout**

Procedure
1. Open the *install_dir*\install\bin directory.
2. Enter `StartWindowsService.cmd`. The final start processes run, concluding with the following messages:

   `Open your Web browser to http://`*host:port*`/dashboard`

   where *host:port* is the IP address and port number on your system.
3. Record the URL address so that you can access Sterling B2B Integrator.

Accessing Sterling B2B Integrator:

You can access Sterling B2B Integrator through a web browser.

Procedure
1. Open a browser window and enter the address that is displayed at the end of the start.
2. On the login page, enter the default user ID and password. The default login is at an administrative level. One of your first tasks as an administrator is to change the administrative password and to register other users with other levels of permission.

Validating the installation with a sample business process:

You can validate the installation by testing a sample business process.

Procedure
1. From the **Administration Menu**, click **Business Process** > **Manager**.
2. In the **Process Name** field, type `Validation_Sample_BPML` and click **Go!**
3. Click **execution manager**.
4. Click **execute**.
5. Click **Go!** The `Status: Success` message is displayed on the upper left side of the page.

Stop Sterling B2B Integrator (Windows):
About this task

To stop Sterling B2B Integrator in a Windows environment:

Procedure
1. From the Administration Menu, select **Operations > System > Troubleshooter**.
2. Click **Stop the System** and wait for shutdown to complete.

Stop Sterling B2B Integrator (Hardstop Windows):
About this task

To stop Sterling B2B Integrator in a Windows environment:

Procedure
1. Navigate to *install_dir*\install\bin.
2. Enter `StopWindowsService.cmd`. Your should receive a message that services have been stopped. Services include Noapps, Opsserver, WebDav, and Database-related service.

Post-Installation Configuration
After installing Sterling B2B Integrator and validating the installation, you may need to do additional configuration depending on your system and business needs.

Post Installation Configuration Checklist (Windows):   After you install Sterling B2B Integrator you need to complete some post installation configuration. Complete the items listed in the post installation checklist:

#	Post Installation Configuration Checklist	Your Notes
1	Upon installation, several default user accounts are automatically created to get you started. For security purposes, the system administrator should update all default user account passwords immediately after installation is completed. See "Changing default user account passwords" on page 40.	
2	Download Sterling B2B Integrator Tools.	
3	Determine if you need to modify any Property Files.	
4	"Configure a Non-English Environment" on page 47	

#	Post Installation Configuration Checklist	Your Notes
5	"Configure Browser Settings for a Different Language" on page 50	

Changing default user account passwords:

When you install Sterling B2B Integrator, several default user accounts are automatically created to get you started. One of the first actions you must take after installation is to update these accounts with unique passwords, because the default ones can be known by all Sterling B2B Integrator customers.

About this task

Default user account passwords are preset at installation. For security purposes, the system administrator should update all default user account passwords immediately after installation is completed.

Default user accounts are listed below in the same order as they appear in the UI under **Accounts > User Accounts > List All**. You can use this table to track the user accounts you want to update.

User Account Name	Update password
MBX_daemon	
admin (*)	
aft_user (*)	
anon	
as2_user	
commandlineuser	
dash_oper (*)	
dash_part (*)	
dash_prtspon (*)	
dash_sponsor (*)	
fg_architect	
fg_operator	
fg_provisioner	
fg_sysadmin (*)	
gmbx_user	
ja_turbine	
jane	
jane_doe	
joe_employee	
joe_manager	
joe_supplier	
john	
sd_buyer	
sd_supplier	

User Account Name	Update password
turbine	
ws_buyer	
ws_director	
ws_employee	
ws_finance	
ws_hr	
ws_manager	
ws_purchaser	
ws_supplier	

(*) denotes a super user

To change the password for a user account, perform the following tasks.

Procedure
1. Log into Sterling B2B Integrator using ID = `admin` and password = `password`.
2. Go to **Accounts > User Accounts**. Under the List section click **Go!** All default user account names are listed.
3. Click **Edit** next to the user account name you want to update the password for.
4. In the New Password and Confirm New Password fields, enter a new, secure password for this User ID.

   Note: Passwords must be at least six characters long.
5. Click **Save** and **Finish**.

What to do next

Repeat steps 3 - 5 for all user account names you want to update.

Download of the Sterling B2B Integrator tools:

After you install Sterling B2B Integrator, you can install tools like the Map Editor and the Graphical Process Modeler (GPM).

Sterling B2B Integrator includes tools that run on a desktop or personal computer. After you install Sterling B2B Integrator, you can install the following tools:
- Map Editor and associated standards

   Note: The Map Editor requires a 32-bit JDK. This JDK is not provided with the product download or media. For more information, see *System Requirements*.
- Graphical Process Modeler (GPM)
- Web Template Designer
- (If licensed) MESA Developer Studio plug-ins, including MESA Developer Studio Software Development Kit (SDK) and MESA Developer Studio Skin Editor
- (If licensed) Reporting Services, which require MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports

Attention: Conflicting IP addresses can cause problems when you download a desktop tool.

Property files configuration in a Windows environment: Property files contain properties that control the operation of Sterling B2B Integrator. For example, the REINIT_DB property in the sandbox.cfg file controls whether or not a database is initialized when you install Sterling B2B Integrator.

By modifying the values of these properties, you can customize the Sterling B2B Integrator to suit your business and technical needs. Most property files are in the *install_dir*\install\properties directory.

After installing Sterling B2B Integrator, most property files and scripts do not need any further configuration for basic operation. However, if you want to customize any specific operations, for example setting a different logging level - you will need to edit (or in some cases, create) certain property or .xml files.

Before changing any property files, refer to the *Working with Property Files* documentation for general information about how to work with Property Files.

Areas where you might need to make specific property files changes after an installation include:
- LDAP user authentication
- Prevention of cross-site script vulnerabilities
- Logging configuration
- Process-specific property file settings

Configure a Non-English Environment:

You can install Sterling B2B Integrator in an English or a non-English environment. The base language for the Configurator can be switched only once.

Use the following checklist to change to a non-English environment:

#	Non-English Environment Checklist	Your Notes
1	Install the Sterling B2B Integrator Language Pack.	
2	Load the Sterling B2B Integrator Language Pack Factory Defaults.	
3	Load the Sterling B2B Integrator Language Pack translators.	
4	Configure Encodings.	
5	Configure Locales.	

Language Settings in a Windows Environment: Language settings for Java applications involve both character sets and encoding:
- A character set is a set of characters (letters, numbers, and symbols such as #, $, and &) that are recognized by computer hardware and software.
- An encoding is a representation of data in a particular character set. An encoding set is a group of encodings.

For information about basic and extended encoding sets, see .http://download.oracle.com/javase/1.5.0/docs/guide/intl/encoding.doc.html

The default encoding set includes:
- UTF-8 (default)
- IS0-8859-1
- ISO-8859-5
- US-ASCII
- ISO_8859-1
- EUC-JP
- UTF-16
- ISO-2022-JP

Sterling B2B Integrator provides two property files that contain supported encoding sets. These properties files reside in the *install_dir*\install\properties directory.
- encodings.properties – Contains the default encoding set used in the user interface.
- encodings_large.properties – Contains all supported encoding sets.

You are not limited to the encodings in the encoding.properties file. Sterling B2B Integrator enables you to configure the encodings properties files to expand the number of encodings you can use.

Install the Language Pack (Windows):
About this task

Before installing the language pack be sure that you have successfully installed Sterling B2B Integrator.

To install Sterling B2B Integrator language pack:

Procedure
1. Insert the language CD into your CD-ROM drive.
2. Complete the following steps:
    a. Click **Start**.
    b. Right-click **Command Prompt** and select **Run as administrator**. The Administrator: Command Prompt dialog box is displayed.
    c. Navigate to Win Directory.
3. Run the `setup.exe` command.

Load the Language Pack Factory Defaults (Windows):
About this task

To load the language-specific factory defaults, use the loadDefaults.cmd script available in the *install_dir*\install\bin directory and pass the locale-specific installer file.

For example:

```
loadDefaults.cmd \install_dir\install\database\FactorySetup\install\
<language>_<country>_locale_installer.xml
```

The default locale that is shipped with the CD is ja_JP.

Load the Language Pack Translations (Windows):
About this task

Prior to loading the Sterling B2B Integrator Language Pack factory defaults, be sure that you have successfully completed all instructions in the database chapter.

To load the language pack translation with custom localization literals:

Procedure
1. Complete the following steps:
   a. Click **Start**.
   b. Right-click **Command Prompt** and select **Run as administrator**. The Administrator: Command Prompt dialog box is displayed.
   c. Navigate to *install_dir*\install\bin.
2. Run the LocalizedStringReconciler tool in the IMPORT mode, enter: `ant.cmd -f localizedstringreconciler.xml import -Dsrc=`*install_dir*`\database\ FactorySetup\XMLS`

   This tool first inserts the value specified in the *<from_language>_<from_country>*_ycplocalizedstrings_*<to_language>_ <to_country>*.properties file present in the *install_dir*\database\FactorySetup\ XMLS\<language>_<country> directory into the database.

   The basefilename refers to the file present in the \database\FactorySetup\ XMLS directory, for which the translations are to be imported into the database.
3. Verify that your locale settings such as currency, time format, and date are correct.

Configure Encodings for Sterling B2B Integrator (Windows):
About this task

To configure your encoding set:

Procedure
1. Stop Sterling B2B Integrator and wait for shutdown to complete.
2. Complete the following steps:
   a. Click **Start**.
   b. Right-click **Command Prompt** and select **Run as administrator**. The Administrator: Command Prompt dialog box is displayed.
   c. Navigate to *install_dir*\install\bin.
3. Open the encodings_large.properties file.
4. Select the encodings you want to add to the encodings.properties file.
5. Open the encodings.properties.in file.
6. At the end of the encodings.properties.in file, add the encodings you selected from the encodings_large.properties file. When adding encodings from one file to the other, first copy the encodings as they appear in the encodings_large.properties file. After adding the new encodings, ensure that the index numbers are consecutive. If the index numbers are not consecutive, change the index number or numbers as needed. For example, encoding54 cannot follow encoding6. In this example, change encoding54 to encoding7.

   The first name in the definition (before the comma) is the name that will appear in the Sterling B2B Integrator user interface. You can change this name to make it more descriptive. For example: encoding4 = 819,ISO8859_1 may be

changed to encoding4 = WesternEurope,ISO8859_1. ISO8859_1 is the Java canonical name and should not be changed.

7. Update the first line in the encodings.properties.in file (numberof). Change *numberof* to the number of encodings added to the file. For example, if the current value is numberof = 6 and you add 5 new encodings, the new value is numberof = 11.

   numberof indicates the total number of encodings located in the file. You must update numberof to ensure that the encodings you added will be visible in the user interface.

8. Complete the following steps:

   a. Click **Start**.

   b. Right-click **Command Prompt** and select **Run as administrator**. The Administrator: Command Prompt dialog box is displayed.

   c. Navigate to *install_dir*\install\bin.

9. Enter `setupfiles.cmd`.

10. Start Sterling B2B Integrator.

Configure Locales (Windows):
About this task

Sterling B2B Integrator runs in any locale that Java supports. If you want to run in a non-default locale, then configure your environment to the specific locale you want to use.

To determine and set your locale in a Windows environment:

Procedure
1. Select **Control Panel > Regional Options > General**.
2. From the Your locale (location) list, select the language and location.
3. Click **Set Default** and select the locale from the Set the appropriate locale list.
4. To configure your operating system as a non-English environment, consult your operating system's documentation.

Configure Browser Settings for a Different Language:

Some browsers and operating systems require additional configuration in order to correctly render the Sterling B2B Integrator user interface in certain languages.

Use the procedures provided in this section to properly configure a browser to display the Sterling B2B Integrator user interface in the appropriate language.

Tip: If your browser is unable to display the user interface properly or you see a mixture of English and another language, this is an indication that the browser is configured incorrectly. You may also need to install additional fonts on the Sterling B2B Integrator server.

Support for other languages:

The Sterling B2B Integrator user interface includes support for several languages.

Attention: Sterling B2B Integrator product code is designed to work with Latin based English only input. The use of any other type of input might have uncertain results and is not supported.

The Sterling B2B Integrator user interface includes support for the following languages:
- French
- German
- Italian
- Japanese
- Korean
- Polish
- Portuguese (Brazilian)
- Simplified Chinese
- Traditional Chinese
- Dutch

Four of these languages involve expanded Unicode character sets:
- Japanese
- Korean
- Simplified Chinese
- Traditional Chinese

The implementation of these languages in your environment might require the addition of new Unicode fonts on your server:

If...	then...
Sterling B2B Integrator is on a server that already supports these languages	You do not need to install any additional fonts.
You are installing on a server that is only setup for the Latin alphabet and you have users who need to view the Sterling B2B Integrator user interface in any of the Asian languages	You need to have the fonts for these languages installed.

A way to test the implementation of a language is to create a user with one of the new languages and setup their browser to use that language as it's primary language. Log in to the system and review the user interface. If you see a mixture of English and the new language, your configuration is not correct. You need to verify that the browser is set up correctly and review the fonts that are installed on the server.

The installation of more fonts/languages on the server should be done in coordination with your technical support team. Be sure to include a Unicode Sans Serif font on your server.

Important: While multiple languages are supported, a user account should be configured to use one specific language to avoid user interface display issues.

Add a Custom Language Preference Code:
About this task

In order for your browser to display the Sterling B2B Integrator user interface and address bar text correctly in a foreign language, you must specify the appropriate language preference code for the browser.

Sterling B2B Integrator supports the following language preference codes:

* de
* en
* en-US
* es
* fr
* it
* ja
* ko
* pt-BR
* zh
* zh-TW
* du

Your browser must be configured to use one of these specific language preference codes to view the Sterling B2B Integrator user interface.

Note: Most browsers provide a default listing of language preference codes. However, Sterling B2B Integrator requires the use of the specific codes as listed here. For example, you cannot use the default German (Germany) [de-DE], you must use **[de]**.

You may need to add these supported codes as a custom language preference code in your browser.

Note: The instructions for configuring a browser's display will differ for each browser. Refer to your chosen browser's documentation for specific instructions on configuring that browser's display.

The following is an example of how to configure a client machine display for an IE window.

Procedure

1. Open a browser window.
2. Select **Tools > Internet Options**.
3. At the bottom of the window under Appearance, click **Languages**.
4. Click **Add** to display the Add Language window.
5. In the User defined: text box, enter the appropriate language preference code.
6. Click **OK**. The added code should display in the **Language: listing** in the Language Preference window. An example entry would be, **User Defined [de]**.
7. (Optional) Move the added language up to be the first one listed if there are multiple languages listed.
   a. Select the newly added language.
   b. Click **Move up**.

      The newly added language should now appear first in the Language listing.
8. Click **OK** to save your Language Preference settings.
9. Click **OK** to close the Internet Options window.
10. Close your browser window.

11. Open a new browser window and access the Sterling B2B Integrator user interface to verify your changes have been applied.

Change Default Browser Font:
About this task

Some languages require the use of special fonts to properly display the Sterling B2B Integrator user interface. The client computer must be configured to display these types of fonts. Each Windows client must be configured appropriately.

Note: The instructions for configuring a browser's display will differ for each browser. Refer to your chosen browser's documentation for specific instructions on configuring that browser's display.

The following is an example of how to change the default browser font for an Internet Explorer (IE) window.

To configure a client machines display for IE:

Procedure
1. Determine which fonts are needed to support your needed language and verify they are installed on the server.

   Note: The installation of additional fonts/languages on the server should be done in coordination with your technical support team. Be sure to include a Unicode Sans Serif font on your server.
2. Open an IE browser window.
3. Select **Tools > Internet Options**.
4. At the bottom of the window under Appearance, click **Fonts**.
5. From the Language Script drop-down menu, change the Latin based value to the appropriate script for your needed language.

   Note: If your encoding is not available, you may need to install a new version of Internet Explorer, but make sure you install the appropriate international options.
6. Select a Webpage font and a Plain text font appropriate for the new language. A Plain text font is one in which all the characters take up the same amount of space and is associated with older computer terminals.

   Note: If no fonts are listed in the menus, then you need to install fonts designed for that encoding.
7. Click **OK** to close the Fonts window.
8. Click **OK** again to close the Internet Options window.
9. Close your browser window.
10. Open a new browser window and access the Sterling B2B IntegratorSterling B2B Integrator user interface to verify your changes have been applied.

Set the Client Character Display:
About this task

To use special characters, such as for various languages, the client computer must be configured to display these types of characters. In order for Unicode characters to display correctly in the application, each Windows client must be configured appropriately.

Note: The instructions for configuring a browser's display will differ for each browser. Refer to your chosen browser's documentation for specific instructions on configuring that browser's display.

The following is an example of how to configure a client machine display for an Internet Explorer (IE) window.

To configure a client machines display for IE:

Procedure
1. Open an IE browser window.
2. Select **View > Encoding > Auto-Select**.

Clearing Browser and Java Plugin Caches Before Initial Deployment:
About this task

Once the Sterling B2B Integrator is ready for deployment, each user must clear the browser and Java Plugin caches on their client machines before launching Sterling B2B Integrator. This requirement applies to all browsers.

To clear the browser and java caches, do the following:

Procedure
1. From the browser menu bar, select **Settings > Control Panel > Internet Options**.
2. Select the General tab, and in the Temporary Internet Files panel, click **Delete Files**. The Delete Files dialog displays.
3. Check the **Delete All Offline Content** checkbox. Click **OK** until the Internet Properties window closes. The browser cache is cleared.
4. From the Windows start menu, select **Settings > Control Panel > Java**.
5. Select the General tab, and in the Temporary Internet Files panel, click **Settings**. The Temporary Files Settings dialog displays.
6. In the Disk Space panel, click **Delete Files**. The Delete Temporary Files pop-up window displays.
7. Click **OK** until the Java Control Panel window closes.

General Internet Explorer Browser Settings: When using Sterling B2B Integrator without any customizations, you need to set the General Browser settings for your Internet Explorer in order to obtain the best browser performance.

Note: This can impact the display of reports and search listings.

To set your general browser settings:
1. From the Internet Explorer menu, select **Tools > Internet Options**.
   The Internet Options window opens to the General tab.
2. Locate the Browsing history section and click **Settings**.
   The Temporary Internet Files and History Settings window opens.
3. Below Check for newer versions of stored pages: select the **Everytime I visit the webpage** option.
4. Click **OK** to save your changes.
5. Click **OK** to apply the changes.
6. Close the browser window and re-open it.

The browser is now set to check for updates to pages everytime a page is accessed rather than relying upon a cached version.

Internet Explorer Security Settings:
About this task

When using Sterling B2B Integrator without any customizations, you need to set security settings for your Internet Explorer to obtain the best browser performance.

To configure the Internet Explorer security and privacy settings:

Procedure

1. From the Internet Explorer menu, select **Tools > Internet Options**.
2. Click the **Security** tab.
3. Select the Web content zone from which Sterling B2B Integrator is accessed.
4. Set the security level to **Medium-low**.
5. Click **Custom Level** and set your security settings according to the following table:

Internet Explorer Security Setting	Sterling B2B Integrator
.NET Framework	
Loose XAML	Enable
XAML browser applications	Enable
XPS documents	Enable
.NET Framework-reliant Components	
Permissions for components with manifests	High Safety
Run components not signed with Authenticode	Enable
Run components signed with Authenticode	Enable
ActiveX Controls and Plugins	
Allow previously unused ActiveX controls to run without prompt	Enable
Allow Scriptlets	Enable
Automatic prompting for ActiveX controls	Enable
Binary and script behaviors	Enabled
Display video and animation on a webpage that does not use external media player	Disable
Download signed ActiveX controls	Prompt
Download unsigned ActiveX controls	Prompt
Initialize and script ActiveX controls not marked as safe for scripting	Prompt
Run ActiveX controls and plugins	Prompt/Enable
Script ActiveX controls marked as safe for scripting	Enable
Downloads	
Automatic prompting for file downloads	Enable
File download	Enable
Font download	Prompt
Enable .NET Framework setup	Enable

Internet Explorer Security Setting	Sterling B2B Integrator
Java VM	
Java permissions	Medium safety
Miscellaneous	
Access data sources across domains	Enable
Allow META REFRESH	Enable
Allow scripting of Internet Explorer web browser control	Enable
Allow script-initiated windows without size or position constraints	Enable
Allow webpages to use restricted protocols for active contents	Prompt
Allow websites to open windows without address or status bars	Enable
Display mixed content	Prompt
Do not prompt for client certificate selection when no certificates or only one certificate exists	Enable
Drag and drop or copy and paste files	Prompt
Include local directory path when uploading files to a server	Enable
Installation of desktop items	Prompt
Launching applications and unsafe files	Prompt
Launching programs and files in an IFRAME	Prompt
Navigate sub-frames across different domains	Enable
Open files based on content, not file extension	Enable
Software channel permissions	Medium safety
Submit non-encrypted form data	Prompt
Use Phishing Filter	Disable
Use Pop-up Blocker	Disable
Userdata persistence	Enable
Websites in less privilged web content zone can navigate into this zone	Prompt
Scripting	
Active scripting	Enable
Allow Programmatic clipboard access	Prompt
Allow status bar updates via script	Enable
Allow websites to prompt for information using scripted windows	Enable
Scripting of Java applets	Enable
User Authentication	
Logon	Prompt for user name and password

6. Click **OK** to save your settings.
7. Click **OK** to save the new settings and **Apply** to implement the settings. The new settings are applied when a new browser window is opened.

System Maintenance

From time to time, you might need to perform system maintenance activities.

These activities might include:

- Performing a Checksum
- Adding or removing a license

System Maintenance: From time to time, you may need to perform system maintenance activities. These activities might include any or all of the following:

- Performing a checksum
- Modifying the license files

DB Checksum Tool:

A checksum is a simple redundancy check used to detect errors in data. The DB Checksum tool generates the difference in resource checksum between the default resource and the latest system resource from the database.

In Sterling B2B Integrator, a verification process compares the checksum between the existing default resource and the resource that was added after applying a fix pack or upgrading. The DB Checksum tool, a resource difference tool generates a granular report of the changes in the system that was not permitted to be set as defaults.

Perform a Checksum (Windows):
About this task

To run the DB Checksum tool in the Windows environment:

Procedure

1. Navigate to *install_dir*\\bin.
2. Enter `db_checksum_tool.cmd [-d] [-i [1 | 2 | 3 | 4 | 5]] [-r [wfd | map | schema | sii | template]] [-o <output file>] [-g]`

   Where:

   -d is the mode to dump the difference of resource checksum between the default resource and latest system resource.

   -i is the resource type integer (optional).

   1 is WFD.

   2 is MAP.

   3 is SCHEMA.

   4 is SII.

   5 is TEMPLATE.

   -r is the resource name (optional). For example, wfd, map, schema, sii, or template.

   -o is the file name to output all the messages (optional).

   -g is the file name that lists all the ignored resources (optional).

   -h is the help screen.

   The DB Checksum tool performs the relevant checksum operation based on the command options and generates the output message.

License modifications:

After the installation finishes, you can modify the software licenses that you loaded with the **AddLicenseSet** command.

The **AddLicenseSet** command is in the `bin` directory of your UNIX or Windows installation. After the initial installation, the license files are in the following directories:

* UNIX - */install_dir*/install/properties/licensefiles
* Windows - *install_dir*\install\properties\licensefiles
* iSeries - */install_dir*/properties/licensefiles

You can add licenses or review the license list from the UI. On the Administration Menu, click **System** > **B2B Console** > **Operations** > **System** > **Licenses**.

AddLicenseSet Command Parameters

Use the **AddLicenseSet** command to modify a single license file or the entire license file directory.

To use the **AddLicenseSet** command, you must do the following:

* Open the `bin` directory
* Include the absolute path to the license file directory or to a license file

The **AddLicenseSet** command has the following parameters:

AddLicenseSet Parameter	Description
-reload	Use this parameter to reload the license files.
	This parameter deletes all of the license files from the database before the new files are loaded. The old license files are saved to the following locations:
	• UNIX - */install_dir*/install/logs/security/ old_licenses
	• Windows - *install_dir*\install\logs\security\ old_licenses
	• iSeries - */install_dir*/logs/security/old_licenses
-upgrade	Use this parameter during an upgrade only.
	This parameter deletes all of the old license files from the database and installs the new license files. The old license files are saved to the following locations:
	• UNIX - */install_dir*/install/logs/security/upgrade
	• Windows -*install_dir*\install\logs\security\upgrade
	• iSeries -*/install_dir*/logs/security/old_licenses

The **AddLicenseSet** command will check if Sterling B2B Integrator is running. If it is running, the command will call the Ops server to refresh the license from the database. If you have any problems with your licenses after running the **AddLicenseSet** command, stop and restart Sterling B2B Integrator.

License Modification: Examples:

There are several different ways you can use the **AddLicenseSet** command to modify your licenses.

UNIX Examples

From the *install_dir*/bin directory:

Scenario	Command usage (UNIX example)
Reload a single license file	`./AddLicenseSet.sh /install_dir/install/properties/` `licensefiles/SI_SFG_License.xml -reload`
Reload all of the license files in the directory	`./AddLicenseSet.sh /install_dir/install/properties/` `licensefiles/ -reload`
Upgrade a single license file	`./AddLicenseSet.sh /install_dir/install/properties/` `licensefiles/SI_SFG_License.xml -upgrade`
Upgrade all of the license files in the directory	`./AddLicenseSet.sh /install_dir/install/properties/` `licensefiles/ -upgrade`

Windows Examples

From the *install_dir*\bin directory:

Scenario	Command usage (Windows example)
Reload a single license file	`AddLicenseSet.cmd\install_dir\install\properties\` `licensefiles\SI_SFG_License.xml -reload`
Reload all of the license files in the directory	`AddLicenseSet.cmd\install_dir\install\properties\` `licensefiles\ -reload`
Upgrade a single license file	`AddLicenseSet.cmd\install_dir\install\properties\` `licensefiles\SI_SFG_License.xml -upgrade`
Upgrade all of the license files in the directory	`AddLicenseSet.cmd\install_dir\install\properties\` `licensefiles\ -upgrade`

Installing and Configuring Perimeter Servers

A perimeter server is an optional software tool for communications management. A perimeter server can be installed in a demilitarized zone (DMZ). A DMZ is a computer host or small network inserted as a neutral zone between a company's private network and their public network. A perimeter server requires a corresponding perimeter client.

The perimeter server manages the communications flow between outer layers of your network and the TCP-based transport adapters. A perimeter server can solve problems with network congestion, security, and scalability, especially in high-volume, Internet-gateway environments.

Installation Guidelines for Perimeter Servers with Sterling B2B Integrator: The installation program installs a perimeter client and a local mode server. The local mode server is useful for testing purposes or in environments that do not require a secure solution. However, if you require high-volume, secure connections, you must install a perimeter server in a remote zone, either a more secure or less secure network than your integration server.

Consider the following before you install a perimeter server:

- Licensing for a perimeter server is determined by the licensing restrictions on the corresponding B2B adapters.
- Each perimeter server is limited to two TCP/IP addresses:
  - Internal interface is the TCP/IP address that the perimeter server uses to communicate with Sterling B2B Integrator.
  - External interface is the TCP/IP address that the perimeter server uses to communicate with trading partners. To use additional TCP/IP addresses, install additional perimeter servers.
- You can have multiple perimeter servers installed on the same computer interacting with one instance of Sterling B2B Integrator. To install a perimeter server on a computer with an existing instance, install the new perimeter server in a different installation directory.
- The combination of internal TCP/IP address and port must be unique for all perimeter servers installed on one computer.
  - If a perimeter server is installed using the wildcard address, then all ports must be unique. The assigned ports are not available for use by adapters that use the server or any other perimeter server on that computer.
  - The internal and external interface may use the same TCP/IP address. However, the port used by the perimeter server is not available to the adapters that use the server.

Perimeter Server Installation Methods: You can install perimeter server either in silent mode or in interactive mode. The default installation mode is silent. In the silent mode, you should specify the details in a silent file, whereas in the interactive mode, you should enter the value each time a prompt appears.

Perimeter Server Information Gathering Checklist: Before you install the perimeter server, you need to gather the following information and answer the following questions:

Perimeter Server Information Gathering Checklist	Your Notes
Path to java	
Path to the Sterling B2B Integrator installation directory	
Will this perimeter server be installed in a less secure network?	
TCP/IP address or the DNS address that the perimeter server will listen on.	
Listening port for the perimeter server.	
Local port that the perimeter server will use to connect to Sterling B2B Integrator. Port number must be higher than 1024.	

Perimeter Server Security Vulnerabilities: When Sterling B2B Integrator is deployed with a remote perimeter server in a more secure network zone, there is a security vulnerability. An intruder may compromise the host where the proxy resides, and take over the persistent connection to the perimeter server residing in the more secure zone. If this happens, the perimeter server will relay all the intruder's network requests past the firewall into this internal zone.

To prevent an intrusion, limit the activities the remote perimeter server can perform on behalf of the proxy to specifically those activities that the proxy needs to do for its operation.

Control these limitations by using a configuration residing in the secure network zone with the remote perimeter server, inaccessible by the proxy that could become compromised.

Installing a perimeter server in a more secure network (Windows):

Install a perimeter server in a more secure network in a Windows environment in interactive mode.

Before you begin
- Sterling B2B Integrator must be installed.
- Complete the Perimeter Server information gathering checklist.

Procedure
1. Close all open Windows programs.
2. Copy the .jar installation files from the installation media to a Windows directory. If you are using FTP to copy the file, be sure that your session is set to binary mode.
3. Complete the following steps:
   a. Click **Start**.
   b. Right-click **Command Prompt** and select **Run as administrator**. The Administrator: Command Prompt dialog box is displayed.
   c. Enter the following command:*path_to_java*\java -jar *install_dir*\install\packages*ps_filename*.jar —interactive
4. Enter the full path name for the Sterling B2B Integrator installation directory and press **Enter**.

   If there is an existing installation in the directory you specify, you can update it using the same settings. Enter yes, and the installation proceeds without more entries.
5. Enter yes to confirm that the installation directory is correct.

   The program verifies the amount of available disk space.
6. Answer the question:

   `Is this server in a less secure network than the integration server?`

   Yes
7. Answer the question: `Will this server need to operate on specific network interfaces?`
   - Enter yes to select from a list network interfaces available.
   - Enter no.
8. Enter the TCP/IP address or DNS name that the integration server listens on for the connection from this perimeter server.
9. Enter yes to confirm the TCP/IP address or DNS name.
10. Enter the port that the integration server listens on for the connection from this server. The port number must be higher than 1024.
11. Enter the local port number that the perimeter server uses for the connection to the integration server.

The port number must be higher than 1024. Specify a port of zero for the operating system to select any unused port.

12. Enter yes to confirm the port number.

   After the installation is complete, the following messages are displayed:

   ```
   Installation of Perimeter Service is finished
   ```

   ```
   To start this Perimeter Server change to the install directory and run
   the startup script.
   ```

   ```
   You will also need to configure this server in your integration server
   (SI) UI.
   ```

Installing a perimeter server in a less secure network (Windows):
About this task

Install a perimeter server in a Windows environment in interactive mode.

Procedure

1. Close all open Windows programs.
2. Copy the .jar installation files from the installation media to a Windows directory. If you are using FTP to copy the file, make sure that your session is set to binary mode.
3. Complete the following steps:
   a. Click **Start**.
   b. Right-click **Command Prompt** and select **Run as administrator**. The Administrator: Command Prompt dialog box is displayed.
   c. Enter the following command:*path_to_java*\java -jar *install_dir*\install\packages*ps_filename*.jar –interactive
4. Enter the full path name of the installation directory.
5. If there is an existing installation in the directory you specify, you can update it using the same settings. Answer the question:

   ```
   There is an existing install at that location, update it while keeping
   existing settings?
   ```

   If **yes**, the installation proceeds without more entries.

   Note: If you want to change any of the settings, you must use a new directory, or delete the old installation before you reinstall the perimeter server. You cannot overwrite an existing installation, and you cannot use an existing directory that does not contain a valid installation. The existing installation must be Sterling B2B Integrator V5.2.x or later.
6. Confirm that the installation directory is correct.

   The program verifies the amount of available disk space.
7. Answer the question:

   ```
   Is this server in a less secure network than the integration server?
   ```

   Yes
8. Answer the question:

   ```
   Will this server need to operate on specific network interfaces?
   ```

   If **yes**, the program returns a list of the network interfaces available on your host. Select the interfaces for the server to use.
9. Enter the TCP/IP address or DNS name for the internal interface to use to communicate with the integration server (Sterling B2B Integrator). Press **Enter** to use a wildcard for this address.

10. Verify the TCP/IP address or DNS name for the internal interface.
11. Enter the TCP/IP address or DNS name for the external interface to use to communicate with trading partners. Press Enter to use a wildcard for this address.
12. Verify the TCP/IP address or DNS name for the external interface.
13. Enter the port that the perimeter server listens on for the connection from the integration server (Sterling B2B Integrator). The port number must be higher than 1024.
14. Verify the port.

    When the perimeter server is installed, the following message is displayed:

    `Installation of Perimeter Service is finished`
15. Change to the installation directory.
16. Enter `startupPs.cmd` to start the perimeter server.

Silent Installation Method for an External Perimeter Server: You can install an external perimeter server using a silent install file. The perimeter server can be installed on the same machine where you have installed Sterling B2B Integrator or on a separate machine. It is recommended to install the perimeter server on an separate machine.

To use the silent installation method, you first create the silent install file and then you use to complete the installation.

Create the Silent Installation File for an External Perimeter Server:
About this task

Create a silent installation file with the following variables:

Entry	Description
INSTALL_DIR	(Required) The installation directory that stores perimeter server files and related directories. This directory must exist prior to running the silent install.
REVERSE_CONNECT	(Optional) Determines if the perimeter server is to be installed in a more secure network zone. Valid values: • Y - more secure network zone • N - less secure network zone
PS_PORT	(Required) Determines the perimeter server port to interact with the system.
PS_SECURE_IF	(Required) Determines the TCP/IP address or DNS name for the internal interface to communicate with the integration server (Sterling B2B Integrator). You can use a wildcard (*) for this address.
PS_EXTERNAL_IF	(Required) Determines the TCP/IP address or DNS name for the external interface to communicate with the trading partners. You can use a wildcard (*) for this address.
REMOTE_ADDR	(Optional) Determines the remote perimeter server address. (Not required if REVERSE_CONNECT=N)
REMOTE_PORT	(Optional) Determines the remote perimeter server port. (Not required if REVERSE_CONNECT=N)

Entry	Description
MAX_JVM_HEAP	(Required) Determines the maximum Java heap size allocated to the JVM.

Installing an external perimeter server with a silent installation file (Windows):

Install an external perimeter server with a silent installation file.

About this task

Before you begin, create the silent installation file.

Procedure
1. From the installation media, copy `SI.jar` to a Windows directory.
2. Set up your silent installation file and record the file location.
3. Complete the following steps:
   a. Click **Start**.
   b. Right-click **Command Prompt** and select **Run as administrator**. The Administrator: Command Prompt dialog box is displayed.
   c. Enter the following command:`\`*path_to_java*`\java -Xmx512m -jar` `\`*install_dir*`\install\packages\`*ps_filename*`.jar –f silent.txt`

Install a Fix Pack in a Remote Perimeter Server (Windows):
About this task

Remote perimeter servers are not automatically updated by a fix pack. You must reinstall the perimeter server using the new perimeter server installation file supplied with the fix pack.

To update a Remote Perimeter Server:

Procedure
1. Update your installation with the latest fix pack. Obtain the fix pack from the Support Center web site.
2. Locate your perimeter server file in the *install_dir*\install\packages directory of your installation. For fix packs, obtain the file from the Support Center web site. These files have a name that identifies a version number. For example, ps_2006.jar.
3. Copy the file to a directory on the remote server.
4. Stop the perimeter server.
5. Complete the following steps:
   a. Click **Start**.
   b. Right-click **Command Prompt** and select **Run as administrator**. The Administrator: Command Prompt dialog box is displayed.
   c. Enter the following command:`\`*absolutePath*`\bin\java -jar `*filename*`.jar` `-interactive`

      Where the *absolutePath* is the directory name where the Java version is installed.
6. Enter the full path to the installation directory. If you do not want to change any settings for your perimeter server, specify the same directory where the remote perimeter server was originally installed.

7. Answer the question:

   There is an existing install at that location, update it while keeping existing settings?

   If **yes**, the installation will proceed without additional entries.

   Note: If you want to change any of the settings, you must use a new directory, or delete the old installation before performing the new installation. You cannot overwrite an existing installation, and you cannot use an existing directory that does not contain a valid installation. The existing installation must be V5.2 or later.

   When the perimeter server is installed, the following message is displayed:

   Installation of Perimeter Service is finished

8. Change to the installation directory.
9. Start the perimeter server.

Grant Permissions for Specific Activities for a Perimeter Server:
About this task

Before you begin:
- Remote perimeter server must be installed for a more secure zone.
- Know what permissions you want to grant
- Understand the content of the restricted.policy file. The first two grant sections in the restricted.policy file are required for correct perimeter server operation. Do not modify these sections.

Procedure

1. Install a remote perimeter server, choosing the option for a more secure network zone.
2. At the installation prompt *Is this server in a less secure network than the integration server?*, select **No**, which is the option for a more secure network zone.
3. Navigate to the perimeter server installation directory.
4. Open the restricted.policy file.
5. Add permission lines for each back-end server that you intend to allow the proxy to access. There are commented out examples for each type of server.

   The first two grant sections are required for correct perimeter server operation. Do not modify these sections.

   For example, you can grant permission to a target FTP Server. In the example, servers are configured to listen on the following ports: 33001 (for FTP), 33002 (for HTTP), and 1364 (for C:D). These port numbers can be edited.

   ```
   // To restrict or permit the required Host/Server to communicate with the
   PS, update the "ftphost/htttphost/snode" with that of the Server IP and
   provide the appropriate PORT number where the Server will listen. //
    // For each target FTP Server
    // permission java.net.SocketPermission "10.117.15.87:33001", "connect"; //
    Control connection.
    // permission java.net.SocketPermission "10.117.15.87:lowPort-highPort",
   "connect"; // Passive data connections.
    // 10.117.15.87 indicates IP of the FTP Server for which the permission is
   granted by PS for communicating with client //
    // For each target HTTP Server
    //
    // permission java.net.SocketPermission "10.117.15.87:33002", "connect";
    // 10.117.15.87 indicates IP of the HTTP Server for which the permission
   is granted by PS for communicating with client //
   ```

```
// For each target C:D snode
//
// permission java.net.SocketPermission "snode:1364", "connect";
//  10.117.15.87 indicates IP of the Connect Direct Node for which
the permission is granted by PS for communication //
```

6. In the perimeter server installation directory, there is the perimeter server settings file called remote_perimeter.properties. Edit it to change the "restricted" setting to a value of true to turn on restrictions.

7. In the future, any attempt by the perimeter server to access disallowed network resources will be rejected and logged in the perimeter server log written to the perimeter server installation directory.

Perform DNS Lookup on Remote Perimeter Server:
About this task

By default, a perimeter server performs DNS lookup in the main server JVM. If you have limited DNS in your secure area, you can configure the remote perimeter server to look up trading partner addresses in the DMZ.

To enable DNS lookup, add the following property to customer_overrides.properties. Set the value to *true*:

Property Name	Description
perimeter.*.forceRemoteDNS=true	Forces resolution of DNS names at remote perimeter server. Set the value to *true* to configure remote perimeter servers to look up trading partner addresses.

Start Perimeter Servers (Windows):
About this task

To start a perimeter server in Windows:

Procedure
1. Navigate to the perimeter server installation directory.
2. Complete the following steps:
   a. Click **Start**.
   b. Right-click **Command Prompt** and select **Run as administrator**. The Administrator: Command Prompt dialog box is displayed.
3. Enter startPSService.cmd.

Stop Perimeter Servers in (Windows):
About this task

To stop a perimeter server in Windows:

Procedure
1. Complete the following steps:
   a. Click **Start**.
   b. Right-click **Command Prompt** and select **Run as administrator**. The Administrator: Command Prompt dialog box is displayed.

2. Enter `stopPSService.cmd`.

User Documentation

The user documentation is available from an online documentation site on the web.

Providing the documentation in an online environment allows for frequent updates of content that is based on user feedback and usability.

If you need a printed copy of the documentation, you can print topics of information through your Internet browser, or you can download documents in PDF format, after you add it to a collection on IBM Knowledge Center.

To access the documentation site from within Sterling B2B Integrator or one of its tools, select the help ⑦ icon. The system must reside on a computer that supports Internet access and an Internet browser.

Improving your access to online documentation:

You can improve your access to online documentation by using several methods.

About this task

After you access the IBM Knowledge Center, you can perform the following tasks:
* Enter a word or phrase and search the entire library for information.
* Move through a hierarchy of contents pages to identify the topic you want to read or print.
* Print topics by using your browser's Print function.
* Add documents to your collection and download them in PDF format.

Uninstall Sterling B2B Integrator from a Windows Non-Cluster Environment
Before you begin

If you have installed Sterling B2B Integrator software using IIM, then perform these steps to unregister Sterling B2B Integrator packages from the IIM registry:
* Launch IIM.
* Click **Uninstall** and select the required Sterling B2B Integrator package (Media, FixPack, or Interim Fix).
* Confirm and click **Uninstall**.

About this task

To uninstall Sterling B2B Integrator from a Windows environment:

Procedure
1. Stop Sterling B2B Integrator and wait for shutdown to complete. Navigate to the `install_dir\install\bin` directory and enter `StopWindowsService.cmd` If you begin removing files before all business processes and the system is stopped, you may be unable to remove the software successfully.
2. Back up the file system and database.
   This step is optional. However, by backing up the file system and database, you are ensured that Sterling B2B Integrator is completely recoverable.

3. Remove the installation directory by entering the following command in the parent directory of your installation directory: rd /s /q *install_dir*\install

4. If you use an Oracle, Microsoft SQL Server, or DB2 database, these remain intact even after you remove Sterling B2B Integrator from the server. If you no longer want to reference the data, contact your database administrator about removing unwanted tables and recovering the database space where Sterling B2B Integrator used to reside.

5. Manually remove the JDK:

   a. Navigate into the _uninst subdirectory of your JDK installation directory

   b. Enter `uninstall.cmd`

6. After you remove Sterling B2B Integrator from the server, you can remove Eclipse, and any tools that were downloaded to the desktop, including the following:

   - Map Editor and associated standards

     Refer to the *Map Editor Guide* for information about removing the Map Editor.

   - Graphical Process Modeler

     Refer to the *Graphical Process Modeler Guide* for information about removing the Graphical Process Modeler.

   - Web Template Designer

     Refer to the *Web Extensions Guide* for information about removing the Web Template Designer.

   - (If licensed) MESA Developer Studio plug-ins, including:

     – MESA Developer Studio Software Development Kit (SDK)

     – MESA Developer Studio Skin Editor

     Refer to the *MESA Developer Studio* guide for information about removing MESA Developer Studio.

   - (If licensed) Reporting Services, which requires MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports.

     Refer to the *MESA Developer Studio* guide for information about removing Reporting Services.

Troubleshooting Tips for Windows Environment

Situation	Message or Symptom	Explanation/Resolution
Installing	You encounter errors or problems during installation.	**Explanation** The installation creates several log files that you can use to diagnose problems like the failure of an installation. **Resolution** Examine the log files generated during installation: - ant.install.log (in the *install_dir* directory) - *install_dir*\PreInstallSI.log

Situation	Message or Symptom	Explanation/Resolution
Installing	When you entered an absolute path during installation, a message indicated that the command was not found.	**Explanation** You entered an incorrect path. Check the information entered. **Resolution** Enter the correct path.
Installing	IM is installed successfully, but SI Fails to install.	Go to Start Open IM select Help and then Export logs to a file for analysis.

Installing a desktop tool or resource	Cannot download any of the following:
	• Map Editor and associated standards
	• Graphical Process Modeler
	• Web Template Designer
	• (If licensed) MESA Developer Studio plug-ins, including:
	  – MESA Developer Studio Software Development Kit (SDK)
	  – MESA Developer Studio Skin Editor
	• (If licensed) Reporting Services, which requires MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports.
		Explanation
		
		When you install Sterling B2B Integrator, system files are created that contain an internal IP address. If you install Sterling B2B Integrator behind a firewall, and your firewall is configured to accept an external IP address from a client computer, you may not be able to download the desktop tools and resources. The firewall will reject the internal IP address from a client residing outside of the firewall.
		
		Resolution
		
		Modify the system files that contain the invalid IP address. Follow these steps:
		1. Navigate to *install_dir*\install\bin.
		2. Stop Sterling B2B Integrator.
		3. Enter the following command followed by the external IP address:
		   `patchJNLP.cmd external_IP_address`
		4. Restart Sterling B2B Integrator.

Cluster Installation or Upgrade	When configuring TCPS the following warning can be found in the activemqbroker.log: sun.security.provider.certpath. SunCertPathBuilderException: unable to find valid certification path to requested target	**Resolution** Add the system certificate to the trust store using the KeyTool command.
Cluster Installation or Upgrade	When configuring TCPS the following warning can be found in the activemqbroker.log: Do not mention any SSL cipher in the ActiveMQconfig. xml. oracle.net.ns.NetException: Invalid cipher suites specified.	**Resolution** Do not mention any SSL cipher in the ActiveMQconfig.xml.

Situation	Message or Symptom	Explanation/Resolution
e-Invoice Upgrade: Oracle Add Constraint Error	When you upgrade Sterling e-Invoicing and are using an Oracle database, if the upgrade fails with the error message `name is already used by an existing object`, this occurs because the default behavior for the `drop constraint` command changed in Oracle 10.	**Explanation** The index that is used to support the constraint is now only removed if the index was generated by the `create constraint` command. The indexes for Sterling e-Invoicing are always generated from constraints during an install. If you receive this error during a Sterling e-Invoicing upgrade, it is because of how the database was restored, the version of Oracle you are using, and because the Oracle `imp` command exported the indexes and constraints separately. There is no way to determine when the imp command will not add a create index command to the export file if it was generated by a constraint – but if it does add the command, the database restore process loses the association of the constraint and its underlying index. The database script that runs during a Sterling e-Invoicing upgrade executes two steps: 1. First, it drops the unique constraint so the next step can redefine it using additional columns. However, the drop constraint command does not remove the underlying index if the association with its index was lost. 2. The next command that redefines this constraint requires a different index definition, but in this scenario the name of the index the constraint wants to use already exists, which causes the `name is already used by an existing object` error. **Resolution** If you receive this error message, the solution for this problem is to drop the index and rerun the Sterling e-Invoicing upgrade. The drop index command you should use is: `drop index UNQ_EINV_CANON`

Situation	Message or Symptom	Explanation/Resolution
Apply a fix pack or Upgrade	The *install_dir*\install\installed_data directory is created (if clustered, on each node) during an upgrade or applying a fix pack. This directory can become very large and take up needed space on the file system.	**Explanation** The information in this directory is used during upgrade or applying a fix pack, but is not required afterward. The deployment/cleanup tasks for the upgrade or fix pack do not remove this directory. **Resolution** The directory can be manually removed to increase the available space for the file system: 1. Navigate to *install_dir*\install 2. Enter `rd /S installed_data` 3. If prompted to confirm deletion, enter Y for yes.

UNIX/Linux Cluster Environment Installation (V5.2.6 or later)

You may follow different installation and upgrade scenarios when you install and upgrade Sterling B2B Integrator in a UNIX/Linux Cluster environment.

Installation Scenarios

It is important to review the following installation scenarios:

Scenario	Instructions
Version 5.1.x is installed and it needs to be upgraded to V5.2.6.	See "Upgrading (V5.2.6 or later)" on page 320
Version 5.2.x is installed and it needs to be upgraded to V5.2.6.	See Applying a fix pack (V5.2.6 or later)
Version 5.2.6 is being installed as the base release.	Review this document and use the installation instructions.

Prerequisite knowledge for installation in the UNIX environment

The installation of Sterling B2B Integrator requires background knowledge in different areas.

Before you begin the installation, you must be knowledgeable on the following topics:
- Application servers
- Operating system on which you plan to install
- Database administration
- VI or another text editor
- *System Requirements* for this release of Sterling B2B Integrator.

Intended audience:

This document can be used by different members of your organization.

This document is intended for use by:
- System administrators
- Installation engineers
- Database administrators.

Assumptions for this guide:

The procedures in this guide are accurate as of the publication date and are specific to this version of the document.

Before you begin the installation

Before you install Sterling B2B Integrator, you must perform certain tasks.

Before you begin the software installation, you need to perform the following tasks:
- Perform system verification tasks
- Perform operating system verification tasks
- Obtain the correct version of the JDK, JCE, and JDBC drivers required. Most Java files required are provided with the product download or media. See the *System Requirements* for more information.

System verification tasks:

Before you install Sterling B2B Integrator, you must perform certain system verification tasks.

Item	System Verification Task	Your Notes®
1	Use the *System Requirements* to verify that your system hardware and software meet the requirements that are specified for this release. For HP, you must run the HP JConfig utility to obtain the required patches and kernel modifications.	
2	Verify that the file system has adequate free disk space.	
3	Verify the following items: • An operating system user account exists on the host server. • User account has permissions to run the commands for the operating environment.	
4	Verify that your database was installed and configured. See the *Configure the Database* chapter for more information. If you are going to manually apply DDL statements, you need to complete the database schema work before you begin the installation.	

Item	System Verification Task	Your Notes®
5	If you are using a non-English-language environment, confirm that you are using the appropriate character set.	

Operating system verification:

Before you install Sterling B2B Integrator, you must perform certain operating system verification tasks.

You must verify your operating system configuration by using the following checklist:

For the Operating System	Operating System Configuration Checklist	Your Notes

HP-UX	Establish these settings:
	
	• Verify kernel parameters and establish the following minimum settings by running **kctune** command:
	  – kctune max_thread_proc 1024
	  – kctune maxdsiz 2147483648
	  – kctune maxdsiz_64bit 8589934592
	  – kctune maxssiz 369098752
	  – kctune maxssiz_64bit 536870912
	• Run the **ulimit** utility, verify, and establish the following minimum settings:
	  – ulimit **-d** = 2097152 KB or higher
	  – ulimit **-s** = 360448 KB or higher	

For the Operating System	Operating System Configuration Checklist	Your Notes

AIX	To ensure that */install_dir*/install directory has the necessary permissions, AIX users must run the following command on the parent directory of the */install_dir*/install directory before installation:
	
	`chmod -R a-s <absolute path>/`*install_dir_parent*
	
	where *install_dir_parent* is the directory in which */install_dir*/install is created.
	
	For example, to specify
	
	`AIX_1/applications/test1/`*my_install* as your installation directory, run the command from the `AIX_1/applications` directory (directly above the `test1` directory):
	
	`chmod -R a-s test1`
	
	or from another location on the file system:
	
	`chmod -R a-s /AIX_1/applications/test1`
	
	This command ensures that when the *my_install* directory is created during installation, it inherits the correct permissions from the `test1` directory.
	
	The **ncargs** parameter specifies the maximum allowable size of the ARG/ENV list (in 4 KB blocks) when the exec() subroutines are run. Set the **ncargs** parameter to 16 or higher.
	
	To display the current value of **ncargs**, enter the command `lsattr -El sys0 -a ncargs`.
	
	To change the current value of **ncargs**, enter the command `chdev -l sys0 -a ncargs=NewValue`.
	
	Note: The **lsattr** command option is **–El** (lowercase L) and the **chdev** command option is **–l** (lowercase L).
	
	Change the following default entries in the `/etc/security/limits` file:
	• `fsize = -1`
	• `core = 2097151`
	• `cpu = -1`
	• `data = 262144`
	• `rss = 65536`
	• `stack = 65536`
	• `nofiles = 4096`	

For the Operating System	Operating System Configuration Checklist	Your Notes

Linux	You must disable SE Linux by entering the following text:
	
	`/etc/sysconfig/selinux: SELINUX=disabled`
	
	Ensure that `/etc/hosts` has short-names first for all entries. For example,
	`127.0.0.1localhostlocalhost.localdomain`
	
	If the base locale is English, verify the following values:
	• **LANG** variable is `en_US`
	• **LANG** variable is exported	

For the Operating System	Operating System Configuration Checklist	Your Notes

Red Hat Enterprise Linux	Make the following system changes:
	
	1. If the base locale for the system is English, edit the /etc/sysconfig/i18n file by changing the **SUPPORTED** variable from en_US.utf8 to en_US. You can also allow multiple support with the following format: en_US.utf8:en_US
	
	2. Save and close the /etc/sysconfig/i18n file.
	
	3. Edit the /etc/security/limits.conf file by adding the following lines:
	  • * hard nofile 8196
	  • * soft nofile 4096
	  • * hard memlock 3000000
	  • * soft memlock 3000000
	  • * hard nproc 16000
	  • * soft nproc 16000
	  • * hard stack 512000
	  • * soft stack 512000
	  This change updates the system **ulimits**. For **nofile**, set the value to unlimited.
	
	4. Save and close the /etc/security/limits.conf file.
	
	5. Restart the system.
	
	IBM Installation Manager in UI mode might fail to start on an RHEL 6.1 or higher x86_64 (64-bit) OS because Installation Manager is a 32-bit application and depends on some of the 32-bit libraries.
	
	For information about installing the required 32-bit OS libraries, refer to the IBM Support website (https://www-304.ibm.com/support/docview.wss?uid=swg21459143)
	
	CAUTION:
	Because of a known issue with the IBM JDK on RHEL 6.1 or higher, a performance degradation might be seen in comparison to previous RHEL releases. To avoid this issue, disable the CFS on RHEL 6.1 or higher.
	
	To disable CFS:
	1. Log in as root
	2. Edit /etc/sysctl.conf and add "kernel.sched_compat_yield = 1"
	3. Restart the system
	
	For more information, go to the IBM SDK and Runtime Environment Java Technology Edition Version 6 information Center and search for *known limitations on Linux***.**	

For the Operating System	Operating System Configuration Checklist	Your Notes

Solaris	Set the following entries in the `/etc/security/limits` file:
	
	   `nofiles = 4096` (recommended value is `unlimited`)
	
	   `set rlim_fd_max=4096` (limit is `65535`) - hard limit
	
	   `set rlim_fd_cur=4096` - soft limit
	
	• To make the setting effective as the hard limit, restart the server or run the following command:
	
	   `kill -1 inetd`
	
	• To make the setting effective as the soft limit, use the parent shell configuration (for example, `.profile`). Then, restart the server.	

SUSE Linux	Make the following system changes:
	
	1. If the base locale for the system is English:
	  • For the individual user, edit the `$HOME/.i18n` file by setting `export LANG="en_US"`.
	  • For a system-wide change, edit the `/etc/sysconfig/language` file by setting `RC_LANG="en_US"`. You must also set `ROOT_USES_LANG="yes"`.
	
	2. You can also allow multiple support with the following format: `RC_LANG="en_US.utf8:en_US"`
	
	3. Save and close the file. Language settings take effect on your next session.
	
	4. Edit the `/etc/security/limits.conf` file by adding the following lines:
	  • `* hard nofile 8196`
	  • `* soft nofile 4096`
	  • `* hard memlock 3000000`
	  • `* soft memlock 3000000`
	  • `* hard nproc 16000`
	  • `* soft nproc 16000`
	  • `* hard stack 512000`
	  • `* soft stack 512000`
	  This change updates the system **ulimits**. For **nofile**, set the value to `unlimited`.
	
	5. Save and close the `/etc/security/limits.conf` file.
	
	6. Restart the system.	

Verification of the system requirements:

Before you begin the installation, verify that your system meets the hardware and software requirements that are specified for this release.

The hardware requirements that are listed in the *System Requirements* are the minimum requirements. Your system requirements might exceed these requirements if you are running other applications on the same machine as Sterling B2B Integrator.

The installation strictly enforces the following system requirements:

• Operating system version must match requirement exactly.

- The minimum patch level for the operating system is enforced, but you can apply higher patch levels.
- JDK version must match requirement exactly.
- The disk space is a minimum for the installation. The system must be separately sized to handle whatever load is going to be put on the system.
- Database version must match exactly.
- JDBC driver version supports exact matches and wildcard matches.

If any of these requirements are not met, the installation fails. If the installation fails, review the installation log for a list of non-compliant items.

Upgrading your JDK (Windows and UNIX):

Sometimes you need to upgrade your JDK version to support a new version of Sterling B2B Integrator.

About this task

If you have V5.2.4.1 or higher installed, you can use the **upgradeJDK** script to upgrade your version of the JDK. See *bin Directory Files* for more information.

If you have V5.2.4.0 or lower installed, follow the steps below to upgrade your JDK.

Procedure

1. Download the new JCE file. For example, the `UnrestrictedPolicy.zip` policy file for the IBM JDK.
2. Back up the existing JDK in *<Install Dir>*/jdk. Change the folder name to `jdk_back`)
3. Copy the new IBM JDK (1.7.0) folder to the installation Directory. Directory Name should be `jdk`)
4. Copy all the jars present in *<Install Dir >*jdk_back\jre\lib\ext to *<install Dir>*jdk\jre\lib\ext directory.
5. If your installation of V5.2.4 or lower was built using the Oracle (SUN) JDK, continue to the next step. Otherwise skip to step 6.
   a. Edit the `sandbox.cfg` property file.
   b. Set JCE_DIST_FILE=*<New Path of Supported JCE File>*. For example, `JCE_DIST_FILE=D\:\\IBM\\unrestrictedpolicyfiles.zip`.
   c. Back up the `local_policy.jar` and `US_export_policy.jar` files present in *<Install Dir>*jdk\jre\lib\security.
   d. Unzip the new JCE file. For example, `Unrestrictedpolicyfiles.zip` file. Copy `local_policy.jar` and `US_export_policy.jar` to *<Install Dir>*jdk\jre\lib\security.
6. Run `updateJavaSecurity.cmd` *<path_to_new_jdk><Install Dir>*/jdk.
7. Verify that security providers have been updated in *<Install Dir>*\jdk\jre\lib\security\java.security.
8. Follow the Upgrade Guide instructions for your upgrade scenario.

Configure the Database
You must install, create, and configure a database so that each Sterling B2B Integrator instance has a dedicated schema and login for the database.

In a clustered environment, Sterling B2B Integrator can support the following databases:
- DB2
- Oracle®
- Microsoft SQL Server

See System Requirements for supported version information.

Required database information before you install Sterling B2B Integrator in a cluster environment:

Before you begin to install Sterling B2B Integrator, you need to install and configure your database.

Review and gather the following information. An *x* indicates that the information is required.

Information to Gather	Oracle	DB2	Microsoft SQL Server	Record Information Here
Application Instance Host				
Application Instance Port				
Database User Name	x	x	x	
Database Password	x	x	x	
Database Catalog Name	x	x	x	
Database Host	x	x	x	
Database Port	x	x	x	
JDBC Driver #1	x	x	x	
Use BLOB data?	x		x	
Enable Multibyte Support?	x	x	x	

Database sizing and capacity planning:

Database sizing is designed to give you estimates of the database growth and to help you plan the disk requirements.

There are many factors to consider when you are estimating the amount of disk space that is required for Sterling B2B Integrator. As a result, trying to consider all growth factors is impractical because the user might not know the answers to many questions that are required to do a detailed forecast. Over the years the cost of disks has dramatically decreased, and the capacity and speed of disks has increased. The method of how information system managers order disk capacity also has changed, from purchasing disk arrays that are dedicated to a particular database server and project, to the concept of SANS (storage area networks).

Consider the confidence that you have in your data estimates when you are making the final purchase decision and adjust accordingly. After the initial purchase and production deployment, disk growth should be tracked for future purchase forecasts.

You should track your actual database storage usage and the number of database records regularly. Correlating these two metrics enabled you to plan your future

disk requirements. Moreover, determining the average amount of space used for each order line or shipment line, enables you to accurately predict your future growth requirements.

Database Definition Language (DDL) statements:

When you install Sterling B2B Integrator, you can manually apply Database Definition Language (DDL) statements to your database tables instead of requiring the installation process to do it directly.

This feature increases database security by reducing the database permissions of the Sterling B2B Integrator database user. The rights to database objects can be reserved for a secure user like a customer database administrator (DBA). A business can require that only a DBA with the proper permissions can make database changes.

Configuring the DB2 Database:

Before you install Sterling B2B Integrator with the DB2 database, you must configure the database.

Before you begin:
- If you do not have DB2 installed, follow the procedures in the DB2 installation manual.
- The installation script creates tables and indexes. Certain tables require a page size of 32 KB. You must have a temporary table space to accommodate such tables. DB2 automatically places tables and indexes in the available table spaces. You can move the tables to a different table space after the installation is complete.
- If you are reinstalling the software, be aware that data in your existing database is deleted. To preserve the data, either back up the existing database or save it under a different name.
- After you create and configure your database, recycle the database. Then, stop and restart the database to apply the changes.

Use the following checklist to configure DB2 for Sterling B2B Integrator:

Item	DB2 Database Configuration Checklist	Your Notes
1	Create the database. Refer to the DB2 documentation on creating the database, including creating a schema repository, login, and table space. **Important:** In V5.2.6.2 or later you must ensure that all tablespaces used by Sterling B2B Integrator tables have a minimum page size of 8K. Otherwise installation will fail. Be sure to install the correct version and patches. See the System Requirements for supported version information.	
3	Review the DB2 parameters.	
4	Ensure that the DB2 user privileges are set.	
5	Install the JDBC drivers for DB2.	

DB2 database user privileges:

The DBADM role is required to perform administrative operations in DB2 database.

DB2 parameters:

When you install Sterling B2B Integrator with the DB2 database, you must set certain DB2 parameters. Other DB2 parameter settings are recommended for the efficient performance of Sterling B2B Integrator.

When you install Sterling B2B Integrator with DB2, you must set the DB2 parameters that are listed in the following topics:
- "Mandatory settings for IBM DB2 registry variables" on page 6
- "Mandatory settings for DB CFG parameters" on page 6

After you install Sterling B2B Integrator with DB2, you can improve the DB2 database performance by setting the recommended parameters that are listed in the performance documentation for the following items:
- DB2 registry variables
- DBM CFG parameters
- DB CFG parameters
- DB2 for Linux on System z
- DB2 for LUW configuration and monitoring

Mandatory settings for IBM DB2 registry variables:

Mandatory IBM DB2 registry values are critical for IBM DB2 performance with Sterling B2B Integrator.

Variable	Mandatory value
DB2_SKIPDELETED	ON Allows index-range queries or table-scan queries to skip records that are in an uncommitted delete state. This reduces the amount of lock contention from Read Share and Next Key Share locks from range queries in tables with a high frequency of deletes. When enabled, DB2_SKIPDELETED allows, where possible, table or index access scans to defer or avoid row locking until a data record is known to satisfy predicate evaluation. This allows predicate evaluation to occur on uncommitted data. This variable is applicable only to statements using either Cursor Stability or Read Stability isolation levels. For index scans, the index must be a type-2 index. Deleted rows are skipped unconditionally on table scan access while deleted keys are not skipped for type-2 index scans unless DB2_SKIPDELETED is also set. Recommended value: ON

Variable	Mandatory value
DB2_SKIPINSERTED	ON Allows SELECTs with Cursor Stability or Read Stability isolation levels to skip uncommitted inserted rows. This reduces record lock contention on tables with heavy insert rates.

Mandatory settings for DB CFG parameters:

For optimal performance, certain parameters and values are mandatory for DB2.

Parameter	Mandatory value
Database Code Set	UTF-8

Installing DB2 client components, compilers, and fix pack:

The use of Sterling B2B Integrator with the DB2 database requires the installation of different items for the database.

About this task

Sterling B2B Integrator uses stored procedures for DB2. For more information about these tasks, see the IBM documentation for DB2.

Procedure

You must install or set up the following DB2 components to use Sterling B2B Integrator with DB2:
1. Install the Administration client.
2. Install the necessary fix pack after you install the client components and compilers. Otherwise, the clients overwrite the fix pack binary files.
3. Set the path for the compiler by entering the db2set command.

Installing JDBC drivers for DB2:

When you install Sterling B2B Integrator with the DB2 database, you must install a JDBC driver for the database.

About this task

For DB2, install the appropriate DB2 JDBC Type 4 driver and any correlating patches. For the supported version information, see *System Requirements*.

You can obtain these files from the IBM website. After you obtain this JDBC driver, record the absolute path to its location on your system. You must supply this absolute path during installation.

If the JDBC driver provided by your database vendor is distributed among multiple files, you must place all the files that comprise the JDBC driver into one JAR file. Follow these steps to create one JAR file:

Procedure

To install a JDBC driver for the DB2 database:

1. Identify all the vendor database JAR files for the JDBC driver.
2. Record the absolute path to the JAR file you created on the Preinstallation Checklist.

   The Type 4 driver does not require a separate Java listener to be running on the database server. Instead, connect directly to the DB2 port.

Upgrading DB2 to version 10.1 or 10.5:

To upgrade from DB2 9.5 or 9.7 to 10.1 or 10.5, you must make configuration changes.

Procedure

To upgrade from DB2 9.5 or 9.7 to 10.1 or 10.5:

1. Copy your DB2 9.5 or 9.7 database content to DB2 10.1 or 10.5.

   Attention: Back up all files before you change any settings.
2. Back up the database driver in the */install_dir*/dbjar/jdbc/DB2/ directory and replace it with the DB2 10.1 or 10.5 version.
3. Update the following sandbox.cfg file fields with your environment-specific parameters:
   ```
   DB_PASS=
   DB_SCHEMA_OWNER=
   DB_DRIVERS_VERSION=
   YANTRA_DB_PORT=
   DB_DATA=
   DB_HOST=
   YANTRA_DB_USER=
   DB_PORT=
   YANTRA_DB_PASS=
   YANTRA_DB_DATA=
   YANTRA_DB_HOST=
   DB_DRIVERS=
   DB_USER=

   DB2_PORT=
   DB2_USER=
   DB2_PASS=
   DB2_DATA=
   DB2_HOST=
   ```
4. Edit the following value in the activemq.xml file:
   ```
   activemq.xml: <value>jdbc:db2//DB_HOST:DB_PORT/DB_DATA</value>
   ```
5. Run the setupfiles script.
6. Run the deployer script.
7. Start Sterling B2B Integrator.

Configuring the Oracle Database:

Before you install Sterling B2B Integrator with the Oracle database, you must configure the database.

Before you begin
- If you are reinstalling the software, be aware that data in your existing database is deleted. To prevent this deletion, either back up the existing database or save it under a different name.
- After you create and configure your database, recycle the database. Then, stop and restart to apply the changes.

About this task

Use the following checklist to configure Oracle for Sterling B2B Integrator:

Item	Oracle Database Configuration Checklist	Your Notes
1	Create the database. Refer to the Oracle documentation on creating the database, including creating a schema repository, login, and table space. Be sure to install the correct version and patches. See the *System Requirements* for the supported version information.	
2	Configure an Oracle Instance.	
3	Configure Oracle Rollback.	
4	Install the Oracle JDBC Driver.	
5	Enable Failover in a Multiple Node Oracle RAC Database Cluster.	
6	After Sterling B2B Integrator is installed, if you want to encrypt the data traffic, perform one of the following tasks: • Configure Sterling B2B Integrator for Data Traffic Encryption • Configure Sterling B2B Integrator for Data Traffic Encryption with SSL	

Configuring an Oracle instance:

An Oracle database requires certain parameter settings and other configurations.

Before you begin
- You must have the Oracle database installed. Ensure that you have installed the correct versions and patches. See *System Requirements* for supported version information.
- Ensure that the user responsible for creating and modifying the Oracle database has a specified quota (extent) assigned in the table space, even if the user was assigned an unlimited table space. Otherwise, the installer might display the error ORA-09150: no privileges on tablespace name.

Procedure

1. Run the create instance procedure. Use AL32UTF8 as the character set.
2. Configure the INIT<*INSTANCE_NAME*>.ORA file with the recommended and mandatory settings in the Performance Management guide. See the Oracle init parameter configuration checklist for specific settings.

   Note: After you complete the installation of Sterling B2B Integrator with Oracle, you can improve the performance of the database with the settings listed in the Performance Management guide.
3. Identify or create a table space for user tables and indexes.
4. Create a user. Unless stated for a task, the user does not require database administrator (DBA) privileges.
5. Grant permissions to the user. The following permissions are required for the administrative user for creating and modifying the Oracle database:
   - GRANT "CONNECT" TO SI_USER
   - ALTER USER SI_USER DEFAULT ROLE "CONNECT"
   - GRANT CREATE SEQUENCE TO SI_USER
   - GRANT CREATE TABLE TO SI_USER
   - GRANT CREATE TRIGGER TO SI_USER
   - GRANT SELECT ON CTXSYS.CTX_USER_INDEXES TO SI_USER
   - GRANT SELECT ON SYS.DBA_DATA_FILES TO SI_USER
   - GRANT SELECT ON SYS.DBA_FREE_SPACE TO SI_USER
   - GRANT SELECT ON SYS.DBA_USERS TO SI_USER
   - GRANT SELECT ON SYS.V_$PARAMETER TO SI_USER
   - GRANT SELECT ANY DICTIONARY TO SI_USER
   - GRANT ALTER SESSION TO SI_USER
   - GRANT CREATE SESSION TO SI_USER
6. If you are using Oracle AQ, grant the AQ_ADMINISTRATOR_ROLE permission.
7. If you plan to use EBICS Client, grant the GRANT CREATE VIEW TO SI_USER permission.

Configuring Oracle rollback:

The configuration of rollback in an Oracle database helps you manage database transactions.

About this task

You can roll back changes in Oracle by using AUTO UNDO management. IBM recommends that you use this option. This practice avoids any manual monitoring of UNDO segments.

Installation of the Oracle JDBC driver:

Sterling B2B Integrator requires the appropriate JDBC driver for the Oracle database.

The JDBC drivers are thin client-based pure Java JDBC drivers. See *System Requirements* for supported version information. The supported versions of the JDBC driver build the correct Sterling B2B Integrator directory structure.

Enabling failover in a multiple node Oracle RAC database cluster:

You can enable failover in a multiple node Oracle RAC database cluster in UNIX/Linux by using traditional RAC or RAC with SCAN.

Procedure

To enable failover in a multiple node Oracle RAC database cluster:
1. Open the */install_dir*/install/properties directory to modify the sandbox.cfg file.
2. In the sandbox.cfg file, add a **ORACLE_JDBC_URL** property, which contains the Oracle RAC connection URL.

   Choose one of the following depending on whether you are using traditional RAC or RAC with SCAN. The property value must be one string of text that starts with ORACLE_JDBC_URL=. Your database administrator (DBA) can modify this URL as needed:
   - To configure traditional RAC, use this format:

   ```
   jdbc:oracle:thin:@
   (DESCRIPTION=
    (ADDRESS_LIST=
     (FAILOVER=ON)
     (LOAD_BALANCE=OFF)
     (ADDRESS=(PROTOCOL=TCP)(HOST=myhost1)(PORT=1521))
     (ADDRESS=(PROTOCOL=TCP)(HOST=myhost2)(PORT=1521))
    )
     (CONNECT_DATA = (SERVER = DEDICATED)(SERVICE_NAME=myservicename OR mySID))
    )
   ```

   Note: This method uses the default Oracle RAC service that is provided by Oracle.
   - To configure RAC with SCAN, use this format:

   `jdbc:oracle:thin:@host:port/service`

   For example:

   `jdbc:oracle:thin:@RAC-SCAN:1521/ORCL`

   Where:
     - RAC-SCAN is resolved to an IP address by DNS
     - 1521 = Port number
     - ORCL = the name of your Oracle RAC service

       Important: To use RAC with SCAN, you must also define a new Oracle RAC service (you cannot use the default service) that defines one node as the preferred node and at least one node as a failover node.
3. Open the */install_dir*/install/bin directory.
4. Enter the command ./setupfiles.sh.

Data traffic encryption in the Oracle database:

You can encrypt transactions between Sterling B2B Integrator and the Oracle database. Encryption prevents anyone who is outside the system from viewing the data that flows between Sterling B2B Integrator and the database.

The following list describes important aspects of enabling database encryption:
- At installation, encryption is turned off by default. If you want your database transactions to be encrypted, you must enable encryption.

- The encryption can be enabled at any time.
- Encryption applies to all database transactions between Sterling B2B Integrator and the database.

System performance might be impacted when encryption is enabled. The extent of this impact depends on your hardware, database configuration, transaction volume, and the relative amount of processing time that is spent by the system against other activities.

For more information on data traffic configuration, see SSL With Oracle JDBC Thin Driver.

Before you encrypt data traffic for the Oracle database:

The decision to encrypt data traffic for the Oracle database includes several considerations.

Consider the following items when you configure database traffic encryption:
- Sterling B2B Integrator must be installed in TCP (clear) mode before you can configure encryption.
- Perform these changes to your database before you install Sterling B2B Integrator.
- Configure wallets for encryption-only mode even if the wallet that is used is empty. Enable auto login for all wallets.
- If you want to use SSL for encryption only, it is recommended to follow the instructions in the "CASE #1: USE SSL FOR ENCRYPTION ONLY" section of the Oracle documentation. It is not necessary to configure certificates for the wallet. In this mode, Diffie-Hellman ciphers are used. The server and the client are not authenticated through SSL. You must authenticate by using a user name and a password. However, if you are running Sterling B2B Integrator on an operating system that requires an IBM JDK, you cannot use this mode, as IBM JSSE TrustManager does not permit anonymous ciphers. You must configure wallets with certificates.
- If you want to use SSL for encryption and for server authentication, it is recommended to follow the instructions in the "CASE #2: USE SSL FOR ENCRYPTION AND SERVER AUTHENTICATION" section of the Oracle documentation.
- If you want to use SSL for encryption and for server authentication of both tiers, it is recommended to follow the instructions in the Oracle "CASE #3: USE SSL FOR ENCRYPTION AND AUTHENTICATION OF BOTH TIERS" section of the Oracle documentation, depending on how you intend to configure client or server authentication.
- After you configure your database for data traffic encryption, the database accepts both TCP (clear) and TCPS (encrypted) connections.
- There is a known issue in the Oracle 11g database when the listener is configured only for TCPS. The **lsnrctl** utility that is used to start and stop database listeners attempts to contact the listener, which is enabled first. You should define the address list of the listener to contact either TCP or IPC before it contacts TCPS.

Configuring Sterling B2B Integrator for data traffic encryption in Oracle:

You can enable data traffic encryption-only, with anonymous authentication, and not SSL authentication.

About this task

If you want to use SSL for encryption only, it is recommended to follow the instructions in the "CASE #1: USE SSL FOR ENCRYPTION ONLY" section of the Oracle documentation. It is not necessary to configure certificates for the wallet. In this mode, Diffie-Hellman ciphers are used, and the server and the client are not authenticated through SSL. You must authenticate by using a user name and a password.

However, if you are running Sterling B2B Integrator on a system that requires an IBM JDK, you cannot use this mode, as IBM JSSE TrustManager does not permit anonymous ciphers. You must configure wallets with certificates.

This procedure is applicable only if you are running Sterling B2B Integrator on a system that requires Sun JDK. The IBM JSSE TrustManager does not permit anonymous ciphers.

If your Sterling B2B Integrator is a cluster installation, you need to perform this procedure on each node, starting with node 1.

Procedure

To configure Sterling B2B Integrator for data traffic encryption in Oracle:
1. Install Sterling B2B Integrator in TCP (clear) mode.
2. Stop Sterling B2B Integrator.
3. Open the */install_dir*/install/properties directory.
4. Open the customer_overrides.properties file and add the following database connection information:

   ```
   jdbcService.oraclePool.prop_oracle.net.ssl_cipher_suites=
   (SSL_DH_anon_WITH_3DES_EDE_CBC_SHA, SSL_DH_anon_WITH_DES_CBC_SHA)
   jdbcService.oraclePool.prop_oracle.net.ssl_server_dn_match=false
   ```

   If you have a configured container, ensure that the same database information is added to the customer_overrides.properties.in file. To locate the file, navigate to the */install_dir*/install/properties/node*x*AC*y* directory, where *x* gives the node number and *y* gives the container number. Perform this step for all the containers configured in the system.
5. Repeat Step 4 for the following Oracle connection pools by changing only the pool name:
   - oraclePool_local
   - oraclePool_NoTrans
   - oracleArchivePool
   - oracleUIPool

   If you have any other database pools, you need to add the properties for those pools.
6. Open the sandbox.cfg file and change the database connection information as shown:

   ```
   ORACLE_JDBC_URL= jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS=(PROTOCOL=tcps)
   (HOST=<DB host>)(PORT=<TCPS port as configured in DB config section above>))
   (CONNECT_DATA=(SERVICE_NAME=<service name>)))
   ```

   Make sure that you enter values for the **HOST**, **PORT**, and **SERVICE_NAME** parameters.

7. Open the `activemqconfig.xml.in` file and modify the following database connection information:

- Remove or comment out the following default ActiveMQ database configuration information:

```
<bean id="gis-ds" class="org.apache.commons.dbcp.BasicDataSource"
  destroy-method="close" singleton="true" lazy-init="default"
  autowire="default" dependency-check="default"
  SCIOverrideName="persistence-bean">
<property name="driverClassName">
<value>oracle.jdbc.driver.OracleDriver</value>
</property>
<property name="url">
#:ifdef ORACLE_JDBC_URL
<value>&ORACLE_JDBC_URL;</value>
#:else
<value>jdbc:oracle:thin:@&ORA_HOST;:&ORA_PORT;:&ORA_DATA;</value>
#:endif
</property>
 <property name="username">
<value>&ORA_USER;</value>
</property>
<property name="password">
<value>&ORA_PASS;</value>
</property>
<property name="maxActive">
<value>32</value>
</property>
</bean>
```

- Add the following ActiveMQ database configuration information:

```
<bean id="gis-ds"
class="oracle.jdbc.pool.OracleDataSource" destroy-method="close"
singleton="true" lazy-init="default"
autowire="default"
dependency-check="default">
<property name="URL"><value>&ORACLE_JDBC_URL;</value></property>
<property name="user"><value>&ORA_USER;</value></property>
<property name="password"><value>&ORA_PASS;</value></property>
<property name="connectionProperties">
  <value> oracle.net.ssl_cipher_suites:
    (SSL_DH_anon_WITH_3DES_EDE_CBC_SHA, SSL_DH_anon_WITH_DES_CBC_SHA)
    oracle.net.ssl_client_authentication: false
    oracle.net.ssl_version: 3.0
    driverClassName:oracle.jdbc.driver.OracleDriver
    maxActive: 32
  </value>
</property>
</bean>
```

8. Open the */install_dir*/install/bin directory.

9. Enter the command ./setupfiles.sh.

10. Restart Sterling B2B Integrator. All the database connections from Sterling B2B Integrator are now connected through TCPS (encrypted) mode.

Configuring Sterling B2B Integrator for data traffic encryption with SSL authentication in Oracle:

You can enable data traffic encryption and SSL authentication.

About this task

This procedure is applicable if you are running Sterling B2B Integrator on a system that requires either Sun JDK or IBM JDK.

The example in this procedure uses two-way SSL authentication. It is recommended to follow the instructions in the "CASE #2: USE SSL FOR ENCRYPTION AND SERVER AUTHENTICATION" section of the Oracle documentation.

You can also configure one-way SSL authentication. If you want to use SSL for encryption and for server authentication of both tiers, it is recommended to follow the instructions in the "CASE #3: USE SSL FOR ENCRYPTION AND AUTHENTICATION OF BOTH TIERS" section of the Oracle documentation.

If your installation of Sterling B2B Integrator is a cluster installation, you need to perform this procedure on each node, starting with node 1.

Procedure

To configure Sterling B2B Integrator for data traffic encryption with SSL authentication in Oracle:

1. Install Sterling B2B Integrator in TCP (clear) mode.
2. Stop Sterling B2B Integrator.
3. Open the */install_dir*/install/properties directory.
4. Open the customer_overrides.properties file and add the following database connection information:

```
jdbcService.oraclePool.prop_javax.net.ssl.trustStore=/.../path/.../ClientKeyStore.jks
jdbcService.oraclePool.prop_javax.net.ssl.trustStoreType=JKS
jdbcService.oraclePool.prop_javax.net.ssl.trustStorePassword=password
jdbcService.oraclePool.prop_oracle.net.ssl_version=3.0
jdbcService.oraclePool.prop_javax.net.ssl.keyStore=/.../path/.../ClientKeyStore.jks
jdbcService.oraclePool.prop_javax.net.ssl.keyStoreType=JKS
jdbcService.oraclePool.prop_javax.net.ssl.keyStorePassword=password
```

5. Repeat step 4 for the following Oracle connection pools by changing only the pool name:
   * **oraclePool_local**
   * **oraclePool_NoTrans**
   * **oracleArchivePool**
   * **oracleUIPool**

   If you have any other database pools, you need to add the properties for those pools.

6. Open the sandbox.cfg file and change the database connection information to the following value:

```
ORACLE_JDBC_URL= jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS=(PROTOCOL=tcps)
(HOST=<DB host>)(PORT=<TCPS port as configured in DB config section above>))
(CONNECT_DATA=(SERVICE_NAME=<service name>)))
```

7. Open the */install_dir*/install/activemq/conf directory.
8. Open the activemqconfig.xml.in file and modify the database connection information:
   * Remove or comment out the following default ActiveMQ database configuration information:

```
#:ifdef ORACLE
<bean id="gis-ds" class="org.apache.commons.dbcp.BasicDataSource"
   destroy-method="close" singleton="true" lazy-init="default"
   autowire="default" dependency-check="default"
  SCIOverrideName="persistence-bean">
<property name="driverClassName">
<value>oracle.jdbc.driver.OracleDriver</value>
</property>
<property name="url">
```

```
#:ifdef ORACLE_JDBC_URL
<value>&ORACLE_JDBC_URL;</value>
#:else
<value>jdbc:oracle:thin:@&ORA_HOST;:&ORA_PORT;:&ORA_DATA;</value>
#:endif
</property>
<property name="username">
<value>&ORA_USER;</value>
</property>
<property name="password"><value>&ORA_PASS;</value>
</property>
<property name="maxActive"><value>32</value>
</property>
</bean>
#:endif
```

- Add the following ActiveMQ database configuration information:

```
<bean id="gis-ds"
class="oracle.jdbc.pool.OracleDataSource" destroy-method="close"
singleton="true" lazy-init="default" autowire="default"
dependency-check="default">
<property name="URL"><value>&ORACLE_JDBC_URL;</value></property>
<property name="user"><value>&ORA_USER;</value></property>
<property name="password"><value>&ORA_PASS;</value></property>
<property name="connectionProperties"><value>
javax.net.ssl.trustStore: /.../path/.../ClientKeyStore.jks
javax.net.ssl.trustStoreType:JKS
javax.net.ssl.trustStorePassword:password
oracle.net.ssl_version:3.0
javax.net.ssl.keyStore: /.../path/.../ClientKeyStore.jks
javax.net.ssl.keyStoreType:JKS
javax.net.ssl.keyStorePassword: password
driverClassName:oracle.jdbc.driver.OracleDriver
maxActive:32
</value>
</property>
</bean>
```

9. Enter the command `./setupfiles.sh`.

10. Restart Sterling B2B Integrator. All the database connections from Sterling B2B Integrator are now connected through TCPS (encrypted) mode.

Configuring the Microsoft SQL Server Database:

Before you install Sterling B2B Integrator with the Microsoft SQL Server database, you must configure the database.

Before you begin
- If you are reinstalling the software, be aware that data in your existing database is deleted. To preserve your data, either back up the existing database or save it under a different name.
- After you create and configure your database, recycle the database. Then, stop and restart to apply the changes.

About this task

Use the following checklist to configure Microsoft SQL Server for Sterling B2B Integrator:

Item	Microsoft SQL Server Database Configuration Checklist	Your Notes
1	If you do not have Microsoft SQL Server installed, follow the installation procedures in the SQL Server installation manual.

Refer to the Microsoft SQL Server documentation on creating the database, including creating a schema repository, login, and table space.

Be sure to install the correct version and patches.

See *System Requirements* for supported version information. | |
3	"Microsoft SQL Server database parameters" on page 16	
4	"Microsoft SQL Server database user privileges" on page 16	
5	"Configuring the snapshot feature for Microsoft SQL Server" on page 18	

Microsoft SQL Server database user privileges:

In Microsoft SQL Server, you must grant DBO (Database Owner) permission to the user. The DB_DDLADMIN role is required for creating objects in the SQL Server database.

Microsoft SQL Server database parameters:

When you install Sterling B2B Integrator with the Microsoft SQL Server database, you must set certain Microsoft SQL Server parameters. Other Microsoft SQL Server parameter settings are recommended for the efficient performance of Sterling B2B Integrator.

When you install Sterling B2B Integrator with Microsoft SQL Server, you must set the Microsoft SQL Server parameters that are listed in "Mandatory settings for Microsoft SQL Server" on page 17.

After you install Sterling B2B Integrator with Microsoft SQL Server, you can improve the database performance by setting the recommended parameters that are listed in the performance documentation for the following items:
* Instance-specific settings for Microsoft SQL Server
* Database-specific settings for Microsoft SQL Server

Mandatory settings for Microsoft SQL Server:

The default collation of Microsoft SQL Server must match the collation for the Sterling B2B Integrator database to prevent collation conversions.

The *tempdb* database that is used by Microsoft SQL Server must be created with the same collation as the default collation of Microsoft SQL Server. The Microsoft SQL Server uses the tempdb database for results that are too large to fit in memory.

If the collations of the tempdb database and the Sterling B2B Integrator database differ, the database engine must convert from the Sterling B2B Integrator collation to the tempdb collation, and then back again before it sends the results to the Sterling B2B Integrator server. These conversions might lead to severe performance issues.

The collation that is required for the Sterling B2B Integrator database is a collation that most closely matches the character set used by Java. By using this collation, you can avoid character data conversions before the data is stored in the database tables. Use the mandatory parameter that is described in the following table when you configure the collation setting:

Parameter	Value
Database Collation	SQL_Latin1_General_CP850_Bin

Additionally, you must perform these tasks:
- Allow Microsoft SQL Server to manage memory dynamically (default).
- Disable any antivirus software that is running on the Microsoft SQL Server data, transaction log, and binary files directory.

Installing the JDBC driver in Microsoft SQL Server:

The use of a SQL Server database with Sterling B2B Integrator requires the installation of a JDBC driver.

About this task

Sterling B2B Integrator requires the correct Microsoft SQL Server driver. See the *System Requirements* for the supported version information.

Download the driver and any appropriate patches from the Microsoft website.

Procedure

To install the JDBC driver in Microsoft SQL Server:
1. Download the `sqljdbc_version_language.tar.gz` file to a temporary directory.
2. To unpack the compressed TAR file, open the directory where you want the driver unpacked and type the following command:

   `gzip -d sqljdbc_version_language.tar.gz`
3. To unpack the TAR file, open the directory where you want the driver installed and type the following command:

   `tar –xf sqljdbc_version_language.tar`

   After the package unpacks, you can find out more information about using this driver by opening the JDBC Help System in the `/absolutePath/sqljdbc_version/language/help/default.htm` file. This file displays the help system in your web browser.
4. When the Sterling B2B Integrator installation asks for the location of the JDBC drivers, specify the extracted JAR file created after you unpack the archive, which is usually named `sqljdbc.jar`. The JDBC driver version is the same as the version of the drivers that are downloaded from Microsoft.

Configuring the snapshot feature for Microsoft SQL Server:

The snapshot feature in Microsoft SQL Server allows you to view a read-only copy of the database even when it is locked. Configuring the snapshot feature can also reduce deadlocks. To enable the snap shot feature, enter the following command:
`ALTER DATABASE db_name SET READ_COMMITTED_SNAPSHOT ON;`

Managing Database Passwords:

A password is used by the system to connect to its database. The password is stored as clear text in a system property file.

If the security policies at your company require you to encrypt these passwords, you can do so after you install the system. Encrypting these passwords is optional.

Database passwords encryption methods:

Database passwords are encrypted with one of two methods: `OBSCURED` or `ENCRYPTED`.

The encryption method is decided by the value of the **encryptionPrefix** property in the `propertyEncryption.properties` or the `propertyEncryption.properties_platform_security_ext` file.

Encrypting database passwords:

Use commands to encrypt database passwords.

Procedure

To encrypt the database password:
1. Stop Sterling B2B Integrator.
2. Open the */install_dir*/install/bin directory.
3. Enter the command `./enccfgs.sh`.
4. Enter the command `./setupfiles.sh`.
5. Enter the command `./deployer.sh`.
6. Enter the command `./run.sh` to start Sterling B2B Integrator.
7. Enter your passphrase.

Decrypting database passwords:

Use properties files and commands to decrypt database passwords.

Procedure

To decrypt the database password:
1. Stop Sterling B2B Integrator.
2. Open the */install_dir*/install/properties directory.
3. Open the `sandbox.cfg` file.
4. Copy the encrypted password from the **database_PASS** property.
   Use the text that appears after the `database_PASS=text`. For example, if `database_PASS= OBSCURED:123ABCxyz321`, you would copy the text `OBSCURED:123ABCxyz321`. (OBSCURED is the encryption method for the password.)

5. Open the */install_dir*/install/bin directory.
6. Enter the command `./decrypt_string.sh` *encrypted_password*.

   For *encrypted_password*, use the text that you copied in Step 4. You are prompted for the system passphrase. After you enter the passphrase, your decrypted password appears.
7. Open the */install_dir*/install/properties directory.
8. Edit the `sandbox.cfg` file to replace the encrypted password with the password that was returned in Step 6.
9. You need to decrypt the entries for the **YANTRA_DB_PASS** and **DB_PASS** properties. Repeat Steps 4 - 8 to decrypt these entries. You must also decrypt any passwords present in the property files. Encrypted passwords typically exist in the following property files:
   - `sandbox.cfg`
   - `apservsetup`
   - `jdbc.properties`
   - `jdbc.properties.in`
   - `customer_overrides.properties`
   - `customer_overrides.properties.in`
10. Open the */install_dir*/install/bin directory.
11. Enter the command `./setupfiles.sh`.
12. Enter the command `./deployer.sh`.
13. Enter the command `./run.sh` to start Sterling B2B Integrator.
14. Enter your passphrase.

Preparing for Installation

To help ensure a trouble-free installation, you should complete the installation checklist and understand some concepts.

Installation checklist for UNIX/Linux cluster:

The installation checklist contains the items that you need to gather and the tasks you need to complete before installing Sterling B2B Integrator in a cluster environment.

The checklist contains:
- Brief descriptions for tasks (detailed procedures are provided after the checklist)
- Information that you need to gather to complete the installation

You might want to make a copy of the following checklist and use it to record the information you collect.

The cluster environment does not support the following items:
- MySQL database
- AS2 Edition

#	Installation Checklist for UNIX/Linux Cluster	Node 1	Node 2	Node 3	Your Notes
1	Review your IBM contract to determine what software you are licensed to use. You need to know this "License information" on page 21 so that you can select the correct components/features to install.				
2	Determine which installation method you are going to use: • IBM Installation Manager (Graphical User Interface) • IBM Installation Manager (Response File)				
3	Decide which type of security certificates to use: • The default self-signed SSL (Secure Sockets Layer) certificate that is automatically installed. • A Certificate Authority-related certificate that you install before you install Sterling B2B Integrator.				
4	If you are using an Oracle, Microsoft SQL Server, or DB2 database, decide whether to manually or automatically apply Database Definition Language (DDL) statements (schema) to the database.				
5	If you are using an Oracle 11.1 database, you must set it up for native compilation by allocating space and by setting the **plsql_native_library_dir** parameter.				
6	Determine whether the database password needs to be encrypted.				
7	Record the host name on which you plan to install the software.				
8	Record the name of the directory where you plan to install the software.				
9	Record the login name to the host server.				
10	Record the password to the host server.				
11	Record the path to the installation wizard and file name.				

#	Installation Checklist for UNIX/Linux Cluster	Node 1	Node 2	Node 3	Your Notes
12	Record the path to the JDK.				
13	Record the path to the JCE file.				
14	Record the host IP address.				
15	Record the initial port number.				
16	Record the system passphrase.				
17	Record the database vendor name.				
18	Record the database user name.				
19	Record the database password.				
20	Record the database (catalog) name.				
21	Record the database host name.				
22	Record the path and file name for the JDBC driver or drivers.				

License information:

A separate license is required for each Sterling B2B Integrator feature that you purchased. During installation, you must choose the license files according to what you purchased. Product licenses do not require an activation key.

IBM assumes customers will only install and use the products they purchased. IBM reserves the right to inspect installs for compliance at any time.

After the installation finishes, if you determine that you need to modify licenses files, see "License modifications" on page 58.

Product Licenses for Sterling B2B Integrator

Sterling B2B Integrator Standard and Enterprise Edition includes:
- MESA Studio
- eInvoicing
- Report Services
- all services and adapters not listed below

Sterling B2B Integrator Standard and Enterprise Financial Edition includes everything listed above plus:
- CHIPS
- SWIFTNet
- NACHA ACH CTX adapter
- FEDWIRE
- Fin Serv XML standard
- FIPS Mode
- Image Cash Letter service
- EBICS

Multicast ports in node to node communications:

Cluster nodes are configured to communicate with each other using JGroups, an open source toolkit that provides flexibility for protocol configuration.

JGroups provides rich open management features, along with multiple protocol support. JGroups supports multicast (UDP) and TCP-based communication protocols.

When JGroups is configured to use multicast (UDP), all cluster nodes communicate with each other on a specific IP address and port. The configuration of multicast ports is based on the installation base port. All clusters that are on the same subnet that is configured on the same base port send multicasting messages on the same multicast IP address and port.

To avoid this situation, each cluster on the same subnet needs to be configured on different base ports. Install your clusters on different port ranges or on different network segments with multicast forwarding restricted, so that they do not interfere with each other. The default multicast address is 239.255.166.17. This address is configurable, with a port range of 10 ports, starting with the multicast base port for the instance.

All nodes that are participating in the same cluster must be installed on the same multicast base port (the **multicastBasePort** property in the noapp.properties_platform_ifcresources_ext.in file). This value is usually computed from the system base (non-multicast) port, but can be configured separately in the noapp.properties_platform_ifcresources_ext.in file, to allow different nodes in a cluster to be installed at different (non-multicast) port ranges. Also, all the nodes in the cluster must be installed in the same subnet.

For node to node communications, the properties are defined in the jgroups_cluster.properties file. The following attributes are used to define communications:

- **property_string** - default value is UDP.
- **distribution_property_string** - default value is TCP. This attribute must never be set to UDP.

If you want to change the communication for cluster multicast from the UDP protocol to TCP, you need to change the value of the **property_string** property in the jgroups_cluster.properties.in file (after you back up the file). Then, run the **setupfiles** command. You can change this value right after the installation or after you start running the cluster. If you change the file after you start the cluster, you need to stop all nodes of the cluster, change the value on each node, and then restart your cluster.

To change the communication for cluster multicast from the UDP protocol to TCP, use the following value for the **property_string** property in the jgroups_cluster.properties.in file:

```
property_string=TCP(start_port=any_available_port_number):
TCPPING (initial_hosts=this_instance_host_ip[start_port_number],
theothernode_instance_host_ip[theothernode_start_port_number];port_range=2;
timeout=5000;num_initial_members=3;up_thread=true;down_thread=true):
VERIFY_SUSPECT(timeout=1500):pbcast.NAKACK(down_thread=true;up_thread=true;
gc_lag=100;retransmit_timeout=3000):pbcast.GMS(join_timeout=5000;
join_retry_timeout=2000;shun=false;print_local_addr=true;
down_thread=true;up_thread=true)
```

For more information about UDP, TCP, and JGroups communications, see the *Sterling B2B Integrator Clustering* documentation.

Port numbers:

During installation, you are prompted to specify the initial port number.

Use the following guidelines for port numbers:
* A range of 200 consecutive open ports (1025 - 65535) is required for this installation.

    Important: Because of RMI, on occasion, a port number outside the range can be assigned.
* The initial port number represents the beginning port number in the range.
* Make sure that port numbers in the port range are not used by any other applications on your system.

After your installation, refer to the `/install_dir/install/properties/sandbox.cfg` file for all of the port assignments.

Security certificates:

You can choose between different security certificates before you install Sterling B2B Integrator.

Before you begin the installation, you must decide which of the following security certificates to use:
* The default self-signed SSL (Secure Sockets Layer) certificate that is automatically generated by the installation.
* A Certificate Authority-related certificate that you generate before you install the software.

If you install with the default SSL certificate, but you later want to switch to a CA-related certificate, you can change the certificate with the **sslCert** property in the `noapp.properties_platform_ifcresources_ext.in` file.

UNIX accounts:

In a UNIX or Linux environment, create one UNIX administrative account on the host server for all of the installations.

For example, if you want to create a test environment and a production environment, create one UNIX account on the host server. For more information about creating UNIX accounts, see your operating system documentation.

Installing the Software
After you have configured the database and prepared your system, you are ready to install Sterling B2B Integrator.

General UNIX/Linux installation information:

You can install Sterling B2B Integrator on UNIX or Linux as either a new installation or as an upgrade from a previous version of Sterling B2B Integrator.

CAUTION:

IBM Sterling B2B Integrator for Financial Services should be installed behind a company firewall for security purposes. For more information on secure deployment options, see the Perimeter Server and Security topics in the Sterling B2B Integrator documentation library .

Installation Scenarios

It is important to review the following installation scenarios:

Scenario	Instructions
Version 5.1.x is installed and it needs to be upgraded to V5.2.6.	See "Upgrading (V5.2.6 or later)" on page 320
Version 5.2.x is installed and it needs to be upgraded to V5.2.6.	See Applying a fix pack (V5.2.6 or later)
Version 5.2.6 is being installed as the base release.	Review this document and use the installation instructions.

Installation Methods

Use one of the following methods to install your system:
* IBM Installation Manager (graphical user interface)
* IBM Installation Manager (response file)

Important: Install and run Sterling B2B Integrator as a non-root user.

General Installation Guidelines

The following are some general installation guidelines:
* Do not create the installation directory manually before the start of the installation. If you create the installation directory before you begin, the installation fails. The directory name that is provided during the installation process is used to create the new installation directory.
* The server on which you are installing must have adequate free disk space.
* *install_dir* refers to the installation directory where the new software is installed. Do not use any pre-existing directory name or an old version of the Sterling B2B Integrator installation directory; other wise, you could inadvertently overwrite the existing installation.
* *parent_install* is the directory one level above the *install_dir* directory.
* Ensure that the *parent_install* directory has the proper read/write permissions.
* If you need to install more than one instance of Sterling B2B Integrator on the same server, you must install the second instance in a different directory.
* The directory path to the SI_*<build_number>*.jar file cannot include any spaces.
* If you are using FTP to copy the files, verify that your session is set to binary mode.
* If you are using AIX with the DB2 database, the directory path cannot be longer than 108 bytes.
* The installation program validates the initial port number and confirms that you have enough disk space for the installation. These port assignments are written to the */install_dir*/install/properties/sandbox.cfg file.

- If you are using an IPv6 address, see "Guidelines for IPv6 addresses" on page 167.
- If you are installing Sterling B2B Integrator on VMware, provide the IP address of the virtual machine, and not the IP address of the VMware host. For example, if 10.251.124.160 is the IP address of the VMware host and 10.251.124.156 is the IP address of the Windows 2003 server it is hosting, use 10.251.124.156 as the correct IP address to install Sterling B2B Integrator.

General IBM Installation Manager information:

IBM Installation Manager V1.8.2 is required to install Sterling B2B Integrator on all supported platforms.

Installation Manager is a Java based multiplatform installation application and provides a consistent approach across various platforms. It does not rely on platform-specific installation technology or mechanism.

Installation Manager uses the local Sterling B2B Integrator offering repositories to install or update Sterling B2B Integrator and its add-on features. It determines the packages that must be installed and displays them including the products, fix packs, and interim fixes. It checks that all prerequisites and interdependencies are met before installing the selected product package and feature sets.

Important: The **Uninstall** option only unregisters Sterling B2B Integrator from Installation Manager. The uninstall procedure as described in the related sections must be performed to completely uninstall Sterling B2B Integrator.

Installation Manager must be installed on each computer on which Sterling B2B Integrator is being installed. If you already have Installation Manager installed on your computer for use with other IBM applications, it can be used with installing Sterling B2B Integrator as long as it's the correct version. If you do not have Installation Manager installed, it is provided as part of the Sterling B2B Integrator installation media.

Supported bit-versions

A 64-bit version of IBM Installation Manager V 1.8.2 is provided with the Sterling B2B Integrator installation package. However, you can also install with a 32-bit version of Installation Manager.

Before you start the installation, consider the following options:
- If you are a new customer, use the version of Installation Manager that is provided with the Sterling B2B Integrator installation package and install Sterling B2B Integrator.
- If you have an earlier version of Installation Manager, you can update it to V1.8.2 using the Installation Manager that is provided with the installation package, then install Sterling B2B Integrator .
- If you are a current customer who did not use Installation Manager earlier, install the version of Installation Manager that is provided with the installation package, then upgrade your Sterling B2B Integrator installation.
- If you have a 32-bit Installation Manager installed, you must download the 32-bit Installation Manager V1.8.2 from Fix Central or IBM Passport Advantage, upgrade it, then proceed with the installation of Sterling B2B Integrator. Ensure you have the required libraries that support screen presentation of the text.

Checking for updates

To check for Installation Manager updates, select **Search for Installation Manager updates** on the **File > Preferences > Updates** page. When the check box is selected, Installation Manager searches for updates when any one of the following pages are opened from the Installation Manager start page:
- Install Packages
- Modify Packages
- Update Packages

Installation Manager also searches for updates when you click the Check for Other Versions, Fixes, and Extensions button on the Install Packages page.

Starting Installation Manager

You should start the Installation Manager (and also install Sterling B2B Integrator) as a non-administrator user.

How you start Installation Manager depends on whether you are using the Installation Manager agent that is provided with Sterling B2B Integrator or if you have an Installation Manager instance that is installed on your system. It also depends on whether you have 32-bit or 64-bit Installation Manager.

Open a command prompt and do one of the following tasks to start the Installation Manager in GUI mode:
- Go to the `IM_<operating_system>` directory and type **./userinst** or **userinst.exe** (Windows) for the following scenario:
  - If you do not have Installation Manager installed and are using the Installation Manager agent that is provided with the Sterling B2B Integrator media.
  - If you have a 64-bit Installation Manager installed.
  - If you have Installation Manager installed on a platform that has only one download available for Installation Manager. For example, AIX, Solaris, HP, zLinux.
- Go to `<installation directory>/Installation Manager/eclipse` (for Windows system, replace / with \) and type **./IBMIM** or **IBMIM.exe** if you have 32-bit Installation Manager installed on a Linux or Windows system.

For information on starting Installation Manager in command mode for silent installation, see the Installing or updating with a response file.

For information on starting Installation Manager in command mode to record a response file, see Recording a response file.

Additional heap memory parameters

The heap memory parameters specify the amount of memory Installation Manager can use during the installation process. The heap memory pool sizes that are used by Installation Manager are hardcoded defaults. If these defaults are not sufficient for your environment, you can specify different values by adding parameters to the Installation Manager`config.ini` file.

Important: These additional parameters are required only if you are experiencing `Out Of Memory` errors during the installation process.

The following parameters can be added:

- memoryMin=user.sb.INSTALL_*<OS>*_INIT_HEAP.*<amount_of_memory>*
- memoryMax=user.sb.INSTALL_*<OS>*_MAX_HEAP.*<amount_of_memory>*

Where *<OS>* is your operating system and *<amount_of_memory>* is the specified amount of memory.

Operating System	Parameter	Example Entry
Sun-Solaris	Initial Heap Size **INSTALL_SUN_INIT_HEAP**	memoryMin=user.sb.INSTALL_SUN_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_SUN_MAX_HEAP**	memoryMax=user.sb.INSTALL_SUN_MAX_HEAP.3072m
Linux	Initial Heap Size **INSTALL_LINUX_INIT_HEAP**	memoryMin=user.sb.INSTALL_LINUX_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_LINUX_MAX_HEAP**	memoryMax=user.sb.INSTALL_LINUX_MAX_HEAP.3072m
AIX	Initial Heap Size **INSTALL_AIX_INIT_HEAP**	memoryMin=user.sb.INSTALL_AIX_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_AIX_MAX_HEAP**	memoryMax=user.sb.INSTALL_AIX_MAX_HEAP.3072m
HP-UX	Initial Heap Size **INSTALL_HPUX_INIT_HEAP**	memoryMin=user.sb.INSTALL_HPUX_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_HPUX_MAX_HEAP**	memoryMax=user.sb.INSTALL_HPUX_MAX_HEAP.3072m
Windows	Initial Heap Size **INSTALL_WIN_INIT_HEAP**	memoryMin=user.sb.INSTALL_WIN_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_WIN_MAX_HEAP**	memoryMax=user.sb.INSTALL_WIN_MAX_HEAP.3072m

Guidelines for a UNIX/Linux cluster environment installation:

A UNIX/Linux cluster environment installation has certain restrictions and guidelines.

The cluster environment does not support the following items:

- MySQL database
- AS2 Edition

The following are installation guidelines for cluster environments:

- All nodes must use the same database.
- All nodes must use the same passphrase.
- All nodes must use the same operating system.

- When you install nodes on different servers, the initial port numbers must be the same. Installing nodes are different servers helps you take advantage of cluster features such as reliability, availability, scalability, and failover.
- You must install the nodes sequentially, one at time, starting with the first node.
- When you install nodes on the same server, you must install node 2 and higher in different directories. Each initial port must be at least 200 higher or lower than the initial port for the other nodes.
- After you install the nodes, you must start the nodes sequentially, one at a time, starting with the first node.

Guidelines for IPv6 addresses:

The use of IPv6 addresses in an installation of Sterling B2B Integrator requires certain guidelines.

Before you use an IPv6 address during an installation, see the *IPv6 Capabilities* section in *System Requirements*.

Consider the following IPv6 address information when you plan the installation:
- If you use an IPv6 address, use a fully qualified address that includes square brackets around the address, and a zero (0) between colons where there are no other numbers. For example, use `[fe80:0:0:0:213:72ff:fe3c:21bf]` instead of `fe80::213:72ff:fe3c:21bf`.
- If you are installing with an IPv6 address, comment out the host name mapping to the IPv4 address and retain the mapping to the IPv6 address in the host file in the `/etc/sysconfig/networking/profiles/default/hosts` directory.
- You must install with a host name, not an IPv6 address, otherwise the Lightweight JDBC adapter and Graphical Process Modeler (GPM) do not work.
- If you are using an Oracle database, do not use an IPv6 address for the host name.
- If you are using an IPv6 address and are going to configure Sterling B2B Integrator as a dual stack host, after you complete the installation, you need to add the IPv6 address (as the **admin_host.3** property) to the `noapp.properties_platform_ifcresources_ext .in` file.

Installing or updating with a response file (V5.2.6 or later):

You can install or update (apply fix pack or interim fix) Sterling B2B Integrator with silent mode by using the sample response files or converting your existing response file to the required format.

Installing in a UNIX/Linux cluster environment with the IBM Installation Manager in GUI mode:

You can install Sterling B2B Integrator in a UNIX/Linux cluster environment with the IBM Installation Manager in a graphical user interface (GUI) mode. Use the X Window System for this installation.

Before you begin
- Complete the "Installation checklist for UNIX/Linux cluster" on page 158.
- Install an X Window windowing system (for example, Cygwin or Xming) for the UNIX/Linux operating systems on your PC.

- Install and configure a Telnet client (for example, PuTTY) for use with X Window System. The following parameters must be set:
    - X-11 forwarding must be enabled.
    - X display location must be set to `localhost`.
- If you are using the Standards Processing Engine (SPE) application with Sterling B2B Integrator, you must install SPE before you install Sterling B2B Integrator.
- If you are using the EBICS Banking Server application with Sterling B2B Integrator, the data encryption for storage within the installation location is not supported.
- Set the ulimit and language as follows:
    - ulimit -n 4096
    - ulimit -u 16000
    - export LANG=en_US

About this task

To install Sterling B2B Integrator in a Unix/Linux cluster environment with the Installation Manager in GUI mode:

Important: Following is a list of changes related to installing or upgrading to Sterling B2B Integrator V5.2.6:

- You can install and upgrade through the user interface or silent installation mode (response files). Console mode installation and upgrade is not supported.
- Sterling B2B Integrator JAR file is included in the repository. Therefore it is not required to manually select the JAR file when installing or upgrading.
- You must use Installation Manager V1.8.2 to install or upgrade Sterling B2B Integrator. `InstallService` is disabled, and cannot be used. You can use `InstallService`, only for a specific scenario related to Sterling File Gateway. For more information, see step 15.

Procedure

1. Start the X Window System client on your PC.

   Minimize the window after it opens.
2. Open a console window and log on to the UNIX/Linux host server where Sterling B2B Integrator must be installed.
3. From the installation media, copy the compressed installation package to a UNIX/Linux directory on the host where Sterling B2B Integrator must be installed.
4. Decompress the installation package on the host server.
5. Open the `InstallationManager` folder in the directory structure that is created when the installation package is decompressed. Several `IM_OperatingSystem.zip` files are displayed.
6. Decompress the file for your operating system.
    - `IM_AIX.zip` (for AIX)
    - `IM_HPIA.zip` (for HP-UX Itanium)
    - `IM_Linux.zip` (for Linux)
    - `IM_Solaris.zip` (for Solaris)
    - `IM_zLinux.zip` (for Linux for System z)

   This action creates a new `IM_OperatingSystem` folder.

Important: Installation Manager V1.8.2 is required to install Sterling B2B Integrator.

7. Decompress the `Common_Repo.zip` from the installation package. The action creates two new folders `b2birepo` and `gmrepo`. The `IM_OperatingSystem`, `b2birepo`, and `gmrepo` folders must be at the same level in a directory.

   Important: `gmrepo` contains the repository file required to install Global Mailbox. For information about Global Mailbox, see Global Mailbox overview.

8. Open a command prompt and do one of the following tasks to start the Installation Manager:

   a. Go to the `IM_<operating_system>` directory and type **./userinst** for the following scenarios:
      - If you do not have the Installation Manager installed and are using the Installation Manager agent provided with V5.2.6.
      - If you have a 64-bit Installation Manager installed.
      - If you have the Installation Manager installed on a platform that has only one download available for Installation Manager. For example, AIX, Solaris, HP, zLinux.

   b. Go to `<installation directory>/Installation Manager/eclipse` and type **./IBMIM**, if you have 32-bit Installation Manager installed on your Linux system.

9. On the Installation Manager home page, click **Install**.

   Important: If `IM_<operating_system>` and `b2birepo` directories are not in the same directory or if you already have Installation Manager installed, then you get a message saying that there no packages to install or Installation Manager could not connect to the repositories. You must add the Sterling B2B Integrator repository files to the Installation Manager repository. For more information about adding repository files, see Repository preferences.

10. On the Install Packages screen, select **IBM Sterling B2B Integrator**. This action selects the versions also. Click **Next**.

11. Review the license agreement and select the option **I accept the terms in the license agreement**.

    If you do not accept the agreement, the installation process does not continue.

12. Select the location for the shared resources directory and click **Next**. This directory is used by the Installation Manager for Sterling B2B Integrator installation and other installations.

    The shared resources directory cannot be a subdirectory of the directory for the installation of Sterling B2B Integrator. The shared resources directory must be empty.

13. Choose **Create a new package group** and specify the path to Sterling B2B Integrator installation directory.

14. Select the required features to be installed. The available options are:
    - **IBM Sterling B2B Integrator**
    - **IBM Sterling File Gateway**

      Important: From Sterling B2B Integrator V5.2.6 onward, Sterling File Gateway V2.2.6 is automatically installed if **IBM Sterling File Gateway** is selected. Any additional post installation tasks are not required to start Sterling File Gateway. It is strongly suggested to install Sterling File Gateway when installing Sterling B2B Integrator V5.2.6. If for any reason Sterling File Gateway is not installed with Sterling B2B Integrator, you

cannot install Sterling File Gateway later using the Installation Manager. You must use `InstallService` to install it. For information about installing Sterling File Gateway by using `InstallService`, see Installing Sterling File Gateway (V2.2.6 or later).

- **FIPS Module**
- **AS2 Edition Module**
- **Financial Services Module**
- **EBICS Banking Server Module**
- **B2B Advanced Communications Integration Module**

Important: When installing Sterling B2B Integrator, select **B2B Advanced Communications Integration Module** to install Sterling B2B Integrator bridge. Sterling B2B Integrator bridge is required for communication between Sterling B2B Integrator and B2B Advanced Communications. If you are installing Global Mailbox and Sterling B2B Integrator, then **B2B Advanced Communications Integration Module** (Sterling B2B Integrator bridge) is installed by default, because Global Mailbox uses the storage module of B2B Advanced Communications. However, you must configure the adapter containers and adapters for Sterling B2B Integrator bridge after installing.

Important: Sterling B2B Integrator is selected by default. Select only the licenses and features that were defined by your IBM contract. If you are unsure which to select, the installation can proceed without a selection and complete successfully. Startup and operation of the software, however, requires one of the licenses to be selected. See "License modifications" on page 58 to apply licenses after the installation.

15. Type the path to your JDK directory and click **Next**.
16. Specify the configuration for the features to install and click **Next**.
    - **FIPS Compliance Mode (Must enable FIPS Module)**
    - **NIST 800-131a Compliance Mode**
        - **off** (default value)
        - **strict**
    - **SPE Integration Module (Requires pre-install of SPE, WTX optional)**

      If you select the SPE option, you are prompted for the following information:
        - SPE installation directory
        - (Optional) WebSphere Transformation Extender (WTX) installation directory
        - SPE UI port

      For more information, see the documentation for the integration of Sterling B2B Integrator and SPE.
17. Type the path to the JCE policy file and click **Next**.
18. Enter the following server location information and click **Next**:
    a. Type the explicit IP address or host name for the server or use the default value of `localhost`.
    b. Type the initial port number or use the default value of 8080.
19. Enter the system passphrase information and click **Next**:
    a. Type a passphrase.
    b. Confirm the passphrase.
20. Type the email information and click **Next**:

a. Type the email address to which you want system alert messages sent.

b. Type the SMTP mail server (IP address or host name) that you want to use for system alert messages and other administrative notices.

21. Enter the following database information and click **Next**.

a. Select the database vendor that you want to use:
   - Oracle
   - Microsoft SQL Server
   - DB2
   - MySQL

b. Select all of the following options that apply to this installation:

Choices:	Action
(Not for MySQL) **This installation is for a cluster node 2 or higher**	If you are installing node 2 or higher in the cluster setup, select the check box and specify the node number. **Important:** In a cluster setup, run the **startCluster** command after installing the first node (node 1) from the /install_dir/install/bin directory, on the host where you installed the node. The syntax is startCluster.sh *nodeNumber true*. Replace *nodeNumber* with *1*. After you run the **startCluster** command for the first node, the subsequent nodes will have clustering automatically started by the installer when they are installed.
(Not for MySQL) **Apply database schema automatically?**	The default is to automatically apply the DDL (Data Definition Language) statements that apply the database schema. If you want to manually create the database schema, then clear the **Apply database schema automatically** check box and continue with the remaining installation steps. **Important:** If you manually apply the schema, the installation stops without error later in the installation process so that you can manually apply the schema.

22. Type the following database connection information. Do not click **Next** until you configure the JDBC driver in the next steps.
   - User name
   - Password (and confirmation)
   - Catalog name
   - Host
   - Port

23. Select a JDBC driver or drivers and click **Next**:

a. Click **Add** to browse to the file location for the appropriate JDBC driver or drivers:
   - (Oracle, Microsoft SQL Server, and MySQL only) Absolute path and file name for one JDBC driver file.

- (DB2 only) Absolute paths and file names for two JDBC driver files. Use the Type-4 JDBC driver. This type of driver converts JDBC calls into the network protocol that is used directly by DB2, allowing a direct call from the system to the DB2 server.

b. Click **Test** to confirm that the driver is supported for the database and Sterling B2B Integrator.

Tip: Make sure that you select the driver path in the **Database driver** field before you click **Test**.

The Installation Manager must successfully validate the connection to the database before you can continue with the installation. If there is a validation failure, you can view the system log to determine more information about the failure. Perform the following tasks:

1) Open the user's application directory: *local_path*/IBM/Installation Manager/logs

2) Open theindex.xml file in a browser.

3) Identify the log file that is based on the time stamp of when you started the installation.

4) Click the installation file to view a listing of errors that occurred during that installation.

24. Determine which of the following options apply to this installation. Select the applicable options and click **Next**:

- **Verbose install?**

- **This installation is an upgrade from a prior version**

  Do not select this option because this installation is a new installation.

25. Determine what performance configurations apply to this installation and click **Next**. Accept the default value or type the appropriate value.

- **Number of Processor Cores**

- **Physical Memory (MB) allocated to Sterling B2B Integrator**

26. Review the installation package summary information. Click **Install** to apply your installation settings to the installation.

If you did not select the option to automatically apply the database schema, the installation stops and you must perform these additional steps to complete the installation with manual DDL statements:

a. Open the installation directory.

b. Locate the InstallSI.log file and open it with a file editor.

c. Search the file for these error messages:

- *<SI_Install>*/repository/scripts/EFrame_IndexAdds.sql must be applied to the database.

- *<SI_Install>*//repository/scripts/EFrame_Sequence.sql must be applied to the database.

- *<SI_Install>*//repository/scripts/EFrame_TableChanges.sql must be applied to the database. Exiting installation..."

Important: If you do not find these error messages in the log file, the installation failed because of another reason and you must resolve that error and attempt the installation again. If you find these messages, continue with the remaining steps.

d. Edit each .sql script for the database. These changes might include changing the SQL delimiter or adding table space options.

e. Log in to the database as the database schema user.

f. Run the following SQL files manually in this order:

> **Important:** When you are running the scripts, you must run the SQL scripts in the specified order.

- `EFrame_IndexDrops.sql`
- `EFrame_TableChanges.sql`
- `EFrame_IndexAdds.sql`
- `EFrame_TextIndexAdds.sql`
- `EFrame_Sequence.sql`
- `EFrame_TextIndexModify.sql`
- `EFrame_TextIndexUpdates.sql`
- `EFrame_TextIndexUpgrade.sql`
- `EFrame_Static.sql`

> **Important:** ActiveMQ uses dynamically generated table names that are based on the name of the installation node. Table generation is not included in these SQL scripts, but is performed automatically during the initial start of Sterling B2B Integrator or when a new cluster node is added. Table generation might fail if security restrictions reduced the Sterling B2B Integrator database user permissions. To avoid this issue, ensure that the DBADM role permissions are enabled during the initial startup. If further issues arise, contact IBM customer support for guidance.

g. Exit from the database.

h. Open the parent directory of the Sterling B2B Integrator installation directory.

i. Uninstall the Sterling B2B Integrator offering to clear out the Installation Manager metadata about the installation, and the delete (or rename as a backup) the Sterling B2B Integrator installation directory.

j. Restart the installation wizard and provide the same installation options that you provided before you cleared the **Apply database schema automatically** check box. If you have recorded a response file (as suggested in step 9), you can use the response file to install Sterling B2B Integrator.

The Installation Progress screen indicates which component of the installation is in process.

A status bar below the **Repository Information** heading displays the progress of the component installation. When the installation completes, a large green circle with a check mark displays with the message `The packages are installed`. A link is provided to view the installation log file.

27. Click **Finish**. The Installation Manager closes and you are returned to your desktop.

    Check the `InstallSI.log` file to verify that all of the components were installed properly.

28. If you are using the AIX operating system and are using IPv6:

    a. Open the `/install_dir/install/properties` directory.

    b. Add the following value to the `sandbox.config` file: `IPV4STACK=false`

    c. Open the `/install_dir/install/bin` directory.

    d. Enter the `./setupfiles.sh` command.

29. Install each subsequent node, from node 2 on. Open your working directory.

30. Start the Installation Manager for each additional node and follow most of the same steps as you did for node 1. When prompted, select the **This installation is for a cluster node 2 or higher** check box.

31. If you installed multiple nodes on the same server or used different base ports for node 2 onward, you need to complete the following steps:

Step	Action	Your Notes
1	Open the */install_dir*/install/properties directory for node 1.	
2	In thenoapp.properies_platform_ifcresources_ext file, record the value for the **multicastBasePort** property.	
3	In the jgroup_cluster.properties file, record the values for the **mcast_port** parameters of the **property_string** and **lock.protocolStack** properties.	
4	For each subsequent node, you need to perform the remaining steps.	
5	Open the */install_dir*/install/properties directory for each node (node 2 and higher).	
6	In the noapp.properies_platform_ifcresources_ext.in file, update the value of the **multicastBasePort** property to match the value for node 1. For example, replace the string &MULTICAST_NODE_PORT1; with the port number 45460. • (before) multicastBasePort= &MULTICAST_NODE_PORT1; • (after) multicastBasePort=45460	
7	In the jgroups_cluster.properties.in file, update all occurrences of the **mcast_port** property to match the values for node 1.	
8	After you update the attributes for all of the nodes, enter the following command for node 2 and higher: */install_dir*/install/bin/setupfiles.sh	

32. Determine whether you need to apply a fix pack or interim fix to the installation. For information about fix pack or interim fix installation, see "Applying a Fix Pack (V5.2.6 or later)" on page 625 and "Applying an interim fix (V5.2.6 or later)" on page 635.

Validating the Installation

After installing Sterling B2B Integrator, you should validate the installation to ensure that everything is working according to your needs.

Validation of the installation checklist in a cluster environment:

As part of the installation, you need to run several tests to ensure that the software installation was successful.

#	Validate Installation Task	Completed
1	Configure the Nodes in the Cluster.	
2	Verify the Cluster Environment Settings in Property Files.	
3	Start the Cluster.	
4	Access Sterling B2B Integrator.	
5	Validate the Installation (Sample Business Process).	
6	Verify the Cluster is Running from the User Interface.	
7	Stop a Node (Hard Stop or Soft Stop) or Stop the Cluster.	

Verifying the cluster environment settings in the properties files:

Procedure

To verify the cluster environment is correct, check these properties file settings on node 2:

1. Verify that the value `CLUSTER=true` is in the `sandbox.cfg` property file.
2. Verify that the value `CLUSTER=true` is in the `centralops.properties` property file.
3. Verify that the value `CLUSTER=true` is in the `noapp.properties` property file.
4. Verify that the value `cluster_env property=true` is in the `ui.properties` property file.

Configuring the nodes in the cluster:

The first time that you configure a cluster, you need to use the **startCluster** command with `true` option (startCluster.sh *nodeNumber* true).

About this task

Initial configuration is the only time that you need to use the **startcluster** command. However, if you need to use the **startcluster** command again, use the `false` option (startCluster.sh nodeNumber false). The `false` option prevents any configuration changes from affecting the system, especially after the installation of a fix pack or interim fix.

Important: You must run the **startCluster** command after installing the first node (node 1) on the host where you have installed the node. After you run the **startCluster** command for the first node, the subsequent nodes are automatically clustered by the installer when they are installed.

Procedure

To configure the nodes, starting with node 1:

1. Open the */install_dir*/install/bin directory.
2. Enter `./startCluster.sh` *nodeNumber* `<true or false>`. Where *nodeNumber* is the number of the node, the `true` option performs database updates and the `false` option prevents database updates. For node 1, enter `./startCluster.sh 1 true`, and so on.
3. If you are starting node 2 or higher, enter your passphrase. For node 1, you are not prompted to enter your passphrase.
4. After the cluster starts, the following message is displayed:

```
BUILD SUCCESSFUL
Total time nn minutes nn seconds
Done with ant script
Running setup files
```
You can proceed to the next node after the command line appears.

What to do next

After all the nodes are configured, the following message is displayed:
```
Deployment to application server successful.
```

Starting Sterling B2B Integrator in a UNIX/Linux cluster environment:

After you run the upgrade software, you can start Sterling B2B Integrator.

Before you begin

If you are starting Sterling B2B Integrator after you upgraded the application from V5.1, change the values of the following properties in the `centralops.properties` file to 600. This action prevents the **run.sh** command from timing out before Sterling B2B Integrator starts. The `centralops.properties` file is in the *install_dir*`/install/properties` directory.
* **OpsServer.commandTimeout**
* **PassPhrase.urlTimeout**

About this task

Perform this task for each node in the cluster, starting with node 1.

Procedure
1. Open the `/`*install_dir*`/install/bin` directory on a command line.
2. Enter `./run.sh`.
3. Enter your passphrase.
4. After the final start processes run, the following message is displayed:
   ```
   Open your Web browser to http://host:port/dashboard
   ```
   The *host:port* variable is the IP address and port number where Sterling B2B Integrator is installed on your system.
   Depending on system load, it might take several minutes for the UI to be ready.
5. Record the URL address so that you can access Sterling B2B Integrator.

What to do next

If you need to release all the locks in a cluster and both nodes are down, use the `restart` parameter for node 1. The `restart` parameter can be used on only node 1. It cannot be used on any other nodes.

For example:
* For node 1, enter the following command:
  ```
  ./run.sh restart
  ```
* For nodes 2 and higher, enter the following command:
  ```
  ./run.sh
  ```

Accessing Sterling B2B Integrator:

You can access Sterling B2B Integrator through a web browser.

Procedure

1. Open a browser window and enter the address that is displayed at the end of the start.
2. On the login page, enter the default user ID and password. The default login is at an administrative level. One of your first tasks as an administrator is to change the administrative password and to register other users with other levels of permission.

Validating the installation with a sample business process:

You can validate the installation by testing a sample business process.

Procedure

1. From the **Administration Menu**, click **Business Process** > **Manager**.
2. In the **Process Name** field, type `Validation_Sample_BPML` and click **Go!**
3. Click **execution manager**.
4. Click **execute**.
5. Click **Go!** The `Status: Success` message is displayed on the upper left side of the page.

Verifying from the user interface that the cluster is running:

You can use the user interface to verify that the cluster is running, including queue information and adapter status.

Procedure

1. From the **Administration Menu**, click **Operations** > **System** > **Troubleshooter**. Ensure you can view the Queue information for each node.
2. From the **Administration Menu**, click **Operations** > **System** > **Troubleshooter**. Ensure you can view the JNDI Tree for each node.
3. From the **Administration Menu**, click **Operations** > **System** > **Troubleshooter**. Ensure you can view the host, state, status, adapters, and memory usage information for each node.
4. From the **Administration Menu**, click **Operations** > **System** > **Troubleshooter**. Ensure you can view the adapter status for each node.

Stop a Node in a Cluster Environment (Soft Stop):
About this task

A soft stop halts the system after all the business processes finish running. In a cluster environment, you need to perform this task on each node, starting with node 1.

Running the soft stop command in a clustered environment suspends all of the scheduled business processes. It is recommended to run the hard stop command when stopping individual nodes of a cluster.

To soft stop in a UNIX or Linux environment:

- You can select **Operations > System > Troubleshooter** and click **Soft Stop**.

- You can perform the soft stop from the command line interface.

For more information about the softstop user interface and command line options, refer to the performance management documentation.

To run a soft stop, from the command line:

Procedure
1. Navigate to */install_dir*/install/bin.
2. Enter `./softstop.sh`.
3. Enter your passphrase.

Stopping a node in a cluster environment with a hard stop:

A hard stop halts the system immediately, including all of the business processes that are currently running.

About this task

You can stop a single node Sterling B2B Integrator in an UNIX or Linux cluster environment.

To run a hard stop on the entire cluster, you must perform this task for each node.

Procedure
1. Open the `/install_dir/install/bin` directory on a command line.
2. Enter `./hardstop.sh`.

Stopping the cluster:

You can use the UI to stop a cluster installation.

Procedure
1. From the **Administration Menu**, click **Operations** > **System** > **Troubleshooting**.
2. Click **Stop the System**.

Post-Installation Configuration

After installing Sterling B2B Integrator and validating the installation, you may need to do additional configuration depending on your system and business needs.

Postinstallation configuration checklist for cluster environment:

After you have install Sterling B2B Integrator, you need to complete the postinstallation configuration checklist.

Review all of the tasks, but note that some tasks might not be required for your system installation.

#	Postinstallation Configuration Checklist	Your Notes
1	Upon installation, several default user accounts are automatically created to get you started. For security purposes, the system administrator should update all default user account passwords immediately after installation is completed. See "Changing default user account passwords" on page 40.	
2	"JMS Cluster Configuration for Failover" on page 41	
3	Configure ActiveMQ for a cluster environment.	
4	If you are using an IPv6 address in a dual stack configuration, complete the *Add the IPv6 Address for the Dual Stack Configuration* task.	
5	Download Sterling B2B Integrator Tools.	
6	Determine whether you need to modify any property files.	
7	Configure Shared File System as Document Storage.	
8	Add host[port] from all the nodes to the jgroups_cluster.property.in for each node.	
9	If you are using an IPv6 address, you need to complete the *Update the sandbox.cfg File for IPv6 Address* task.	
10	"Manage Nodes in a Cluster" on page 45	
11	"Services and Adapters Associated with Node 1 in a Cluster" on page 46	
12	Configure Customer Overrides File with a Firewall between Nodes.	
13	"Configure a Non-English Environment" on page 47	
14	"Configure Browser Settings for a Different Language" on page 50	

Changing default user account passwords:

When you install Sterling B2B Integrator, several default user accounts are automatically created to get you started. One of the first actions you must take after installation is to update these accounts with unique passwords, because the default ones can be known by all Sterling B2B Integrator customers.

About this task

Default user account passwords are preset at installation. For security purposes, the system administrator should update all default user account passwords immediately after installation is completed.

Default user accounts are listed below in the same order as they appear in the UI under **Accounts > User Accounts > List All**. You can use this table to track the user accounts you want to update.

User Account Name	Update password
MBX_daemon	
admin (*)	
aft_user (*)	
anon	
as2_user	
commandlineuser	
dash_oper (*)	
dash_part (*)	
dash_prtspon (*)	
dash_sponsor (*)	
fg_architect	
fg_operator	
fg_provisioner	
fg_sysadmin (*)	
gmbx_user	
ja_turbine	
jane	
jane_doe	
joe_employee	
joe_manager	
joe_supplier	
john	
sd_buyer	
sd_supplier	
turbine	
ws_buyer	
ws_director	
ws_employee	
ws_finance	
ws_hr	
ws_manager	
ws_purchaser	
ws_supplier	

(*) denotes a super user

To change the password for a user account, perform the following tasks.

Procedure
1. Log into Sterling B2B Integrator using ID = `admin` and password = `password`.
2. Go to **Accounts > User Accounts**. Under the List section click **Go!** All default user account names are listed.
3. Click **Edit** next to the user account name you want to update the password for.

4. In the New Password and Confirm New Password fields, enter a new, secure password for this User ID.

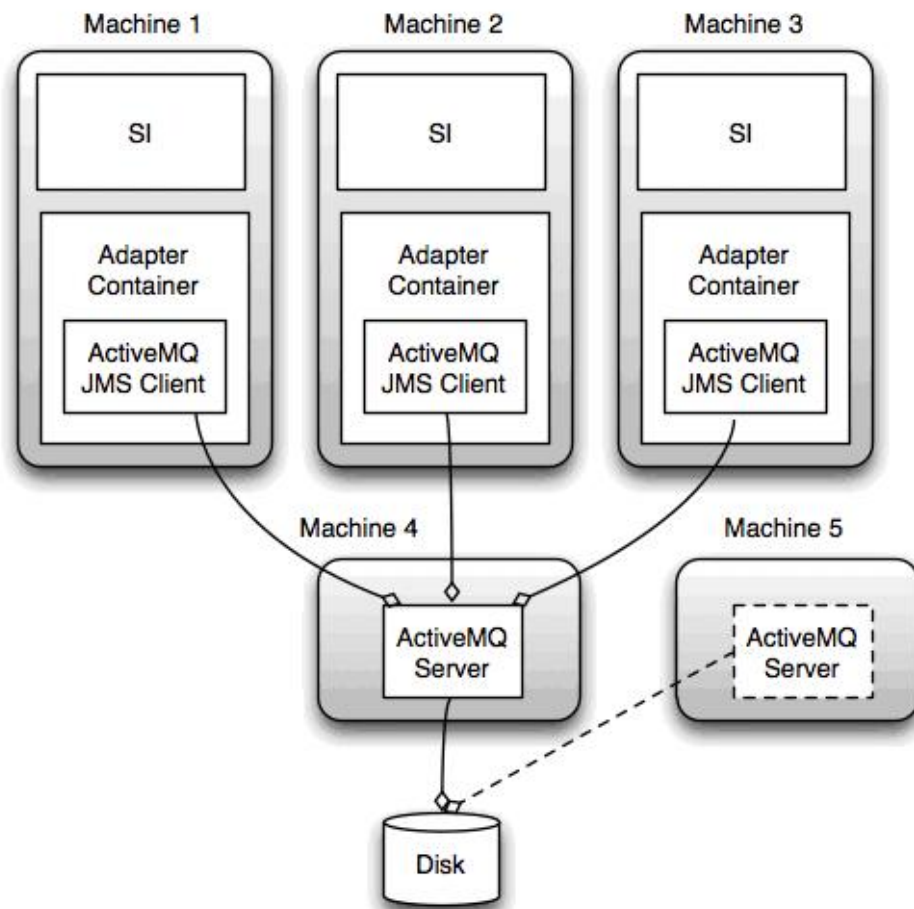   **Note:** Passwords must be at least six characters long.
5. Click **Save** and **Finish**.

What to do next

Repeat steps 3 - 5 for all user account names you want to update.

JMS Cluster Configuration for Failover: To allow proper JMS execution and failover in the Sterling B2B Integrator cluster environment, you must configure an external ActiveMQ using the *Configure ActiveMQ for a Cluster Environment* task.

The following diagram illustrates how the ActiveMQ can be configured to increase availability and failover.

Configure ActiveMQ for a Cluster Environment:
About this task

To configure the ActiveMQ for the cluster environment:

Procedure

1. Download the ActiveMQ 5.2 from http://activemq.apache.org/activemq-520-release.html for the appropriate OS.
2. Deploy an instance of ActiveMQ 5.2. This can be on the same machine as Sterling B2B Integrator or on a separate machine.
3. Navigate to */install_dir*/install/properties.
4. Copy the **activemq.xml** file to the AMQ conf directory. This file configures the ActiveMQ to:
   - Use failover clustering
   - Use the SI database for storage
   - Configures the AMQ port usage

   By default, ActiveMQ is configured to listen at the Sterling B2B Integrator base port + 64 and the ActiveMQ interface will be at base port + 65 (http://server:base port + 66/admin). The port can be changed by editing the config file. The port number must be higher than 1024.
5. Navigate to */install_dir*/install/properties.
6. On each Sterling B2B Integrator application node and each Sterling B2B Integrator container node, the queue configuration must be re-directed to utilize the ActiveMQ cluster. In each node, add the following to the customer_overrides.properties:

   For FIFO Processing:

   ```
   fifo.broker.username=
   fifo.broker.password=
   fifo.broker.url=failover:(tcp://amq_master_hostname:amq_master_port,
   tcp://amq_slave_hostname:amq_slave_port)
   ```

   For adapters running in separate JVM containers:

   ```
   iwfcqueue.username=
   iwfcqueue.password=
   iwfcqueue.protocol_config=failover:(tcp://amq_master_hostname:amq_master_port,
   tcp://amq_slave_hostname:amq_slave_port)
   ```
7. Start the ActiveMQ instances. To start ActiveMQ, it is necessary to supply the activemq.hostname property with the hostname for the current system. For example:

   ```
   activemq -Dactivemq.hostname=ExampleHostname
   ```

   See http://activemq.org for additional information about running an ActiveMQ instance.
8. Start Sterling B2B Integrator.

Add the IPv6 Address for Dual Stack Configuration:
About this task

If you are using IPv6 and have Sterling B2B Integrator configured in a dual stack, you need to add the IPv6 address to the admin host list.

To add the IPv6 address:

Procedure

1. Navigate to the installation directory that contains the noapp.properties file.
2. Open the noapp.properties_platform_ifcresources_ext .in file.
3. Add following line to the properties file:

   ```
   admin_host.3=FULL_IPv6_ADDRESS
   ```

Where FULL_IPv6_ADDRESS is the IPv6 address of the machine. (Make sure you surround the IPv6 address with square brackets.)

4. Save and close the file.
5. Run the setupfiles.sh.
6. Start Sterling B2B Integrator.

Download of the Sterling B2B Integrator tools:

After you install Sterling B2B Integrator, you can install tools like the Map Editor and the Graphical Process Modeler (GPM).

Sterling B2B Integrator includes tools that run on a desktop or personal computer. After you install Sterling B2B Integrator, you can install the following tools:
* Map Editor and associated standards

   Note: The Map Editor requires a 32-bit JDK. This JDK is not provided with the product download or media. For more information, see *System Requirements*.
* Graphical Process Modeler (GPM)
* Web Template Designer
* (If licensed) MESA Developer Studio plug-ins, including MESA Developer Studio Software Development Kit (SDK) and MESA Developer Studio Skin Editor
* (If licensed) Reporting Services, which require MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports

Attention: Conflicting IP addresses can cause problems when you download a desktop tool.

Property files configuration in a UNIX environment: Property files contain properties that control the operation of Sterling B2B Integrator. For example, the REINIT_DB property in the sandbox.cfg file controls whether or not a database is initialized when you install Sterling B2B Integrator.

By modifying the values of these properties, you can customize Sterling B2B Integrator to suit your business and technical needs. Most property files are in the:
* For UNIX, */install_dir*/install/properties directory
* For Windows, *install_dir*\install\properties directory

After installing Sterling B2B Integrator, most property files and scripts do not need any further configuration for basic operation. However, if you want to customize any specific operations, for example setting a different logging level - you will need to edit (or in some cases, create) certain property or .xml files.

Before changing any property files, refer to Working with Property Files documentation for general information about how to work with Property Files.

Areas where you might need to make specific property files changes after an installation include:
* LDAP user authentication
* Prevention of cross-site script vulnerabilities
* Logging configuration
* Process-specific property file settings

Configure Shared File Systems as Document Storage:
About this task

To configure the shared file systems as document storage:

Procedure
1. Navigate to /*install_dir*/install/properties.
2. Open the jdbc.properties.in file.
3. Update the value of the *document_dir* attribute to point to the shared files system directory where you store documents.
4. Save and close the file.
5. Navigate to /*install_dir*/install/bin.
6. Enter ./setupfiles.sh.
7. Restart Sterling B2B Integrator.

Add host[port] From all the Nodes to the jgroups_cluster.property.in for Each Node:
About this task

Complete this task for both vertical and horizontal clusters. You will need to complete this task for each node, starting with node 1.

Before you begin, it is important to note that you should never override mcast_addr in the jgroup_cluster.properties.

To add the host [port] to the jgroups_cluster.property.in file:

Procedure
1. Navigate to the properties file directory for the node.
2. Determine the initial_hosts port for each node:
    * Navigate to the properties file directory for the node.
    * Find the initial_hosts from the jgroups_cluster.property (initial_hosts=host{port}).
    * Record the value from the initial_hosts for each node.
3. Open the jgroups_cluster.property.in file.
4. Add the initial_hosts property to the file. For example, if node 1 is on host1 and node 2 is on host2. For node 1, you would add:

    ```
    initial_hosts=host1[port1],host2[port2]
    ```

    For node 2, you would add:

    ```
    initial_hosts=host2[port2],host1[port1]
    ```
5. Save and close the file.

Update the sandbox.cfg file for an IPv6 address:
About this task

Before you begin, it is important to note that you should never override mcast_addr in the jgroup_cluster.properties.

To update the sandbox.cfg file for an IPv6 address (complete this task for each node in the cluster):

Procedure

1. Navigate to the properties file directory for each node.
2. Open the sandbox.cfg file.
3. Add the following line to the file.

   `IPV4STACK=false`
4. Save and close the file.
5. Navigate to the bin directory for your installation.
6. Enter `setupfiles.sh` (UNIX) or `setupfiles.cmd` (Windows).

Manage Nodes in a Cluster:
About this task

You can add or remove nodes in a cluster environment. The following prerequisites should be considered before performing any modification in the cluster environment:

- New nodes should have the same range of ports available as the current nodes.
- Sterling B2B Integrator license file should be updated to include the IP address of the new nodes.
- Directory structure on the new nodes should match with the directory structure of the existing nodes.
- Perimeter servers should be updated with the new IP addresses to ensure proper configuration.
- Any adapters, services, or business processes assigned to or scheduled to run on the node being removed should be assigned to run on other nodes.

Add a Node to the Cluster (UNIX or Linux):

You do not need to stop the cluster environment while adding a new node.

About this task

To add a node into the cluster:

Procedure

1. Install a new Sterling B2B Integrator node to be added into the cluster during installation. Ensure that the new node being added is not a primary node.
2. Update the `jgroups_cluster.properties` file and the `jgroups_cluster.properties.in` file with the new node details.
3. Configure the new node by running `startcluster.cmd nodeNumber` from the `/<install_dir>/install/bin` directory. The node number should be greater than 1.

   You should run `startCluster.sh` only after you install Sterling B2B Integrator. You should not run `startCluster.sh` when you restart a Sterling B2B Integrator instance.
4. Start the new node.

Remove a Node from the Cluster:
About this task

To remove a node from the cluster:

Procedure

1. Reassign or stop any adapters, services, or business processes assigned to or scheduled to run on the node being removed.
2. Perform backup of the node being removed.
3. Edit the `jgroups_cluster.properties` file and the `jgroups_cluster.properties.in` file in all nodes to remove the IP address of the node being removed.
4. Restart the cluster environment.

   Important: Start node 1 with the **restart** option to update the node information.

Services and Adapters Associated with Node 1 in a Cluster: The following services and adapters are associated with node 1 in the cluster:

- File System adapter
- Command Line 2 Adapter
- Connect::Direct Server Adapter
- Connect::Direct Requester Adapter
- Connect:Enterprise for UNIX Server Adapter
- HTTP Server adapter
- HTTP Client adapter
- FTP Client adapter
- FTP Server adapter
- SFTP Client adapter

The following services and adapters have storage set to database:

- HTTP Server adapter
- Connect:Enterprise for UNIX Extract Service
- Connect::Direct Server Adapter

The default storage for all of the workflows is set to database.

Configure Customer Overrides File with a Firewall between Nodes: About this task

If you have configured a firewall between nodes that blocks ports outside of the port range assigned to Sterling B2B Integrator, perform the following task on all nodes:

Procedure

1. Navigate to the Sterling B2B Integrator installation directory.
2. Navigate to the properties directory and locate (or create, if necessary) the customer_overrides.properties file.
3. Open the customer_overrides.properties file using a text editor.
4. Add the following properties:
   ```
   noapp.jnp_host= <host_name>
   noapp.jnprmiport=<port_number_1>
   noapp.jnprmiport2=<port_number_2>
   noapp.useSocketFactories=true
   noapp.jndirmiport=<port_number_3>
   ops.jnp_host= <host_name>
   ```

```
ops.jnprmiport=<port_number_1>
ops.useSocketFactories=true
ops.jndirmiport=<port_number_2>
ops.jnprmiport2=<port_number_3>
```
This increases the number of threads used by the system.

5. Save and close the customer_overrides.properties file.
6. Stop Sterling B2B Integrator and restart it to apply the changes.

Configure a Non-English Environment:

You can install Sterling B2B Integrator in an English or a non-English environment. The base language for the Configurator can be switched only once.

Use the following checklist to change to a non-English environment:

#	Non-English Environment Checklist	Your Notes
1	Install the Sterling B2B Integrator Language Pack.	
2	Load the Sterling B2B Integrator Language Pack Factory Defaults.	
3	Load the Sterling B2B Integrator Language Pack translators.	
4	Configure Encodings.	
5	Configure Locales.	

Language Settings: Language settings for Java applications involve both character sets and encoding:
- A character set is a set of characters (letters, numbers, and symbols such as #, $, and &) that are recognized by computer hardware and software.
- An encoding is a representation of data in a particular character set. An encoding set is a group of encodings.

For information about basic and extended encoding sets, see http://download.oracle.com/javase/1.5.0/docs/guide/intl/encoding.doc.html.

The default encoding set includes:
- UTF-8 (default)
- IS0-8859-1
- ISO-8859-5
- US-ASCII
- ISO_8859-1
- EUC-JP
- UTF-16
- ISO-2022-JP

Sterling B2B Integrator provides two property files that contain supported encoding sets. These properties files reside in the */install_dir/*install/properties directory.
- encodings.properties – Contains the default encoding set used in the user interface.
- encodings_large.properties – Contains all supported encoding sets.

You are not limited to the encodings in the encoding.properties file. Sterling B2B Integrator enables you to configure the encodings properties files to expand the number of encodings you can use.

Install the Language Pack:
About this task

Before installing the language pack be sure that you have successfully installed Sterling B2B Integrator.

To install the Sterling B2B Integrator language pack:

Procedure
1. Insert the language CDs into your CD-ROM drive.
2. Navigate to the directory that is appropriate for your operating system.
   - If you are using AIX, open the AIX directory.
   - If you are using HP-UX, open the HP directory.
   - If you are using Solaris, open the Sun directory.
   - If you are using Red Hat Linux, open the Linux directory.
   - If you are using SUSE Linux, open the Linux directory.
3. Enter `./setup.bin`.

Load the Language Pack Translations:
About this task

Prior to loading the Sterling B2B Integrator Language Pack factory defaults, be sure that you have successfully completed all instructions in the database chapter.

To load the language pack translation with custom localization literals:

Procedure
1. Run the LocalizedStringReconciler tool in the IMPORT mode from the */install_dir*/install/bin directory. Enter: `./ant.sh -f localizedstringreconciler.xml import -Dsrc=`*/install_dir*`/database/ FactorySetup/XMLS` This tool first inserts the value specified in the *<from_language>_<from_country>*_ycplocalizedstrings_*<to_language> _<to_country>*.properties file present in the */install_dir*/database/FactorySetup/ XMLS/<language>_<country> directory into the database.

   The basefilename refers to the file present in the `/database/FactorySetup/XMLS` directory, for which the translations are to be imported into the database.
2. Verify that your locale settings such as currency, time format, and date are correct.

Configure Encodings:
About this task

To configure your encoding set:

Procedure
1. Stop Sterling B2B Integrator and wait for shutdown to complete.
2. Navigate to */install_dir*/install/properties.
3. Open the encodings_large.properties file.

4. Select the encodings you want to add to the encodings.properties file.
5. Open the encodings.properties.in file.
6. At the end of the encodings.properties.in file, add the encodings you selected from the encodings_large.properties file. When adding encodings from one file to the other, first copy the encodings as they appear in the encodings_large.properties file. After adding the new encodings, ensure that the index numbers are consecutive. If the index numbers are not consecutive, change the index number or numbers as needed. For example, encoding54 cannot follow encoding6. In this example, change encoding54 to encoding7.

   The first name in the definition (before the comma) is the name that will appear in the Sterling B2B Integrator user interface. You can change this name to make it more descriptive. For example: encoding4 = 819,ISO8859_1 may be changed to encoding4 = WesternEurope,ISO8859_1. ISO8859_1 is the Java canonical name and should not be changed.
7. Update the first line in the encodings.properties.in file (numberof). Change *numberof* to the number of encodings added to the file. For example, if the current value is numberof = 6 and you add 5 new encodings, the new value is numberof = 11.

   numberof indicates the total number of encodings located in the file. You must update numberof to ensure that the encodings you added will be visible in the user interface.
8. Navigate to */install_dir/*install/bin.
9. Enter `./setupfiles.sh`.
10. Start Sterling B2B Integrator.

Configure Locale:
About this task

Sterling B2B Integrator runs in any locale that Java supports. If you want to run the in a non-default locale, then configure your environment to the specific locale you want to use.

To configure locale (default is English):

Procedure
1. Enter `local-a`. A list of locales is displayed.
2. Enter `export LANG <locale>`. Where <locale> is the language, for example to set the locale to Japanese, locale = ja_JP.
3. Enter `export LC_ALL <locale>`. Some UNIX shells require the setenv command instead of the export command.

Configure Browser Settings for a Different Language:

Some browsers and operating systems require additional configuration in order to correctly render the Sterling B2B Integrator user interface in certain languages.

Use the procedures provided in this section to properly configure a browser to display the Sterling B2B Integrator user interface in the appropriate language.

Tip: If your browser is unable to display the user interface properly or you see a mixture of English and another language, this is an indication that the browser is configured incorrectly. You may also need to install additional fonts on the Sterling B2B Integrator server.

Support for other languages:

The Sterling B2B Integrator user interface includes support for several languages.

Attention: Sterling B2B Integrator product code is designed to work with Latin based English only input. The use of any other type of input might have uncertain results and is not supported.

The Sterling B2B Integrator user interface includes support for the following languages:
* French
* German
* Italian
* Japanese
* Korean
* Polish
* Portuguese (Brazilian)
* Simplified Chinese
* Traditional Chinese
* Dutch

Four of these languages involve expanded Unicode character sets:
* Japanese
* Korean
* Simplified Chinese
* Traditional Chinese

The implementation of these languages in your environment might require the addition of new Unicode fonts on your server:

If...	then...
Sterling B2B Integrator is on a server that already supports these languages	You do not need to install any additional fonts.
You are installing on a server that is only setup for the Latin alphabet and you have users who need to view the Sterling B2B Integrator user interface in any of the Asian languages	You need to have the fonts for these languages installed.

A way to test the implementation of a language is to create a user with one of the new languages and setup their browser to use that language as it's primary language. Log in to the system and review the user interface. If you see a mixture of English and the new language, your configuration is not correct. You need to verify that the browser is set up correctly and review the fonts that are installed on the server.

The installation of more fonts/languages on the server should be done in coordination with your technical support team. Be sure to include a Unicode Sans Serif font on your server.

Important: While multiple languages are supported, a user account should be configured to use one specific language to avoid user interface display issues.

Add a Custom Language Preference Code:
About this task

In order for your browser to display the Sterling B2B Integrator user interface and address bar text correctly in a foreign language, you must specify the appropriate language preference code for the browser.

Sterling B2B Integrator supports the following language preference codes:
- de
- en
- en-US
- es
- fr
- it
- ja
- ko
- pt-BR
- zh
- zh-TW
- du

Your browser must be configured to use one of these specific language preference codes to view the Sterling B2B Integrator user interface.

Note: Most browsers provide a default listing of language preference codes. However, Sterling B2B Integrator requires the use of the specific codes as listed here. For example, you cannot use the default German (Germany) [de-DE], you must use **[de]**.

You may need to add these supported codes as a custom language preference code in your browser.

Note: The instructions for configuring a browser's display will differ for each browser. Refer to your chosen browser's documentation for specific instructions on configuring that browser's display.

The following is an example of how to configure a client machine display for an IE window.

Procedure
1. Open a browser window.
2. Select **Tools > Internet Options**.
3. At the bottom of the window under Appearance, click **Languages**.
4. Click **Add** to display the Add Language window.
5. In the User defined: text box, enter the appropriate language preference code.
6. Click **OK**. The added code should display in the **Language: listing** in the Language Preference window. An example entry would be, **User Defined [de]**.
7. (Optional) Move the added language up to be the first one listed if there are multiple languages listed.
   a. Select the newly added language.

b. Click **Move up**.

The newly added language should now appear first in the Language listing.

8. Click **OK** to save your Language Preference settings.

9. Click **OK** to close the Internet Options window.

10. Close your browser window.

11. Open a new browser window and access the Sterling B2B Integrator user interface to verify your changes have been applied.

Change Default Browser Font:
About this task

Some languages require the use of special fonts to properly display the Sterling B2B Integrator user interface. The client computer must be configured to display these types of fonts. Each Windows client must be configured appropriately.

Note: The instructions for configuring a browser's display will differ for each browser. Refer to your chosen browser's documentation for specific instructions on configuring that browser's display.

The following is an example of how to change the default browser font for an Internet Explorer (IE) window.

To configure a client machines display for IE:

Procedure

1. Determine which fonts are needed to support your needed language and verify they are installed on the server.

   Note: The installation of additional fonts/languages on the server should be done in coordination with your technical support team. Be sure to include a Unicode Sans Serif font on your server.

2. Open an IE browser window.

3. Select **Tools > Internet Options**.

4. At the bottom of the window under Appearance, click **Fonts**.

5. From the Language Script drop-down menu, change the Latin based value to the appropriate script for your needed language.

   Note: If your encoding is not available, you may need to install a new version of Internet Explorer, but make sure you install the appropriate international options.

6. Select a Webpage font and a Plain text font appropriate for the new language. A Plain text font is one in which all the characters take up the same amount of space and is associated with older computer terminals.

   Note: If no fonts are listed in the menus, then you need to install fonts designed for that encoding.

7. Click **OK** to close the Fonts window.

8. Click **OK** again to close the Internet Options window.

9. Close your browser window.

10. Open a new browser window and access the Sterling B2B IntegratorSterling B2B Integrator user interface to verify your changes have been applied.

Set the Client Character Display:
About this task

To use special characters, such as for various languages, the client computer must be configured to display these types of characters. In order for Unicode characters to display correctly in the application, each Windows client must be configured appropriately.

Note: The instructions for configuring a browser's display will differ for each browser. Refer to your chosen browser's documentation for specific instructions on configuring that browser's display.

The following is an example of how to configure a client machine display for an Internet Explorer (IE) window.

To configure a client machines display for IE:

Procedure
1. Open an IE browser window.
2. Select **View > Encoding > Auto-Select**.

Clearing Browser and Java Plugin Caches Before Initial Deployment:
About this task

Once the Sterling B2B Integrator is ready for deployment, each user must clear the browser and Java Plugin caches on their client machines before launching Sterling B2B Integrator. This requirement applies to all browsers.

To clear the browser and java caches, do the following:

Procedure
1. From the browser menu bar, select **Settings > Control Panel > Internet Options**.
2. Select the General tab, and in the Temporary Internet Files panel, click **Delete Files**. The Delete Files dialog displays.
3. Check the **Delete All Offline Content** checkbox. Click **OK** until the Internet Properties window closes. The browser cache is cleared.
4. From the Windows start menu, select **Settings > Control Panel > Java**.
5. Select the General tab, and in the Temporary Internet Files panel, click **Settings**. The Temporary Files Settings dialog displays.
6. In the Disk Space panel, click **Delete Files**. The Delete Temporary Files pop-up window displays.
7. Click **OK** until the Java Control Panel window closes.

General Internet Explorer Browser Settings: When using Sterling B2B Integrator without any customizations, you need to set the General Browser settings for your Internet Explorer in order to obtain the best browser performance.

Note: This can impact the display of reports and search listings.

To set your general browser settings:
1. From the Internet Explorer menu, select **Tools > Internet Options**.

   The Internet Options window opens to the General tab.

2. Locate the Browsing history section and click **Settings**.

   The Temporary Internet Files and History Settings window opens.

3. Below Check for newer versions of stored pages: select the **Everytime I visit the webpage** option.

4. Click **OK** to save your changes.

5. Click **OK** to apply the changes.

6. Close the browser window and re-open it.

   The browser is now set to check for updates to pages everytime a page is accessed rather than relying upon a cached version.

Internet Explorer Security Settings:
About this task

When using Sterling B2B Integrator without any customizations, you need to set security settings for your Internet Explorer to obtain the best browser performance.

To configure the Internet Explorer security and privacy settings:

Procedure

1. From the Internet Explorer menu, select **Tools > Internet Options**.

2. Click the **Security** tab.

3. Select the Web content zone from which Sterling B2B Integrator is accessed.

4. Set the security level to **Medium-low**.

5. Click **Custom Level** and set your security settings according to the following table:

Internet Explorer Security Setting	Sterling B2B Integrator
.NET Framework	
Loose XAML	Enable
XAML browser applications	Enable
XPS documents	Enable
.NET Framework-reliant Components	
Permissions for components with manifests	High Safety
Run components not signed with Authenticode	Enable
Run components signed with Authenticode	Enable
ActiveX Controls and Plugins	
Allow previously unused ActiveX controls to run without prompt	Enable
Allow Scriptlets	Enable
Automatic prompting for ActiveX controls	Enable
Binary and script behaviors	Enabled
Display video and animation on a webpage that does not use external media player	Disable
Download signed ActiveX controls	Prompt
Download unsigned ActiveX controls	Prompt
Initialize and script ActiveX controls not marked as safe for scripting	Prompt

Internet Explorer Security Setting	Sterling B2B Integrator
Run ActiveX controls and plugins	Prompt/Enable
Script ActiveX controls marked as safe for scripting	Enable
Downloads	
Automatic prompting for file downloads	Enable
File download	Enable
Font download	Prompt
Enable .NET Framework setup	Enable
Java VM	
Java permissions	Medium safety
Miscellaneous	
Access data sources across domains	Enable
Allow META REFRESH	Enable
Allow scripting of Internet Explorer web browser control	Enable
Allow script-initiated windows without size or position constraints	Enable
Allow webpages to use restricted protocols for active contents	Prompt
Allow websites to open windows without address or status bars	Enable
Display mixed content	Prompt
Do not prompt for client certificate selection when no certificates or only one certificate exists	Enable
Drag and drop or copy and paste files	Prompt
Include local directory path when uploading files to a server	Enable
Installation of desktop items	Prompt
Launching applications and unsafe files	Prompt
Launching programs and files in an IFRAME	Prompt
Navigate sub-frames across different domains	Enable
Open files based on content, not file extension	Enable
Software channel permissions	Medium safety
Submit non-encrypted form data	Prompt
Use Phishing Filter	Disable
Use Pop-up Blocker	Disable
Userdata persistence	Enable
Websites in less privilged web content zone can navigate into this zone	Prompt
Scripting	
Active scripting	Enable
Allow Programmatic clipboard access	Prompt
Allow status bar updates via script	Enable

Internet Explorer Security Setting	Sterling B2B Integrator
Allow websites to prompt for information using scripted windows	Enable
Scripting of Java applets	Enable
User Authentication	
Logon	Prompt for user name and password

6. Click **OK** to save your settings.
7. Click **OK** to save the new settings and **Apply** to implement the settings. The new settings are applied when a new browser window is opened.

System Maintenance

From time to time, you might need to perform system maintenance activities.

These activities might include:
- Performing a Checksum
- Adding or removing a license

System Maintenance:

From time to time, you may need to perform system maintenance activities.

These activities might include any or all of the following:
- Performing a Checksum
- Adding or removing a license

DB Checksum Tool:

A checksum is a simple redundancy check used to detect errors in data. The DB Checksum tool generates the difference in resource checksum between the default resource and the latest system resource from the database.

In Sterling B2B Integrator, a verification process compares the checksum between the existing default resource and the resource that was added after applying a fix pack or upgrading. The DB Checksum tool, a resource difference tool generates a granular report of the changes in the system that was not permitted to be set as defaults.

Performing a checksum:

Use a command to run the DB Checksum tool.

Procedure

To run the DB Checksum tool:
1. Open the */install_dir*/install/bin directory.
2. Enter the following command:
   ```
   ./db_checksum_tool.sh [-d] [-i [1 | 2 | 3 | 4 | 5]]
   [-r [wfd | map | schema | sii | template]] [-o <output file>] [-g]
   ```
   Where:
   - -d is the mode to dump the difference of resource checksum between the default resource and latest system resource.

- **-i** is the resource type integer (optional).
- 1 is WFD.
- 2 is MAP.
- 3 is SCHEMA.
- 4 is SII.
- 5 is TEMPLATE.
- **-r** is the resource name (optional). For example, wfd, map, schema, sii, or template.
- **-o** is the file name to output all the messages (optional).
- **-g** is the file name that lists all the ignored resources (optional).
- **-h** is the help screen.

The DB Checksum tool performs the relevant checksum operation that is based on the command options and generates the output message.

License modifications:

After the installation finishes, you can modify the software licenses that you loaded with the **AddLicenseSet** command.

The **AddLicenseSet** command is in the `bin` directory of your UNIX or Windows installation. After the initial installation, the license files are in the following directories:
- UNIX - /*install_dir*/install/properties/licensefiles
- Windows - *install_dir*\install\properties\licensefiles
- iSeries - /*install_dir*/properties/licensefiles

You can add licenses or review the license list from the UI. On the Administration Menu, click **System** > **B2B Console** > **Operations** > **System** > **Licenses**.

AddLicenseSet Command Parameters

Use the **AddLicenseSet** command to modify a single license file or the entire license file directory.

To use the **AddLicenseSet** command, you must do the following:
- Open the `bin` directory
- Include the absolute path to the license file directory or to a license file

The **AddLicenseSet** command has the following parameters:

AddLicenseSet Parameter	Description
-reload	Use this parameter to reload the license files.
	This parameter deletes all of the license files from the database before the new files are loaded. The old license files are saved to the following locations:
	• UNIX - /*install_dir*/install/logs/security/ old_licenses
	• Windows - *install_dir*\install\logs\security\ old_licenses
	• iSeries - /*install_dir*/logs/security/old_licenses

AddLicenseSet Parameter	Description
`-upgrade`	Use this parameter during an upgrade only.
	This parameter deletes all of the old license files from the database and installs the new license files. The old license files are saved to the following locations:
	• UNIX - */install_dir*/install/logs/security/upgrade
	• Windows -*install_dir*\install\logs\security\upgrade
	• iSeries -/*install_dir*/logs/security/old_licenses

The **AddLicenseSet** command will check if Sterling B2B Integrator is running. If it is running, the command will call the Ops server to refresh the license from the database. If you have any problems with your licenses after running the **AddLicenseSet** command, stop and restart Sterling B2B Integrator.

License Modification: Examples:

There are several different ways you can use the **AddLicenseSet** command to modify your licenses.

UNIX Examples

From the *install_dir*/bin directory:

Scenario	Command usage (UNIX example)
Reload a single license file	`./AddLicenseSet.sh /install_dir/install/properties/ licensefiles/SI_SFG_License.xml -reload`
Reload all of the license files in the directory	`./AddLicenseSet.sh /install_dir/install/properties/ licensefiles/ -reload`
Upgrade a single license file	`./AddLicenseSet.sh /install_dir/install/properties/ licensefiles/SI_SFG_License.xml -upgrade`
Upgrade all of the license files in the directory	`./AddLicenseSet.sh /install_dir/install/properties/ licensefiles/ -upgrade`

Windows Examples

From the *install_dir*\bin directory:

Scenario	Command usage (Windows example)
Reload a single license file	`AddLicenseSet.cmd\install_dir\install\properties\ licensefiles\SI_SFG_License.xml -reload`
Reload all of the license files in the directory	`AddLicenseSet.cmd\install_dir\install\properties\ licensefiles\ -reload`
Upgrade a single license file	`AddLicenseSet.cmd\install_dir\install\properties\ licensefiles\SI_SFG_License.xml -upgrade`
Upgrade all of the license files in the directory	`AddLicenseSet.cmd\install_dir\install\properties\ licensefiles\ -upgrade`

Installing and Configuring Perimeter Servers

A perimeter server is an optional software tool for communications management. A perimeter server can be installed in a demilitarized zone (DMZ). A DMZ is a

computer host or small network inserted as a neutral zone between a company's private network and their public network. A perimeter server requires a corresponding perimeter client.

The perimeter server manages the communications flow between outer layers of your network and the TCP-based transport adapters. A perimeter server can solve problems with network congestion, security, and scalability, especially in high-volume, Internet-gateway environments.

Installation Guidelines for Perimeter Servers with Sterling B2B Integrator: The installation program installs a perimeter client and a local mode server. The local mode server is useful for testing purposes or in environments that do not require a secure solution. However, if you require high-volume, secure connections, you must install a perimeter server in a remote zone, either a more secure or less secure network than your integration server.

Consider the following before you install a perimeter server:
- Licensing for a perimeter server is determined by the licensing restrictions on the corresponding B2B adapters.
- Each perimeter server is limited to two TCP/IP addresses:
  - Internal interface is the TCP/IP address that the perimeter server uses to communicate with Sterling B2B Integrator.
  - External interface is the TCP/IP address that the perimeter server uses to communicate with trading partners. To use additional TCP/IP addresses, install additional perimeter servers.
- You can have multiple perimeter servers installed on the same computer interacting with one instance of Sterling B2B Integrator. To install a perimeter server on a computer with an existing instance, install the new perimeter server in a different installation directory.
- The combination of internal TCP/IP address and port must be unique for all perimeter servers installed on one computer.
  - If a perimeter server is installed using the wildcard address, then all ports must be unique. The assigned ports are not available for use by adapters that use the server or any other perimeter server on that computer.
  - The internal and external interface may use the same TCP/IP address. However, the port used by the perimeter server is not available to the adapters that use the server.

Perimeter Server Installation Methods: You can install perimeter server either in silent mode or in interactive mode. The default installation mode is silent. In the silent mode, you should specify the details in a silent file, whereas in the interactive mode, you should enter the value each time a prompt appears.

Perimeter Server Information Gathering Checklist: Before you install the perimeter server, you need to gather the following information and answer the following questions:

Perimeter Server Information Gathering Checklist	Your Notes
Path to java	
Path to the Sterling B2B Integrator installation directory	

Perimeter Server Information Gathering Checklist	Your Notes
Will this perimeter server be installed in a less secure network?	
TCP/IP address or the DNS address that the perimeter server will listen on.	
Listening port for the perimeter server.	
Local port that the perimeter server will use to connect to Sterling B2B Integrator. Port number must be higher than 1024.	

Perimeter Server Security Vulnerabilities: When Sterling B2B Integrator is deployed with a remote perimeter server in a more secure network zone, there is a security vulnerability. An intruder may compromise the host where the proxy resides, and take over the persistent connection to the perimeter server residing in the more secure zone. If this happens, the perimeter server will relay all the intruder's network requests past the firewall into this internal zone.

To prevent an intrusion, limit the activities the remote perimeter server can perform on behalf of the proxy to specifically those activities that the proxy needs to do for its operation.

Control these limitations by using a configuration residing in the secure network zone with the remote perimeter server, inaccessible by the proxy that could become compromised.

Installing a perimeter server in a more secure network in a UNIX or Linux environment:

Install a perimeter server in a more secure network in a UNIX or Linux environment in interactive mode

Before you begin
- Sterling B2B Integrator must be installed.
- Complete the Perimeter Server information gathering checklist.

Procedure
1. Enter: */path_to_java*/java -jar */install_dir*/install/packages/ *ps_filename*.jar –interactive

   The installation program verifies the operating system, minimum fix pack level, and the location and version of the JDK.
2. Enter the full path name for the Sterling B2B Integrator installation directory and press **Enter**.

   If there is an existing installation in the directory you specify, you can update it using the same settings. Enter yes, and installation proceeds without more entries.
3. Enter yes to confirm that the installation directory is correct.

   The program verifies the amount of available disk space.
4. Is this server in a less secure network than the integration server, enter no.

   This installation is for a more secure network.

5. Answer the question: `Will this perimeter server need to operate on specific network interface?`
   - Enter yes to select from a list network interfaces available.
   - Enter no.
6. Enter the TCP/IP address or DNS name that the integration server listens on for the connection from this perimeter server.
7. Enter yes to confirm the TCP/IP address or DNS name.
8. Enter the port that the integration server listens on for the connection from this server. The port number must be higher than 1024.
9. Enter the local port number that the perimeter server uses for the connection to the integration server.

   The port number must be higher than 1024. Specify a port number of zero for the operating system to select any unused port.
10. Enter yes to confirm the port number.

   After the installation is complete, the following messages are displayed:

   `Installation of Perimeter Service is finished`

   `To start this Perimeter Server change to the install directory and run the startup script.`

   `You will also need to configure this server in your integration server (SI) UI.`

Installing a perimeter server in a less secure network in a UNIX or Linux environment:

Install a perimeter server in a UNIX or Linux environment in interactive mode.

Procedure
1. Copy the .jar installation files from the installation media to a UNIX/Linux directory. If you are using FTP to copy the file, make sure that your session is set to binary mode.
2. Enter: `/path_to_java/java -jar /install_dir/install/packages/ ps_filename.jar –interactive`

   The program verifies the operating system, minimum fix pack level, and the location and version of the JDK.
3. Enter the full path name of the installation directory.
4. If there is an existing installation in the directory you specify, you can update it using the same settings. Answer the question:

   `There is an existing install at that location, update it while keeping existing settings?`

   If **yes**, the installation proceeds without more entries.

   Note: If you want to change any of the settings, you must use a new directory, or delete the old installation before you reinstall the perimeter server. You cannot overwrite an existing installation, and you cannot use an existing directory that does not contain a valid installation.
5. Confirm that the installation directory is correct.

   The program verifies the amount of available disk space.
6. Answer the question:

   `Is this server in a less secure network than the integration server?`

   Yes

7. Answer the question:

   `Will this server need to operate on specific network interfaces?`

   If **yes**, the program returns a list of the network interfaces available on your host. Select the interfaces for the server to use.

8. Enter the TCP/IP address or DNS name for the internal interface to use to communicate with the integration server (Sterling B2B Integrator). Press **Enter** to use a wildcard for this address.

9. Verify the TCP/IP address or DNS name for the internal interface.

10. Enter the TCP/IP address or DNS name for the external interface to use to communicate with trading partners. Press Enter to use a wildcard for this address.

11. Verify the TCP/IP address or DNS name for the external interface.

12. Enter the port that the perimeter server listens on for the connection from the integration server (Sterling B2B Integrator). The port number must be higher than 1024.

13. Verify the port.

    When the perimeter server is installed, the following message is displayed:

    `Installation of Perimeter Service is finished`

14. Change to the installation directory.

15. Enter `./startupPs.sh` to start the perimeter server.

Silent Installation Method for an External Perimeter Server: You can install an external perimeter server using a silent install file. The perimeter server can be installed on the same machine where you have installed Sterling B2B Integrator or on a separate machine. It is recommended to install the perimeter server on an separate machine.

To use the silent installation method, you first create the silent install file and then you use to complete the installation.

Create the Silent Installation File for an External Perimeter Server:
About this task

Create a silent installation file with the following variables:

Entry	Description
INSTALL_DIR	(Required) The installation directory that stores perimeter server files and related directories. This directory must exist prior to running the silent install.
REVERSE_CONNECT	(Optional) Determines if the perimeter server is to be installed in a more secure network zone. Valid values: • Y - more secure network zone • N - less secure network zone
PS_PORT	(Required) Determines the perimeter server port to interact with the system.
PS_SECURE_IF	(Required) Determines the TCP/IP address or DNS name for the internal interface to communicate with the integration server (Sterling B2B Integrator). You can use a wildcard (*) for this address.
PS_EXTERNAL_IF	(Required) Determines the TCP/IP address or DNS name for the external interface to communicate with the trading partners. You can use a wildcard (*) for this address.

Entry	Description
REMOTE_ADDR	(Optional) Determines the remote perimeter server address. (Not required if REVERSE_CONNECT=N)
REMOTE_PORT	(Optional) Determines the remote perimeter server port. (Not required if REVERSE_CONNECT=N)
MAX_JVM_HEAP	(Required) Determines the maximum Java heap size allocated to the JVM.

Installing an external perimeter server with a silent installation file:

Install an external perimeter server with a silent installation file.

About this task

Before you begin, create the silent installation file.

Procedure
1. From the installation media, copy SI.jar to a UNIX/Linux directory.
2. Set up your silent installation file and record its location.
3. Go to your working directory.
4. To start the installation, enter: */absolutePath*/bin/java -jar */install_dir*/install/packages/*ps_filename*.jar -f silent.txt

   The installation starts. You can follow the progress of the installation on screen.

   The installation program verifies support for your operating system and JDK. It also verifies that you have enough space for the installation.

   When the installation is finished, the system displays the following message:

   Installation has completed successfully.
5. Determine whether you must apply any fix packs to the installation. Refer to *Installation Maintenance* to install the latest fix pack.

Install a Fix Pack in a Remote Perimeter Server UNIX or Linux Environment: About this task

Remote perimeter servers are not automatically updated by a fix pack. You must reinstall the perimeter server using the new perimeter server installation file supplied with the fix pack.

To update a Remote Perimeter Server:

Procedure
1. Update your installation with the latest fix pack. Obtain the fix pack from the Support Center web site.
2. Locate your perimeter server fix pack in the */install_dir*/install/packages directory of your installation. Download the file from the Support Center web site. These files have a name that identifies a version number. For example, ps_2006.jar.
3. Copy the file to a directory on the remote server.
4. Stop the perimeter server, enter ./stopPs.sh.

5. To begin the installation, enter : */absolutePath*/bin/java -jar *filename*.jar -interactive

absolutePath is the directory name where the Java version is installed.

The program verifies the operating system, required patch level, and the location and version of the JDK.

6. Enter the full path to the installation directory. If you do not want to change any settings for your perimeter server, specify the same directory where the remote perimeter server was originally installed.

7. Answer the question:

There is an existing install at that location, update it while keeping existing settings?

If **yes**, the installation will proceed without additional entries.

Note: If you want to change any of the settings, you must use a new directory, or delete the old installation before performing the new installation. You cannot overwrite an existing installation, and you cannot use an existing directory that does not contain a valid installation. The existing installation must be Sterling B2B Integrator 5.0 or later.

When the perimeter server is installed, the following message is displayed:

Installation of Perimeter Service is finished

8. Change to the installation directory.

9. Enter ./startupPs.sh to start the perimeter server.

Grant Permissions for Specific Activities for a Perimeter Server: About this task

Before you begin:

- Remote perimeter server must be installed for a more secure zone.
- Know what permissions you want to grant
- Understand the content of the restricted.policy file. The first two grant sections in the restricted.policy file are required for correct perimeter server operation. Do not modify these sections.

Procedure

1. Install a remote perimeter server, choosing the option for a more secure network zone.

2. At the installation prompt *Is this server in a less secure network than the integration server?*, select **No**, which is the option for a more secure network zone.

3. Navigate to the perimeter server installation directory.

4. Open the restricted.policy file.

5. Add permission lines for each back-end server that you intend to allow the proxy to access. There are commented out examples for each type of server.

The first two grant sections are required for correct perimeter server operation. Do not modify these sections.

For example, you can grant permission to a target FTP Server. In the example, servers are configured to listen on the following ports: 33001 (for FTP), 33002 (for HTTP), and 1364 (for C:D). These port numbers can be edited.

```
// To restrict or permit the required Host/Server to communicate with the
PS, update the "ftphost/htttphost/snode" with that of the Server IP and
provide the appropriate PORT number where the Server will listen. //
 // For each target FTP Server
 // permission java.net.SocketPermission "10.117.15.87:33001", "connect"; //
```

```
    Control connection.
 // permission java.net.SocketPermission "10.117.15.87:lowPort-highPort",
"connect"; // Passive data connections.
 // 10.117.15.87 indicates IP of the FTP Server for which the permission is
granted by PS for communicating with client //
 // For each target HTTP Server
 //
 // permission java.net.SocketPermission "10.117.15.87:33002", "connect";
 // 10.117.15.87 indicates IP of the HTTP Server for which the permission
is granted by PS for communicating with client //

 // For each target C:D snode
 //
 // permission java.net.SocketPermission "snode:1364", "connect";
 //  10.117.15.87 indicates IP of the Connect Direct Node for which
the permission is granted by PS for communication //
```

6. In the perimeter server installation directory, there is the perimeter server settings file called remote_perimeter.properties. Edit it to change the "restricted" setting to a value of true to turn on restrictions.

7. In the future, any attempt by the perimeter server to access disallowed network resources will be rejected and logged in the perimeter server log written to the perimeter server installation directory.

Perform DNS Lookup on Remote Perimeter Server:
About this task

By default, a perimeter server performs DNS lookup in the main server JVM. If you have limited DNS in your secure area, you can configure the remote perimeter server to look up trading partner addresses in the DMZ.

To enable DNS lookup, add the following property to customer_overrides.properties. Set the value to *true*:

Property Name	Description
perimeter.*.forceRemoteDNS=true	Forces resolution of DNS names at remote perimeter server. Set the value to *true* to configure remote perimeter servers to look up trading partner addresses.

Start Perimeter Servers in UNIX or Linux:
About this task

To start a perimeter server in UNIX or Linux:

Procedure

1. Navigate to the perimeter server installation directory.
2. Enter ./startPSService.sh.

Stop Perimeter Servers in UNIX or Linux:
About this task

To stop a perimeter server in UNIX or Linux:

Procedure

1. Navigate to the perimeter server installation directory.
2. Enter `./stopPSService.sh`.

Using IBM Sterling Gentran:Server for UNIX with Sterling B2B Integrator

Sterling B2B Integrator has the ability to access information located in Sterling Gentran:Server® for UNIX. You can configure this immediately following the installation or at a later date.

By configuring Sterling B2B Integrator to run with Sterling Gentran:Server for UNIX, you can:
- View data from your Sterling Gentran:Server trading partners
- Start or stop Sterling Gentran:Server data managers
- View which data managers are running
- View, search, and track Sterling Gentran:Server Life Cycle event records

The following restrictions apply:
- You must have an UNIX or Linux environment
- You must be using one of the following Sterling Gentran:Server for UNIX products:
  - Sterling Gentran:Server for UNIX with Process Control Manager (PCM)
  - Sterling Gentran:Server for UNIX with EC Workbench (ECW)
  - Sterling Gentran:Server for UNIX with Advanced Data Distribution (ADD)

Install and Configure Attunity® Data Connect:
About this task

If you want Sterling B2B Integrator to use the trading partner information in your Sterling Gentran:Server for UNIX, you must install and configure Attunity Data Connect. The Attunity Data Connect software provides JDBC access to the Gentran DISAM database fields where the trading partner information is stored.

To install and configure Attunity Data Connect:

Procedure

1. Install Attunity Data Connect 3.3 or later using the installation procedures provided with the Attunity Data Connect software.
2. Ensure the Attunity Data Connect software runs as expected.
3. Create a new DISAM data source and refresh the Attunity Data Connect server. See the Attunity Data Connect documentation for the procedure.
4. Locate the following metadata description files in the */install_dir/*tp_import/gentran/disam_mapping directory:

Find this file	Replace this string $YOUR_DATASOURCE with ..	Replace this string $YOUR_GENTRAN with ..
TP_MAST.XML	the name of the data source for your Sterling Gentran:Server for UNIX system	the path to the root directory of Sterling Gentran:Server for UNIX

Find this file	Replace this string $YOUR_DATASOURCE with ..	Replace this string $YOUR_GENTRAN with ..
TRADACOM.XML	the name of the data source for your Sterling Gentran:Server for UNIX system	the path to the root directory of Sterling Gentran:Server for UNIX
ORGANIZATION.XML	the name of the data source for your Sterling Gentran:Server for UNIX system	the path to the root directory of Sterling Gentran:Server for UNIX
TP_MISC.XML	the name of the data source for your Sterling Gentran:Server for UNIX system	the path to the root directory of Sterling Gentran:Server for UNIX

  5. Run the Attunity Data Connect Dictionary (ADD) Editor.
  6. Select the DISAM data source you created in Step 3.
  7. Import the metadata description files you updated in Step 4. See the Attunity Data Connect documentation for the procedure.
  8. Verify that the metadata description files are included in the list of tables.
  9. Save your changes.
 10. Exit the Attunity Data Connect Dictionary (ADD) Editor.

Configure Sterling B2B Integrator To Run with IBM Sterling Gentran:Server for UNIX:
About this task

To configure Sterling B2B Integrator to run with Sterling Gentran:Server:

Procedure
  1. Set the umask to 002 in Sterling B2B Integrator.
  2. Is Sterling B2B Integrator installed on a different computer than Sterling Gentran:Server?
     - If No, then continue to Step 3.
     - If Yes, then NFS mount the $EDI_ROOT of Sterling Gentran:Server onto the Sterling B2B Integrator host. Continue to Step 3.
  3. Verify that the remote shell (rsh or remsh) is working. If you are unable to use the rsh/rmesh shell and can only use ssh shell, change the GS_RSHELL variable located in sandbox.cfg file.
  4. Navigate to */install_dir*/bin.
  5. Stop Sterling B2B Integrator, enter `./softstop.sh`.

     For more information about the softstop command line options, refer to the performance management documentation.

     Note: If you are in a clustered environment, softstop suspends all the scheduled business processes. It is recommended to run a hardstop when stopping individual nodes in a cluster.
  6. Enter `./configGSUnix.sh`. This command starts the configuration.
  7. Press **Enter** to continue the configuration.

8. If you currently use Sterling Gentran:Server Life Cycle and want to configure Tracking and Ops, then you need to enter the following the database information:
   - Database vendor
   - Absolute path to the JDBC drivers
   - Database user name
   - Database password
   - Database (catalog) name
   - Database host name using either the IP address or name of the computer where the data base is installed
   - Database port number

9. Is Sterling Gentran:Server installed on the same computer as Sterling B2B Integrator?
   - If Yes, enter EDI_ROOT for the local computer and continue with next step.
   - If No, enter the host name where Sterling Gentran:Server is installed, and the EDI root where Sterling Gentran:ServerSterling Gentran:Server is mounted. Verify the EDI root is installed.

10. Enter the version number for Sterling Gentran:Server.
    - Enter 1 for version 5.3.
    - Enter 2 for version 6.0.

11. If you want to configure Sterling B2B Integrator to view Trading Partner Administration, then you need to enter the following Sterling Gentran:Server database information:
    - Absolute path to the JDBC drivers (for example, /attunity_install_dir/java
    - Database user name
    - Database password
    - Database (catalog) name
    - Database host name where Attunity Data Connect is installed
    - Attunity port number

12. Enter yes and press **Enter** to continue the configuration. After the installation completed, the following message is displayed: *Deployment to the application server successful.*

13. Enter ./run.sh.

IBM Sterling Gentran:Server for UNIX and Sterling B2B Integrator Migration Information: When you are migrating maps and setting up processes in Sterling B2B Integrator from Sterling Gentran:Server for UNIX, Sterling Gentran:Server for UNIX now displays translation errors, if any, in the envelope segments and does not process the erroneous envelope segments.

Sterling Gentran:Server for UNIX 6.0 and 6.1 allowed EDI envelope segments (ISA, GS, ST, SE, GE, IEA, UNB, UNH, UNT, and UNZ) with errors to be processed successfully. This has been corrected and Sterling Gentran:Server for UNIX now issues translation errors when using X12 or EDIFACT deenvelope processes. The functional acknowledgments display the errors in the envelope segments.

The following examples illustrate scenarios where Sterling Gentran:Server for UNIX allowed successful processing of EDI segments with errors:

- Sterling Gentran:Server for UNIX did not display an error when the segment count in the UNT or SE segments did not reflect the correct count of segments in a transaction.
- Sterling Gentran:Server for UNIX did not display an error when the use of segment delimiters in the Map Input properties did not match the data. The user could not specify a delimiter in a map with multiple data files that used different delimiters. The user had to use the Syntax Record and specify the positions of the delimiters.

Uninstall Sterling B2B Integrator from a UNIX/Linux Cluster Environment
Before you begin

If you have installed Sterling B2B Integrator software using IIM, then perform these steps to unregister Sterling B2B Integrator packages from the IIM registry:
- Launch IIM.
- Click **Uninstall** and select the required Sterling B2B Integrator package (Media, FixPack, or Interim Fix).
- Confirm and click **Uninstall**.

About this task

To uninstall Sterling B2B Integrator from a UNIX/Linux cluster environment, perform the following procedure on each node, starting with node 1:

Procedure
1. Stop Sterling B2B Integrator and wait for shutdown to complete. If you begin removing files before all business processes and Sterling B2B Integrator are stopped, you may be unable to remove Sterling B2B Integrator successfully.

   To stop Sterling B2B Integrator, navigate to */install_dir*/install/bin and run the following command:

   `./hardstop.sh`
2. Back up the file system and database.

   This step is optional. However, by backing up the file system and database, you are ensured that Sterling B2B Integrator is completely recoverable.
3. Remove the installation directory by entering the following command in the parent directory of your installation directory: rm **-rf** *install_dir*
4. If you use an Oracle, Microsoft SQL Server, or DB2 database, these remain intact even after you remove Sterling B2B Integrator from the server. If you no longer want to reference the data, contact your database administrator about removing unwanted tables and recovering the database space where Sterling B2B Integrator used to reside.
5. (Optional) To remove the JDK, review and perform the uninstall procedure for the JDK you are using.
6. After you remove Sterling B2B Integrator from the server, you can remove Eclipse, and any tools that were downloaded to the desktop, including the following:
   - Map Editor and associated standards

     Refer to the *Map Editor Guide* for information about removing the Map Editor.
   - Graphical Process Modeler

Refer to the *Graphical Process Modeler Guide* for information about removing the Graphical Process Modeler.
- Web Template Designer

  Refer to the *Web Extensions Guide* for information about removing the Web Template Designer.
- (If licensed) MESA Developer Studio plug-ins, including:
  - MESA Developer Studio Software Development Kit (SDK)
  - MESA Developer Studio Skin Editor

  Refer to the *MESA Developer Studio* guide for information about removing MESA Developer Studio.
- (If licensed) Reporting Services, which requires MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports.

  Refer to the *MESA Developer Studio* guide for information about removing Reporting Services.

User Documentation

The user documentation is available from an online documentation site on the web.

Providing the documentation in an online environment allows for frequent updates of content that is based on user feedback and usability.

If you need a printed copy of the documentation, you can print topics of information through your Internet browser, or you can download documents in PDF format, after you add it to a collection on IBM Knowledge Center.

To access the documentation site from within Sterling B2B Integrator or one of its tools, select the help ⑦ icon. The system must reside on a computer that supports Internet access and an Internet browser.

Improving your access to online documentation:

You can improve your access to online documentation by using several methods.

About this task

After you access the IBM Knowledge Center, you can perform the following tasks:
- Enter a word or phrase and search the entire library for information.
- Move through a hierarchy of contents pages to identify the topic you want to read or print.
- Print topics by using your browser's Print function.
- Add documents to your collection and download them in PDF format.

Troubleshooting Tips for Cluster Environment

Situation	Message or Symptom	Explanation/Resolution
Installing	You encounter errors or problems during installation.	**Explanation** The installation creates several log files that you can use to diagnose problems like the failure of an installation. **Resolution** Examine the log files generated during installation: • ant.install.log (in the *parent_install* directory) • /*install_dir*/PreInstallSI.log • /*install_dir*/InstallSI.log
Installing	When you entered an absolute path during installation, a message indicated that the command was not found.	**Explanation** You entered an incorrect path. Check the information entered. **Resolution** Enter the correct path.

Installing a desktop tool or resource	Cannot download any of the following:
	• Map Editor and associated standards
	• Graphical Process Modeler
	• Web Template Designer
	• (If licensed) MESA Developer Studio plug-ins, including:
	  – MESA Developer Studio Software Development Kit (SDK)
	  – MESA Developer Studio Skin Editor
	• (If licensed) Reporting Services, which requires MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports.
		Explanation
		
		When you install Sterling B2B Integrator, system files are created that contain an internal IP address. If you install Sterling B2B Integrator behind a firewall, and your firewall is configured to accept an external IP address from a client computer, you may not be able to download the desktop tools and resources. The firewall will reject the internal IP address from a client residing outside of the firewall.
		
		Resolution
		
		Modify the system files that contain the invalid IP address. Follow these steps:
		1. Navigate to /*install_dir*/install/bin.
		2. Stop Sterling B2B Integrator.
		3. Enter the following command followed by the external IP address:
		  `./patchJNLP.sh external_IP_address`
		4. Restart Sterling B2B Integrator.

Installing	Memory and ulimit errors.	**Explanation** The installation fails with memory and ulimit errors. **Resolution** • Refer to the *Viewing and Editing Performance Configuration Settings* in the *Performance Management* documentation. Modify your memory setting accordingly. • Refer to the *Operating System Configuration Checklist* and tune the ulimit settings.

Situation	Message or Symptom	Explanation/Resolution
Accessing the URL	Attempts to access the URL for Sterling B2B Integrator display the message: Page cannot be displayed	**Resolution** See the information on *Changes to Network Interface Bindings* to update either the property file or the dashboard.

Node status on a dual-stack machine	Displays **Node went down** status in Node Status page, but the node is up and running.	**Explanation**
		
		Sterling B2B Integrator is configured using an IPv4 address on a dual-stack machine. The Node Status page displays Node went down status, but the node is up and running.
		
		Resolution
		
		Modify the noapp.properties_platform_ifcresources_ext.in and jgroups_cluster.properties.in files by performing the following:
		
		1. Identify the IPv6 address of the host machine from the /etc/hosts file.
		2. Navigate to the /install_dir/properties directory.
		3. Edit noapp.properties_platform_ifcresources_ext.in file and add the IPv6 address: admin_host.2 = <IPv6 address>
		4. Edit jgroups_cluster.properties.in and modify the following:
		   • &HOST_NAME=<IPv6 address>
		   • mcast_addr=FFFF::<IPv4 address>
		5. Run the ./setupfiles.sh script to apply the changes.

Installing (HP-UX 11.31)	When entering your email address the @ key is not recognized.	**Explanation** The @ key is being mapped to kill or eol, it needs to be mapped to another character. **Resolution** This resolution only applies to HP-UX 11.31. Map the @ key to another character. Note: If you need want to see what the key is mapped to, use the stty -a command.

Situation	Message or Symptom	Explanation/Resolution
Cluster Installation	Cluster is not working properly and your machine is running dual-stack - ipv4 and ipv6.	**Explanation** You can see the node went down from User Interface, but the node is running. **Resolution** • Find your ipv6 address in the /etc/hosts file and update noapp.properties.in file admin_host.2 = <ipv6_address>. • Edit jgroups_cluster.properties.in file and replace &HOST_NAME with the ipv6 address string and change mcast_addr=FFFF::239.255.166.17. • Enter setupfiles.sh.
Cluster Installation or Upgrade	When configuring TCPS the following warning can be found in the activemqbroker.log: sun.security.provider.certpath. SunCertPathBuilderException: unable to find valid certification path to requested target.	**Resolution** Add the system certificate to the trust store using the KeyTool command.
Cluster Installation or Upgrade	When configuring TCPS the following warning can be found in the activemqbroker.log: oracle.net.ns.NetException: Invalid cipher suites specified.	**Resolution** Do not mention any SSL cipher in the ActiveMQconfig.xml.

Situation	Message or Symptom	Explanation/Resolution
e-Invoice Upgrade: Oracle Add Constraint Error	When you upgrade Sterling e-Invoicing and are using an Oracle database, if the upgrade fails with the error message `name is already used by an existing object`, this occurs because the default behavior for the `drop constraint` command changed in Oracle 10.	**Explanation** The index that is used to support the constraint is now only removed if the index was generated by the `create constraint` command. The indexes for Sterling e-Invoicing are always generated from constraints during an install. If you receive this error during a Sterling e-Invoicing upgrade, it is because of how the database was restored, the version of Oracle you are using, and because the Oracle `imp` command exported the indexes and constraints separately. There is no way to determine when the imp command will not add a create index command to the export file if it was generated by a constraint – but if it does add the command, the database restore process loses the association of the constraint and its underlying index. The database script that runs during a Sterling e-Invoicing upgrade executes two steps: 1. First, it drops the unique constraint so the next step can redefine it using additional columns. However, the drop constraint command does not remove the underlying index if the association with its index was lost. 2. The next command that redefines this constraint requires a different index definition, but in this scenario the name of the index the constraint wants to use already exists, which causes the `name is already used by an existing object` error. **Resolution** If you receive this error message, the solution for this problem is to drop the index and rerun the Sterling e-Invoicing upgrade. The drop index command you should use is: `drop index UNQ_EINV_CANON`
Applying a fix pack or upgrading	The */install_dir*/install/ installed_data directory is created (if clustered, on each node) during upgrade or applying a fix pack. This directory can become very large and take up needed space on the file system.	**Explanation** The information in this directory is used during upgrade or when applying a fix pack, but is not required afterward. The deployment/cleanup tasks for the upgrade do not remove this directory. **Resolution** The directory can be manually removed to increase the available space for the file system: 1. Navigate to */install_dir*/install 2. Enter `rm -r installed_data`

UNIX/Linux Non-Cluster Environment Installation (V5.2.6 or later)

You may follow different installation and upgrade scenarios when you install and upgrade Sterling B2B Integrator in a UNIX/Linux non-cluster (single node) environment.

Installation Scenarios

It is important to review the following installation scenarios:

Scenario	Instructions
Version 5.1.x is installed and it needs to be upgraded to V5.2.6.	See "Upgrading (V5.2.6 or later)" on page 320
Version 5.2.x is installed and it needs to be upgraded to V5.2.6.	See Applying a fix pack (V5.2.6 or later)
Version 5.2.6 is being installed as the base release.	Review this document and use the installation instructions.

Prerequisite knowledge for installation in the UNIX environment

The installation of Sterling B2B Integrator requires background knowledge in different areas.

Before you begin the installation, you must be knowledgeable on the following topics:
- Application servers
- Operating system on which you plan to install
- Database administration
- VI or another text editor
- *System Requirements* for this release of Sterling B2B Integrator.

Intended audience:

This document can be used by different members of your organization.

This document is intended for use by:
- System administrators
- Installation engineers
- Database administrators.

Assumptions for this guide:

The procedures in this guide are accurate as of the publication date and are specific to this version of the document.

Before you begin the installation

Before you install Sterling B2B Integrator, you must perform certain tasks.

Before you begin the software installation, you need to perform the following tasks:
- Perform system verification tasks
- Perform operating system verification tasks

- Obtain the correct version of the JDK, JCE, and JDBC drivers required. Most Java files required are provided with the product download or media. See the *System Requirements* for more information.

System verification tasks:

Before you install Sterling B2B Integrator, you must perform certain system verification tasks.

Item	System Verification Task	Your Notes
1	Use the *System Requirements* to verify that your system hardware and software meet the requirements that are specified for this release. For HP, you must run the HP JConfig utility to obtain the required patches and kernel modifications.	
2	Verify that the file system has adequate free disk space.	
3	Verify the following items: - An operating system user account exists on the host server. - User account has permissions to run the commands for the operating environment.	
4	Verify that your database was installed and configured. See the *Configure the Database* chapter for more information. If you are going to manually apply DDL statements, you need to complete the database schema work before you begin the installation.	
5	If you are using a non-English-language environment, confirm that you are using the appropriate character set.	

Operating system verification:

Before you install Sterling B2B Integrator, you must perform certain operating system verification tasks.

You must verify your operating system configuration by using the following checklist:

For the Operating System	Operating System Configuration Checklist	Your Notes

HP-UX	Establish these settings:
	
	• Verify kernel parameters and establish the following minimum settings by running **kctune** command:
	  – `kctune max_thread_proc 1024`
	  – `kctune maxdsiz 2147483648`
	  – `kctune maxdsiz_64bit 8589934592`
	  – `kctune maxssiz 369098752`
	  – `kctune maxssiz_64bit 536870912`
	• Run the **ulimit** utility, verify, and establish the following minimum settings:
	  – `ulimit -d` = 2097152 KB or higher
	  – `ulimit -s` = 360448 KB or higher	

For the Operating System	Operating System Configuration Checklist	Your Notes

AIX	To ensure that */install_dir*/install directory has the necessary permissions, AIX users must run the following command on the parent directory of the */install_dir*/install directory before installation:
	
	`chmod -R a-s <absolute path>/`*`install_dir_parent`*
	
	where *install_dir_parent* is the directory in which */install_dir*/install is created.
	
	For example, to specify
	
	`AIX_1/applications/test1/`*`my_install`* as your installation directory, run the command from the `AIX_1/applications` directory (directly above the `test1` directory):
	
	`chmod -R a-s test1`
	
	or from another location on the file system:
	
	`chmod -R a-s /AIX_1/applications/test1`
	
	This command ensures that when the *my_install* directory is created during installation, it inherits the correct permissions from the `test1` directory.
	
	The **ncargs** parameter specifies the maximum allowable size of the ARG/ENV list (in 4 KB blocks) when the exec() subroutines are run. Set the **ncargs** parameter to 16 or higher.
	
	To display the current value of **ncargs**, enter the command `lsattr -El sys0 -a ncargs`.
	
	To change the current value of **ncargs**, enter the command `chdev -l sys0 -a ncargs=NewValue`.
	
	Note: The **lsattr** command option is **–El** (lowercase L) and the **chdev** command option is **–l** (lowercase L).
	
	Change the following default entries in the `/etc/security/limits` file:
	• `fsize = -1`
	• `core = 2097151`
	• `cpu = -1`
	• `data = 262144`
	• `rss = 65536`
	• `stack = 65536`
	• `nofiles = 4096`	

For the Operating System	Operating System Configuration Checklist	Your Notes

Linux	You must disable SE Linux by entering the following text:
	
	`/etc/sysconfig/selinux: SELINUX=disabled`
	
	Ensure that /etc/hosts has short-names first for all entries. For example,
	`127.0.0.1localhostlocalhost.localdomain`
	
	If the base locale is English, verify the following values:
	• **LANG** variable is en_US
	• **LANG** variable is exported	

For the Operating System	Operating System Configuration Checklist	Your Notes

Red Hat Enterprise Linux	Make the following system changes:
	
	1. If the base locale for the system is English, edit the /etc/sysconfig/i18n file by changing the **SUPPORTED** variable from en_US.utf8 to en_US. You can also allow multiple support with the following format: en_US.utf8:en_US
	
	2. Save and close the /etc/sysconfig/i18n file.
	
	3. Edit the /etc/security/limits.conf file by adding the following lines:
	  • * hard nofile 8196
	  • * soft nofile 4096
	  • * hard memlock 3000000
	  • * soft memlock 3000000
	  • * hard nproc 16000
	  • * soft nproc 16000
	  • * hard stack 512000
	  • * soft stack 512000
	
	  This change updates the system **ulimits**. For **nofile**, set the value to unlimited.
	
	4. Save and close the /etc/security/limits.conf file.
	
	5. Restart the system.
	
	IBM Installation Manager in UI mode might fail to start on an RHEL 6.1 or higher x86_64 (64-bit) OS because Installation Manager is a 32-bit application and depends on some of the 32-bit libraries.
	
	For information about installing the required 32-bit OS libraries, refer to the IBM Support website (https://www-304.ibm.com/support/docview.wss?uid=swg21459143)
	
	CAUTION:
	Because of a known issue with the IBM JDK on RHEL 6.1 or higher, a performance degradation might be seen in comparison to previous RHEL releases. To avoid this issue, disable the CFS on RHEL 6.1 or higher.
	
	To disable CFS:
	1. Log in as root
	2. Edit /etc/sysctl.conf and add "kernel.sched_compat_yield = 1"
	3. Restart the system
	
	For more information, go to the IBM SDK and Runtime Environment Java Technology Edition Version 6 information Center and search for *known limitations on Linux*.	

For the Operating System	Operating System Configuration Checklist	Your Notes

Solaris	Set the following entries in the /etc/security/limits file:
	
	   nofiles = 4096 (recommended value is unlimited)
	
	   set rlim_fd_max=4096 (limit is 65535) - hard limit
	
	   set rlim_fd_cur=4096 - soft limit
	
	• To make the setting effective as the hard limit, restart the server or run the following command:
	
	   kill -1 inetd
	
	• To make the setting effective as the soft limit, use the parent shell configuration (for example, .profile). Then, restart the server.	

SUSE Linux	Make the following system changes:
	
	1. If the base locale for the system is English:
	   • For the individual user, edit the $HOME/.i18n file by setting export LANG="en_US".
	   • For a system-wide change, edit the /etc/sysconfig/language file by setting RC_LANG="en_US". You must also set ROOT_USES_LANG="yes".
	
	2. You can also allow multiple support with the following format: RC_LANG="en_US.utf8:en_US"
	
	3. Save and close the file. Language settings take effect on your next session.
	
	4. Edit the /etc/security/limits.conf file by adding the following lines:
	   • * hard nofile 8196
	   • * soft nofile 4096
	   • * hard memlock 3000000
	   • * soft memlock 3000000
	   • * hard nproc 16000
	   • * soft nproc 16000
	   • * hard stack 512000
	   • * soft stack 512000
	   This change updates the system **ulimits**. For **nofile**, set the value to unlimited.
	
	5. Save and close the /etc/security/limits.conf file.
	
	6. Restart the system.	

Verification of the system requirements:

Before you begin the installation, verify that your system meets the hardware and software requirements that are specified for this release.

The hardware requirements that are listed in the *System Requirements* are the minimum requirements. Your system requirements might exceed these requirements if you are running other applications on the same machine as Sterling B2B Integrator.

The installation strictly enforces the following system requirements:

• Operating system version must match requirement exactly.

- The minimum patch level for the operating system is enforced, but you can apply higher patch levels.
- JDK version must match requirement exactly.
- The disk space is a minimum for the installation. The system must be separately sized to handle whatever load is going to be put on the system.
- Database version must match exactly.
- JDBC driver version supports exact matches and wildcard matches.

If any of these requirements are not met, the installation fails. If the installation fails, review the installation log for a list of non-compliant items.

Upgrading your JDK (Windows and UNIX):

Sometimes you need to upgrade your JDK version to support a new version of Sterling B2B Integrator.

About this task

If you have V5.2.4.1 or higher installed, you can use the **upgradeJDK** script to upgrade your version of the JDK. See *bin Directory Files* for more information.

If you have V5.2.4.0 or lower installed, follow the steps below to upgrade your JDK.

Procedure

1. Download the new JCE file. For example, the `UnrestrictedPolicy.zip` policy file for the IBM JDK.
2. Back up the existing JDK in *<Install Dir>*/jdk. Change the folder name to `jdk_back`)
3. Copy the new IBM JDK (1.7.0) folder to the installation Directory. Directory Name should be `jdk`)
4. Copy all the jars present in *<Install Dir* >jdk_back\jre\lib\ext to *<install Dir>*jdk\jre\lib\ext directory.
5. If your installation of V5.2.4 or lower was built using the Oracle (SUN) JDK, continue to the next step. Otherwise skip to step 6.
   a. Edit the `sandbox.cfg` property file.
   b. Set `JCE_DIST_FILE=`*<New Path of Supported JCE File>*. For example, `JCE_DIST_FILE=D\:\\IBM\\unrestrictedpolicyfiles.zip`.
   c. Back up the `local_policy.jar` and `US_export_policy.jar` files present in *<Install Dir>*jdk\jre\lib\security.
   d. Unzip the new JCE file. For example, `Unrestrictedpolicyfiles.zip` file. Copy `local_policy.jar` and `US_export_policy.jar` to *<Install Dir>*jdk\jre\lib\security.
6. Run `updateJavaSecurity.cmd` *<path_to_new_jdk><Install Dir>*/jdk.
7. Verify that security providers have been updated in *<Install Dir>*\jdk\jre\lib\security\java.security.
8. Follow the Upgrade Guide instructions for your upgrade scenario.

Configure the Database
You must install, create, and configure a database so that each Sterling B2B Integrator instance has a dedicated schema and login for the database.

In a non-clustered environment, the Sterling B2B Integrator can support the following databases:

- DB2
- Oracle®
- Microsoft SQL Server
- MySQL

    Attention: MySQL will not be supported in Sterling B2B Integrator after V5.2.6. See http://www.ibm.com/support/knowledgecenter/SS3JSW_5.2.0/ com.ibm.help.sb2bi_overview.doc/com.ibm.help.whats_new.doc/ 526_next_retirement_list.html for more information.

See System Requirements for supported version information.

Database Information You Need Before You Install Sterling B2B Integrator in a Non-Cluster Environment: Before you begin to install Sterling B2B Integrator, you need to install and configure your database. Review and gather the following information. An "x" indicates the information is required.

Information to Gather	Oracle	DB2	Microsoft SQL Server	MySQL	Record Information Here
Database User Name	x	x	x	x	
Database Password	x	x	x	x	
Database Catalog Name	x	x	x	x	
Database Host	x	x	x	x	
Database Port	x	x	x	x	
JDBC Driver #1	x	x	x	x	
Use BLOB data?	x		x		
Enable Multibyte Support?	x	x	x		

Database sizing and capacity planning:

Database sizing is designed to give you estimates of the database growth and to help you plan the disk requirements.

There are many factors to consider when you are estimating the amount of disk space that is required for Sterling B2B Integrator. As a result, trying to consider all growth factors is impractical because the user might not know the answers to many questions that are required to do a detailed forecast. Over the years the cost of disks has dramatically decreased, and the capacity and speed of disks has increased. The method of how information system managers order disk capacity also has changed, from purchasing disk arrays that are dedicated to a particular database server and project, to the concept of SANS (storage area networks).

Consider the confidence that you have in your data estimates when you are making the final purchase decision and adjust accordingly. After the initial purchase and production deployment, disk growth should be tracked for future purchase forecasts.

You should track your actual database storage usage and the number of database records regularly. Correlating these two metrics enabled you to plan your future

disk requirements. Moreover, determining the average amount of space used for each order line or shipment line, enables you to accurately predict your future growth requirements.

Database Definition Language (DDL) statements:

When you install Sterling B2B Integrator, you can manually apply Database Definition Language (DDL) statements to your database tables instead of requiring the installation process to do it directly.

This feature increases database security by reducing the database permissions of the Sterling B2B Integrator database user. The rights to database objects can be reserved for a secure user like a customer database administrator (DBA). A business can require that only a DBA with the proper permissions can make database changes.

Configuring the DB2 Database:

Before you install Sterling B2B Integrator with the DB2 database, you must configure the database.

Before you begin:
* If you do not have DB2 installed, follow the procedures in the DB2 installation manual.
* The installation script creates tables and indexes. Certain tables require a page size of 32 KB. You must have a temporary table space to accommodate such tables. DB2 automatically places tables and indexes in the available table spaces. You can move the tables to a different table space after the installation is complete.
* If you are reinstalling the software, be aware that data in your existing database is deleted. To preserve the data, either back up the existing database or save it under a different name.
* After you create and configure your database, recycle the database. Then, stop and restart the database to apply the changes.

Use the following checklist to configure DB2 for Sterling B2B Integrator:

Item	DB2 Database Configuration Checklist	Your Notes
1	Create the database. Refer to the DB2 documentation on creating the database, including creating a schema repository, login, and table space. **Important:** In V5.2.6.2 or later you must ensure that all tablespaces used by Sterling B2B Integrator tables have a minimum page size of 8K. Otherwise installation will fail. Be sure to install the correct version and patches. See the System Requirements for supported version information.	
3	Review the DB2 parameters.	
4	Ensure that the DB2 user privileges are set.	
5	Install the JDBC drivers for DB2.	

DB2 database user privileges:

The DBADM role is required to perform administrative operations in DB2 database.

DB2 parameters:

When you install Sterling B2B Integrator with the DB2 database, you must set certain DB2 parameters. Other DB2 parameter settings are recommended for the efficient performance of Sterling B2B Integrator.

When you install Sterling B2B Integrator with DB2, you must set the DB2 parameters that are listed in the following topics:
* "Mandatory settings for IBM DB2 registry variables" on page 6
* "Mandatory settings for DB CFG parameters" on page 6

After you install Sterling B2B Integrator with DB2, you can improve the DB2 database performance by setting the recommended parameters that are listed in the performance documentation for the following items:
* DB2 registry variables
* DBM CFG parameters
* DB CFG parameters
* DB2 for Linux on System z
* DB2 for LUW configuration and monitoring

Mandatory settings for IBM DB2 registry variables:

Mandatory IBM DB2 registry values are critical for IBM DB2 performance with Sterling B2B Integrator.

Variable	Mandatory value
DB2_SKIPDELETED	ON
	Allows index-range queries or table-scan queries to skip records that are in an uncommitted delete state. This reduces the amount of lock contention from Read Share and Next Key Share locks from range queries in tables with a high frequency of deletes.
	When enabled, DB2_SKIPDELETED allows, where possible, table or index access scans to defer or avoid row locking until a data record is known to satisfy predicate evaluation. This allows predicate evaluation to occur on uncommitted data.
	This variable is applicable only to statements using either Cursor Stability or Read Stability isolation levels. For index scans, the index must be a type-2 index. Deleted rows are skipped unconditionally on table scan access while deleted keys are not skipped for type-2 index scans unless DB2_SKIPDELETED is also set.
	Recommended value: ON

Variable	Mandatory value
DB2_SKIPINSERTED	ON Allows SELECTs with Cursor Stability or Read Stability isolation levels to skip uncommitted inserted rows. This reduces record lock contention on tables with heavy insert rates.

Mandatory settings for DB CFG parameters:

For optimal performance, certain parameters and values are mandatory for DB2.

Parameter	Mandatory value
Database Code Set	UTF-8

Installing DB2 client components, compilers, and fix pack:

The use of Sterling B2B Integrator with the DB2 database requires the installation of different items for the database.

About this task

Sterling B2B Integrator uses stored procedures for DB2. For more information about these tasks, see the IBM documentation for DB2.

Procedure

You must install or set up the following DB2 components to use Sterling B2B Integrator with DB2:
1. Install the Administration client.
2. Install the necessary fix pack after you install the client components and compilers. Otherwise, the clients overwrite the fix pack binary files.
3. Set the path for the compiler by entering the db2set command.

Installing JDBC drivers for DB2:

When you install Sterling B2B Integrator with the DB2 database, you must install a JDBC driver for the database.

About this task

For DB2, install the appropriate DB2 JDBC Type 4 driver and any correlating patches. For the supported version information, see *System Requirements*.

You can obtain these files from the IBM website. After you obtain this JDBC driver, record the absolute path to its location on your system. You must supply this absolute path during installation.

If the JDBC driver provided by your database vendor is distributed among multiple files, you must place all the files that comprise the JDBC driver into one JAR file. Follow these steps to create one JAR file:

Procedure

To install a JDBC driver for the DB2 database:
1. Identify all the vendor database JAR files for the JDBC driver.
2. Record the absolute path to the JAR file you created on the Preinstallation Checklist.

   The Type 4 driver does not require a separate Java listener to be running on the database server. Instead, connect directly to the DB2 port.

Upgrading DB2 to version 10.1 or 10.5:

To upgrade from DB2 9.5 or 9.7 to 10.1 or 10.5, you must make configuration changes.

Procedure

To upgrade from DB2 9.5 or 9.7 to 10.1 or 10.5:
1. Copy your DB2 9.5 or 9.7 database content to DB2 10.1 or 10.5.

   Attention: Back up all files before you change any settings.
2. Back up the database driver in the */install_dir*/dbjar/jdbc/DB2/ directory and replace it with the DB2 10.1 or 10.5 version.
3. Update the following sandbox.cfg file fields with your environment-specific parameters:

```
DB_PASS=
DB_SCHEMA_OWNER=
DB_DRIVERS_VERSION=
YANTRA_DB_PORT=
DB_DATA=
DB_HOST=
YANTRA_DB_USER=
DB_PORT=
YANTRA_DB_PASS=
YANTRA_DB_DATA=
YANTRA_DB_HOST=
DB_DRIVERS=
DB_USER=

DB2_PORT=
DB2_USER=
DB2_PASS=
DB2_DATA=
DB2_HOST=
```
4. Edit the following value in the activemq.xml file:

   activemq.xml: *<value>*jdbc:db2//DB_HOST:DB_PORT/DB_DATA*</value>*
5. Run the setupfiles script.
6. Run the deployer script.
7. Start Sterling B2B Integrator.

Configuring the Oracle Database:

Before you install Sterling B2B Integrator with the Oracle database, you must configure the database.

Before you begin

- If you are reinstalling the software, be aware that data in your existing database is deleted. To prevent this deletion, either back up the existing database or save it under a different name.
- After you create and configure your database, recycle the database. Then, stop and restart to apply the changes.

About this task

Use the following checklist to configure Oracle for Sterling B2B Integrator:

Item	Oracle Database Configuration Checklist	Your Notes
1	Create the database. Refer to the Oracle documentation on creating the database, including creating a schema repository, login, and table space. Be sure to install the correct version and patches. See the *System Requirements* for the supported version information.	
2	Configure an Oracle Instance.	
3	Configure Oracle Rollback.	
4	Install the Oracle JDBC Driver.	
5	Enable Failover in a Multiple Node Oracle RAC Database Cluster.	
6	After Sterling B2B Integrator is installed, if you want to encrypt the data traffic, perform one of the following tasks: • Configure Sterling B2B Integrator for Data Traffic Encryption • Configure Sterling B2B Integrator for Data Traffic Encryption with SSL	

Configuring an Oracle instance:

An Oracle database requires certain parameter settings and other configurations.

Before you begin

- You must have the Oracle database installed. Ensure that you have installed the correct versions and patches. See *System Requirements* for supported version information.
- Ensure that the user responsible for creating and modifying the Oracle database has a specified quota (extent) assigned in the table space, even if the user was assigned an unlimited table space. Otherwise, the installer might display the error `ORA-09150: no privileges on tablespace name`.

Procedure

1. Run the create instance procedure. Use AL32UTF8 as the character set.
2. Configure the INIT<*INSTANCE_NAME*>.ORA file with the recommended and mandatory settings in the Performance Management guide. See the Oracle init parameter configuration checklist for specific settings.

   Note: After you complete the installation of Sterling B2B Integrator with Oracle, you can improve the performance of the database with the settings listed in the Performance Management guide.
3. Identify or create a table space for user tables and indexes.
4. Create a user. Unless stated for a task, the user does not require database administrator (DBA) privileges.
5. Grant permissions to the user. The following permissions are required for the administrative user for creating and modifying the Oracle database:
   - GRANT "CONNECT" TO SI_USER
   - ALTER USER SI_USER DEFAULT ROLE "CONNECT"
   - GRANT CREATE SEQUENCE TO SI_USER
   - GRANT CREATE TABLE TO SI_USER
   - GRANT CREATE TRIGGER TO SI_USER
   - GRANT SELECT ON CTXSYS.CTX_USER_INDEXES TO SI_USER
   - GRANT SELECT ON SYS.DBA_DATA_FILES TO SI_USER
   - GRANT SELECT ON SYS.DBA_FREE_SPACE TO SI_USER
   - GRANT SELECT ON SYS.DBA_USERS TO SI_USER
   - GRANT SELECT ON SYS.V_$PARAMETER TO SI_USER
   - GRANT SELECT ANY DICTIONARY TO SI_USER
   - GRANT ALTER SESSION TO SI_USER
   - GRANT CREATE SESSION TO SI_USER
6. If you are using Oracle AQ, grant the AQ_ADMINISTRATOR_ROLE permission.
7. If you plan to use EBICS Client, grant the GRANT CREATE VIEW TO SI_USER permission.

Configuring Oracle rollback:

The configuration of rollback in an Oracle database helps you manage database transactions.

About this task

You can roll back changes in Oracle by using AUTO UNDO management. IBM recommends that you use this option. This practice avoids any manual monitoring of UNDO segments.

Installation of the Oracle JDBC driver:

Sterling B2B Integrator requires the appropriate JDBC driver for the Oracle database.

The JDBC drivers are thin client-based pure Java JDBC drivers. See *System Requirements* for supported version information. The supported versions of the JDBC driver build the correct Sterling B2B Integrator directory structure.

Enabling failover in a multiple node Oracle RAC database cluster:

You can enable failover in a multiple node Oracle RAC database cluster in UNIX/Linux by using traditional RAC or RAC with SCAN.

Procedure

To enable failover in a multiple node Oracle RAC database cluster:
1. Open the */install_dir*/install/properties directory to modify the sandbox.cfg file.
2. In the sandbox.cfg file, add a **ORACLE_JDBC_URL** property, which contains the Oracle RAC connection URL.

   Choose one of the following depending on whether you are using traditional RAC or RAC with SCAN. The property value must be one string of text that starts with ORACLE_JDBC_URL=. Your database administrator (DBA) can modify this URL as needed:
   - To configure traditional RAC, use this format:
     ```
     jdbc:oracle:thin:@
     (DESCRIPTION=
      (ADDRESS_LIST=
       (FAILOVER=ON)
       (LOAD_BALANCE=OFF)
       (ADDRESS=(PROTOCOL=TCP)(HOST=myhost1)(PORT=1521))
       (ADDRESS=(PROTOCOL=TCP)(HOST=myhost2)(PORT=1521))
      )
       (CONNECT_DATA = (SERVER = DEDICATED)(SERVICE_NAME=myservicename OR mySID))
      )
     ```

     Note: This method uses the default Oracle RAC service that is provided by Oracle.
   - To configure RAC with SCAN, use this format:
     ```
     jdbc:oracle:thin:@host:port/service
     ```
     For example:
     ```
     jdbc:oracle:thin:@RAC-SCAN:1521/ORCL
     ```
     Where:
     - RAC-SCAN is resolved to an IP address by DNS
     - 1521 = Port number
     - ORCL = the name of your Oracle RAC service

       Important: To use RAC with SCAN, you must also define a new Oracle RAC service (you cannot use the default service) that defines one node as the preferred node and at least one node as a failover node.
3. Open the */install_dir*/install/bin directory.
4. Enter the command ./setupfiles.sh.

Data traffic encryption in the Oracle database:

You can encrypt transactions between Sterling B2B Integrator and the Oracle database. Encryption prevents anyone who is outside the system from viewing the data that flows between Sterling B2B Integrator and the database.

The following list describes important aspects of enabling database encryption:
- At installation, encryption is turned off by default. If you want your database transactions to be encrypted, you must enable encryption.

- The encryption can be enabled at any time.
- Encryption applies to all database transactions between Sterling B2B Integrator and the database.

System performance might be impacted when encryption is enabled. The extent of this impact depends on your hardware, database configuration, transaction volume, and the relative amount of processing time that is spent by the system against other activities.

For more information on data traffic configuration, see SSL With Oracle JDBC Thin Driver.

Before you encrypt data traffic for the Oracle database:

The decision to encrypt data traffic for the Oracle database includes several considerations.

Consider the following items when you configure database traffic encryption:
- Sterling B2B Integrator must be installed in TCP (clear) mode before you can configure encryption.
- Perform these changes to your database before you install Sterling B2B Integrator.
- Configure wallets for encryption-only mode even if the wallet that is used is empty. Enable auto login for all wallets.
- If you want to use SSL for encryption only, it is recommended to follow the instructions in the "CASE #1: USE SSL FOR ENCRYPTION ONLY" section of the Oracle documentation. It is not necessary to configure certificates for the wallet. In this mode, Diffie-Hellman ciphers are used. The server and the client are not authenticated through SSL. You must authenticate by using a user name and a password. However, if you are running Sterling B2B Integrator on an operating system that requires an IBM JDK, you cannot use this mode, as IBM JSSE TrustManager does not permit anonymous ciphers. You must configure wallets with certificates.
- If you want to use SSL for encryption and for server authentication, it is recommended to follow the instructions in the "CASE #2: USE SSL FOR ENCRYPTION AND SERVER AUTHENTICATION" section of the Oracle documentation.
- If you want to use SSL for encryption and for server authentication of both tiers, it is recommended to follow the instructions in the Oracle "CASE #3: USE SSL FOR ENCRYPTION AND AUTHENTICATION OF BOTH TIERS" section of the Oracle documentation, depending on how you intend to configure client or server authentication.
- After you configure your database for data traffic encryption, the database accepts both TCP (clear) and TCPS (encrypted) connections.
- There is a known issue in the Oracle 11g database when the listener is configured only for TCPS. The **lsnrctl** utility that is used to start and stop database listeners attempts to contact the listener, which is enabled first. You should define the address list of the listener to contact either TCP or IPC before it contacts TCPS.

Configuring Sterling B2B Integrator for data traffic encryption in Oracle:

You can enable data traffic encryption-only, with anonymous authentication, and not SSL authentication.

About this task

If you want to use SSL for encryption only, it is recommended to follow the instructions in the "CASE #1: USE SSL FOR ENCRYPTION ONLY" section of the Oracle documentation. It is not necessary to configure certificates for the wallet. In this mode, Diffie-Hellman ciphers are used, and the server and the client are not authenticated through SSL. You must authenticate by using a user name and a password.

However, if you are running Sterling B2B Integrator on a system that requires an IBM JDK, you cannot use this mode, as IBM JSSE TrustManager does not permit anonymous ciphers. You must configure wallets with certificates.

This procedure is applicable only if you are running Sterling B2B Integrator on a system that requires Sun JDK. The IBM JSSE TrustManager does not permit anonymous ciphers.

If your Sterling B2B Integrator is a cluster installation, you need to perform this procedure on each node, starting with node 1.

Procedure

To configure Sterling B2B Integrator for data traffic encryption in Oracle:
1. Install Sterling B2B Integrator in TCP (clear) mode.
2. Stop Sterling B2B Integrator.
3. Open the */install_dir*/install/properties directory.
4. Open the customer_overrides.properties file and add the following database connection information:

   ```
   jdbcService.oraclePool.prop_oracle.net.ssl_cipher_suites=
   (SSL_DH_anon_WITH_3DES_EDE_CBC_SHA, SSL_DH_anon_WITH_DES_CBC_SHA)
   jdbcService.oraclePool.prop_oracle.net.ssl_server_dn_match=false
   ```

   If you have a configured container, ensure that the same database information is added to the customer_overrides.properties.in file. To locate the file, navigate to the */install_dir*/install/properties/node*x*AC*y* directory, where *x* gives the node number and *y* gives the container number. Perform this step for all the containers configured in the system.
5. Repeat Step 4 for the following Oracle connection pools by changing only the pool name:
   - oraclePool_local
   - oraclePool_NoTrans
   - oracleArchivePool
   - oracleUIPool

   If you have any other database pools, you need to add the properties for those pools.
6. Open the sandbox.cfg file and change the database connection information as shown:

   ```
   ORACLE_JDBC_URL= jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS=(PROTOCOL=tcps)
   (HOST=<DB host>)(PORT=<TCPS port as configured in DB config section above>))
   (CONNECT_DATA=(SERVICE_NAME=<service name>)))
   ```

   Make sure that you enter values for the **HOST**, **PORT**, and **SERVICE_NAME** parameters.

7. Open the `activemqconfig.xml.in` file and modify the following database connection information:

- Remove or comment out the following default ActiveMQ database configuration information:

```
<bean id="gis-ds" class="org.apache.commons.dbcp.BasicDataSource"
  destroy-method="close" singleton="true" lazy-init="default"
  autowire="default" dependency-check="default"
  SCIOverrideName="persistence-bean">
<property name="driverClassName">
<value>oracle.jdbc.driver.OracleDriver</value>
</property>
<property name="url">
#:ifdef ORACLE_JDBC_URL
<value>&ORACLE_JDBC_URL;</value>
#:else
<value>jdbc:oracle:thin:@&ORA_HOST;:&ORA_PORT;:&ORA_DATA;</value>
#:endif
</property>
 <property name="username">
<value>&ORA_USER;</value>
</property>
<property name="password">
<value>&ORA_PASS;</value>
</property>
<property name="maxActive">
<value>32</value>
</property>
</bean>
```

- Add the following ActiveMQ database configuration information:

```
<bean id="gis-ds"
class="oracle.jdbc.pool.OracleDataSource" destroy-method="close"
singleton="true" lazy-init="default"
autowire="default"
dependency-check="default">
<property name="URL"><value>&ORACLE_JDBC_URL;</value></property>
<property name="user"><value>&ORA_USER;</value></property>
<property name="password"><value>&ORA_PASS;</value></property>
<property name="connectionProperties">
  <value> oracle.net.ssl_cipher_suites:
    (SSL_DH_anon_WITH_3DES_EDE_CBC_SHA, SSL_DH_anon_WITH_DES_CBC_SHA)
    oracle.net.ssl_client_authentication: false
    oracle.net.ssl_version: 3.0
    driverClassName:oracle.jdbc.driver.OracleDriver
    maxActive: 32
  </value>
</property>
</bean>
```

8. Open the */install_dir*/install/bin directory.

9. Enter the command ./setupfiles.sh.

10. Restart Sterling B2B Integrator. All the database connections from Sterling B2B Integrator are now connected through TCPS (encrypted) mode.

Configuring Sterling B2B Integrator for data traffic encryption with SSL authentication in Oracle:

You can enable data traffic encryption and SSL authentication.

About this task

This procedure is applicable if you are running Sterling B2B Integrator on a system that requires either Sun JDK or IBM JDK.

The example in this procedure uses two-way SSL authentication. It is recommended to follow the instructions in the "CASE #2: USE SSL FOR ENCRYPTION AND SERVER AUTHENTICATION" section of the Oracle documentation.

You can also configure one-way SSL authentication. If you want to use SSL for encryption and for server authentication of both tiers, it is recommended to follow the instructions in the "CASE #3: USE SSL FOR ENCRYPTION AND AUTHENTICATION OF BOTH TIERS" section of the Oracle documentation.

If your installation of Sterling B2B Integrator is a cluster installation, you need to perform this procedure on each node, starting with node 1.

Procedure

To configure Sterling B2B Integrator for data traffic encryption with SSL authentication in Oracle:

1. Install Sterling B2B Integrator in TCP (clear) mode.
2. Stop Sterling B2B Integrator.
3. Open the */install_dir*/install/properties directory.
4. Open the customer_overrides.properties file and add the following database connection information:

```
jdbcService.oraclePool.prop_javax.net.ssl.trustStore=/.../path/.../ClientKeyStore.jks
jdbcService.oraclePool.prop_javax.net.ssl.trustStoreType=JKS
jdbcService.oraclePool.prop_javax.net.ssl.trustStorePassword=password
jdbcService.oraclePool.prop_oracle.net.ssl_version=3.0
jdbcService.oraclePool.prop_javax.net.ssl.keyStore=/.../path/.../ClientKeyStore.jks
jdbcService.oraclePool.prop_javax.net.ssl.keyStoreType=JKS
jdbcService.oraclePool.prop_javax.net.ssl.keyStorePassword=password
```

5. Repeat step 4 for the following Oracle connection pools by changing only the pool name:
   - **oraclePool_local**
   - **oraclePool_NoTrans**
   - **oracleArchivePool**
   - **oracleUIPool**

   If you have any other database pools, you need to add the properties for those pools.

6. Open the sandbox.cfg file and change the database connection information to the following value:

```
ORACLE_JDBC_URL= jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS=(PROTOCOL=tcps)
(HOST=<DB host>)(PORT=<TCPS port as configured in DB config section above>))
(CONNECT_DATA=(SERVICE_NAME=<service name>)))
```

7. Open the */install_dir*/install/activemq/conf directory.
8. Open the activemqconfig.xml.in file and modify the database connection information:
   - Remove or comment out the following default ActiveMQ database configuration information:

```
#:ifdef ORACLE
<bean id="gis-ds" class="org.apache.commons.dbcp.BasicDataSource"
    destroy-method="close" singleton="true" lazy-init="default"
    autowire="default" dependency-check="default"
  SCIOverrideName="persistence-bean">
<property name="driverClassName">
<value>oracle.jdbc.driver.OracleDriver</value>
</property>
<property name="url">
```

```
#:ifdef ORACLE_JDBC_URL
<value>&ORACLE_JDBC_URL;</value>
#:else
<value>jdbc:oracle:thin:@&ORA_HOST;:&ORA_PORT;:&ORA_DATA;</value>
#:endif
</property>
<property name="username">
<value>&ORA_USER;</value>
</property>
<property name="password"><value>&ORA_PASS;</value>
</property>
<property name="maxActive"><value>32</value>
</property>
</bean>
#:endif
```

* Add the following ActiveMQ database configuration information:

```
<bean id="gis-ds"
class="oracle.jdbc.pool.OracleDataSource" destroy-method="close"
singleton="true" lazy-init="default" autowire="default"
dependency-check="default">
<property name="URL"><value>&ORACLE_JDBC_URL;</value></property>
<property name="user"><value>&ORA_USER;</value></property>
<property name="password"><value>&ORA_PASS;</value></property>
<property name="connectionProperties"><value>
javax.net.ssl.trustStore: /.../path/.../ClientKeyStore.jks
javax.net.ssl.trustStoreType:JKS
javax.net.ssl.trustStorePassword:password
oracle.net.ssl_version:3.0
javax.net.ssl.keyStore: /.../path/.../ClientKeyStore.jks
javax.net.ssl.keyStoreType:JKS
javax.net.ssl.keyStorePassword: password
driverClassName:oracle.jdbc.driver.OracleDriver
maxActive:32
</value>
</property>
</bean>
```

9. Enter the command `./setupfiles.sh`.

10. Restart Sterling B2B Integrator. All the database connections from Sterling B2B Integrator are now connected through TCPS (encrypted) mode.

Configuring the Microsoft SQL Server Database:

Before you install Sterling B2B Integrator with the Microsoft SQL Server database, you must configure the database.

Before you begin

* If you are reinstalling the software, be aware that data in your existing database is deleted. To preserve your data, either back up the existing database or save it under a different name.
* After you create and configure your database, recycle the database. Then, stop and restart to apply the changes.

About this task

Use the following checklist to configure Microsoft SQL Server for Sterling B2B Integrator:

Item	Microsoft SQL Server Database Configuration Checklist	Your Notes
1	If you do not have Microsoft SQL Server installed, follow the installation procedures in the SQL Server installation manual. Refer to the Microsoft SQL Server documentation on creating the database, including creating a schema repository, login, and table space. Be sure to install the correct version and patches. See *System Requirements* for supported version information.	
3	"Microsoft SQL Server database parameters" on page 16	
4	"Microsoft SQL Server database user privileges" on page 16	
5	"Configuring the snapshot feature for Microsoft SQL Server" on page 18	

Microsoft SQL Server database user privileges:

In Microsoft SQL Server, you must grant DBO (Database Owner) permission to the user. The DB_DDLADMIN role is required for creating objects in the SQL Server database.

Microsoft SQL Server database parameters:

When you install Sterling B2B Integrator with the Microsoft SQL Server database, you must set certain Microsoft SQL Server parameters. Other Microsoft SQL Server parameter settings are recommended for the efficient performance of Sterling B2B Integrator.

When you install Sterling B2B Integrator with Microsoft SQL Server, you must set the Microsoft SQL Server parameters that are listed in "Mandatory settings for Microsoft SQL Server" on page 17.

After you install Sterling B2B Integrator with Microsoft SQL Server, you can improve the database performance by setting the recommended parameters that are listed in the performance documentation for the following items:
* Instance-specific settings for Microsoft SQL Server
* Database-specific settings for Microsoft SQL Server

Mandatory settings for Microsoft SQL Server:

The default collation of Microsoft SQL Server must match the collation for the Sterling B2B Integrator database to prevent collation conversions.

The *tempdb* database that is used by Microsoft SQL Server must be created with the same collation as the default collation of Microsoft SQL Server. The Microsoft SQL Server uses the tempdb database for results that are too large to fit in memory.

If the collations of the tempdb database and the Sterling B2B Integrator database differ, the database engine must convert from the Sterling B2B Integrator collation to the tempdb collation, and then back again before it sends the results to the Sterling B2B Integrator server. These conversions might lead to severe performance issues.

The collation that is required for the Sterling B2B Integrator database is a collation that most closely matches the character set used by Java. By using this collation, you can avoid character data conversions before the data is stored in the database tables. Use the mandatory parameter that is described in the following table when you configure the collation setting:

Parameter	Value
Database Collation	SQL_Latin1_General_CP850_Bin

Additionally, you must perform these tasks:
- Allow Microsoft SQL Server to manage memory dynamically (default).
- Disable any antivirus software that is running on the Microsoft SQL Server data, transaction log, and binary files directory.

Installing the JDBC driver in Microsoft SQL Server:

The use of a SQL Server database with Sterling B2B Integrator requires the installation of a JDBC driver.

About this task

Sterling B2B Integrator requires the correct Microsoft SQL Server driver. See the *System Requirements* for the supported version information.

Download the driver and any appropriate patches from the Microsoft website.

Procedure

To install the JDBC driver in Microsoft SQL Server:
1. Download the `sqljdbc_version_language.tar.gz` file to a temporary directory.
2. To unpack the compressed TAR file, open the directory where you want the driver unpacked and type the following command:

   `gzip -d sqljdbc_version_language.tar.gz`
3. To unpack the TAR file, open the directory where you want the driver installed and type the following command:

   `tar –xf sqljdbc_version_language.tar`

   After the package unpacks, you can find out more information about using this driver by opening the JDBC Help System in the `/absolutePath/sqljdbc_version/language/help/default.htm` file. This file displays the help system in your web browser.
4. When the Sterling B2B Integrator installation asks for the location of the JDBC drivers, specify the extracted JAR file created after you unpack the archive, which is usually named `sqljdbc.jar`. The JDBC driver version is the same as the version of the drivers that are downloaded from Microsoft.

Configuring the snapshot feature for Microsoft SQL Server:

The snapshot feature in Microsoft SQL Server allows you to view a read-only copy of the database even when it is locked. Configuring the snapshot feature can also reduce deadlocks. To enable the snap shot feature, enter the following command:
ALTER DATABASE db_name SET READ_COMMITTED_SNAPSHOT ON;

Configuring the MySQL Database:

You can use a MySQL database for maintaining information on Sterling B2B Integrator. Only non-clustered installations of Sterling B2B Integrator can use the MySQL database.

MySQL is case-insensitive for searches with string values. For example, the search results will be the same when you search for users 'Admin' and 'admin'. As a result, it impacts searches for maps, business processes, services, mailboxes, user names, and other data stored in the database.

Use the following checklist to configure the MySQL database for Sterling B2B Integrator:

#	MySQL Database Configuration Checklist	Your Notes
1	Install MySQL database. Refer to MySQL documentation for information about installing the MySQL database. Be sure to install correct version and patches. See *System Requirements* for supported version information.	
2	Set the MySQL Parameters.	
3	Create the database. For example, you can run the following command to create the database: `CREATE DATABASE database_name` Refer to MySQL documentation for more information about creating the database.	
4	Create a user account and grant permissions.	
5	Install the JDBC Drivers for MySQL.	

If you need additional MySQL database information, see the documentation provided by the vendor at http:////dev.mysql.com/doc/refman/5.0/en/.

Update the MySQL Parameters: Sterling B2B Integrator requires the following parameter settings in your MySQL database.

The parameter values recommended are minimum values. You can increase the values based on your requirements or if the database server is used by more than one instance of Sterling B2B Integrator.

It is recommended to configure a data file for auto extension (innodb_data_file_path = ibdata1:400M:autoextend).

Parameter	Value
max_connections	500
max_allowed_packet	100M
default-table-type	INNODB
wait_timeout	31536000
max_write_lock_count	500000
transaction-isolation	READ-COMMITTED
character-set-server	utf8
binlog_format	mixed
table_open_cache	512
key_buffer_size	384M
sort_buffer	512K
connect_timeout	15
innodb_data_file_path	ibdata1:400M:autoextend
innodb_data_home_dir	/*install_dir*/mysql/var/
innodb_log_group_home_dir	/*install_dir*/mysql/var/
innodb_flush_log_at_trx_commit	1
innodb_mirrored_log_groups	1
innodb_log_files_in_group	3
innodb_file_io_threads	4
innodb_lock_wait_timeout	600
innodb_log_file_size	5M
innodb_log_buffer_size	8M
innodb_buffer_pool_size	128M
innodb_additional_mem_pool_size	32M

Review the innodb_buffer_pool_size and the innodf_additional_mem_pool_size in the /*install_dir*/install/mysql/data my.cnf. If the values from the previous Sterling B2B Integrator tuning.properties are larger than what is in your new my.ini file, you need to adjust them accordingly.

Install the JDBC Drivers for MySQL:
About this task

Sterling B2B Integrator requires appropriate JDBC driver for MySQL database. These drivers are platform independent and architecture independent drivers. See *System Requirements* for supported version information.

After obtaining the correct JDBC driver, record the absolute path to its location on your system. You must supply this absolute path when installing Sterling B2B Integrator.

Create User Account and Grant MySQL Database User Privileges:

About this task

You must grant all privileges on the MySQL database to the Sterling B2B Integrator administrative user. The following example creates and grants all privileges to the user in the MySQL database:

```
GRANT ALL PRIVILEGES ON database_name.* TO user@localhost IDENTIFIED BY 'password'
WITH GRANT OPTION
```

Where:
- database_name - refers to the name of the database created.
- user - refers to the database user account that will be used by Sterling B2B Integrator.
- password - refers to the password associated with the database user account.

Once you have granted all the privileges, you will need to FLUSH the privileges to complete the setup. For example, run this command from the SQL prompt:

```
FLUSH PRIVILEGES;
```

Managing Database Passwords:

A password is used by the system to connect to its database. The password is stored as clear text in a system property file.

If the security policies at your company require you to encrypt these passwords, you can do so after you install the system. Encrypting these passwords is optional.

Database passwords encryption methods:

Database passwords are encrypted with one of two methods: OBSCURED or ENCRYPTED.

The encryption method is decided by the value of the **encryptionPrefix** property in the propertyEncryption.properties or the propertyEncryption.properties_platform_security_ext file.

Encrypting database passwords:

Use commands to encrypt database passwords.

Procedure

To encrypt the database password:
1. Stop Sterling B2B Integrator.
2. Open the */install_dir*/install/bin directory.
3. Enter the command ./enccfgs.sh.
4. Enter the command ./setupfiles.sh.
5. Enter the command ./deployer.sh.
6. Enter the command ./run.sh to start Sterling B2B Integrator.
7. Enter your passphrase.

Decrypting database passwords:

Use properties files and commands to decrypt database passwords.

Procedure

To decrypt the database password:

1. Stop Sterling B2B Integrator.
2. Open the */install_dir*/install/properties directory.
3. Open the sandbox.cfg file.
4. Copy the encrypted password from the **database_PASS** property.

   Use the text that appears *after* the database_PASS=*text*. For example, if database_PASS= OBSCURED:123ABCxyz321, you would copy the text OBSCURED:123ABCxyz321. (OBSCURED is the encryption method for the password.)
5. Open the */install_dir*/install/bin directory.
6. Enter the command ./decrypt_string.sh *encrypted_password*.

   For *encrypted_password*, use the text that you copied in Step 4. You are prompted for the system passphrase. After you enter the passphrase, your decrypted password appears.
7. Open the */install_dir*/install/properties directory.
8. Edit the sandbox.cfg file to replace the encrypted password with the password that was returned in Step 6.
9. You need to decrypt the entries for the **YANTRA_DB_PASS** and **DB_PASS** properties. Repeat Steps 4 - 8 to decrypt these entries. You must also decrypt any passwords present in the property files. Encrypted passwords typically exist in the following property files:

   - sandbox.cfg
   - apservsetup
   - jdbc.properties
   - jdbc.properties.in
   - customer_overrides.properties
   - customer_overrides.properties.in
10. Open the */install_dir*/install/bin directory.
11. Enter the command ./setupfiles.sh.
12. Enter the command ./deployer.sh.
13. Enter the command ./run.sh to start Sterling B2B Integrator.
14. Enter your passphrase.

Change the MySQL Database Password:
About this task

If you changed the MySQL hostname after installing, you should change the MySQL database password.

To change the MySQL database password:

Procedure

1. Start the MySQL database. Enter:

   ./control_mysql.sh start
2. Change the root user password to <new_hostname + old_mysqlport>. For example:

   <absolute path>/mysql/bin/mysqladmin --port=43003

   --socket=/tmp/mysql.43003.sock -- user=root --
   password=blriedlin0143003

```
     password "blriedlin01Temp43003"
```
3. Stop the MySQL database. Enter:
   ```
   ./control_mysql.sh stop
   ```

Preparing for Installation

To help ensure a trouble-free installation, you should complete the installation checklist and understand some concepts.

Installation Checklist for UNIX/Linux Non-Cluster Environment: The installation checklist contains the items you need to gather and tasks you need to complete prior to installing Sterling B2B Integrator. The checklist contains:

- Brief descriptions for tasks (detailed procedures are provided after the checklist)
- Information you need to gather to complete the installation

You may want to make a copy of the following checklist and use it to record the information you collect.

#	Installation Checklist for UNIX/Linux Non-Cluster Environment	Your Notes
1	Review your IBM contract to determine what software you have licensed. You need to know this *License Information* so that you can select the correct components/features to install.	
2	Determine which installation method you are going to use: • IBM Installation Manager (Graphical User Interface) • IBM Installation Manager (Text Based) • Silent Installation	
3	Decide which type of security certificates you will use: • The default self-signed SSL (Secure Sockets Layer) certificate that is automatically installed. • A Certificate Authority-related certificate that you install before installing the software.	
4	If you are using an Oracle, Microsoft SQL Server, or DB2 database, decide if you are going to manually or automatically apply Database Definition Language (DDL) Statements (schema) to the database.	
5	If you are using an Oracle 11.1 database, you must set it up for native compilation by allocating space and by setting the **plsql_native_library_dir** parameter.	
6	Determine if the database password needs to be encrypted.	
7	Record the Hostname on which you plan to install the software.	
8	Record the Directory Name where you plan to install the software.	
9	Record the Login to host machine.	
10	Record the Password to the host machine.	
11	Record the path to the Installation Manager and the installation package file name.	

#	Installation Checklist for UNIX/Linux Non-Cluster Environment	Your Notes
12	Record the path to JDK.	
13	Record the path to JCE file.	
14	Record the Host IP address.	
15	Record the Initial Port Number.	
16	Record the System passphase.	
17	Record the Database vendor name.	
18	Record the Database user name.	
19	Record the Database password.	
20	Record the Database (catalog) name.	
21	Record the Database host name.	
22	Record the Path and file name for the JDBC Driver(s).	
23	Ensure you have read and write privileges on the parent installation directory.	

License information:

A separate license is required for each Sterling B2B Integrator feature that you purchased. During installation, you must choose the license files according to what you purchased. Product licenses do not require an activation key.

IBM assumes customers will only install and use the products they purchased. IBM reserves the right to inspect installs for compliance at any time.

After the installation finishes, if you determine that you need to modify licenses files, see "License modifications" on page 58.

Product Licenses for Sterling B2B Integrator

Sterling B2B Integrator Standard and Enterprise Edition includes:
- MESA Studio
- eInvoicing
- Report Services
- all services and adapters not listed below

Sterling B2B Integrator Standard and Enterprise Financial Edition includes everything listed above plus:
- CHIPS
- SWIFTNet
- NACHA ACH CTX adapter
- FEDWIRE
- Fin Serv XML standard
- FIPS Mode
- Image Cash Letter service
- EBICS

Security certificates:

You can choose between different security certificates before you install Sterling B2B Integrator.

Before you begin the installation, you must decide which of the following security certificates to use:
* The default self-signed SSL (Secure Sockets Layer) certificate that is automatically generated by the installation.
* A Certificate Authority-related certificate that you generate before you install the software.

If you install with the default SSL certificate, but you later want to switch to a CA-related certificate, you can change the certificate with the `sslCert` property in the `noapp.properties_platform_ifcresources_ext.in` file.

Port numbers:

During installation, you are prompted to specify the initial port number.

Use the following guidelines for port numbers:
* A range of 200 consecutive open ports (1025 - 65535) is required for this installation.

  Important: Because of RMI, on occasion, a port number outside the range can be assigned.
* The initial port number represents the beginning port number in the range.
* Make sure that port numbers in the port range are not used by any other applications on your system.

After your installation, refer to the `/install_dir/install/properties/sandbox.cfg` file for all of the port assignments.

UNIX accounts:

In a UNIX or Linux environment, create one UNIX administrative account on the host server for all of the installations.

For example, if you want to create a test environment and a production environment, create one UNIX account on the host server. For more information about creating UNIX accounts, see your operating system documentation.

Installing the Software

After you have configured the database and prepared your system, you are ready to install Sterling B2B Integrator.

General UNIX/Linux installation information:

You can install Sterling B2B Integrator on UNIX or Linux as either a new installation or as an upgrade from a previous version of Sterling B2B Integrator.

CAUTION:

IBM Sterling B2B Integrator for Financial Services should be installed behind a company firewall for security purposes. For more information on secure deployment options, see the Perimeter Server and Security topics in the Sterling B2B Integrator documentation library .

Installation Scenarios

It is important to review the following installation scenarios:

Scenario	Instructions
Version 5.1.x is installed and it needs to be upgraded to V5.2.6.	See "Upgrading (V5.2.6 or later)" on page 320
Version 5.2.x is installed and it needs to be upgraded to V5.2.6.	See Applying a fix pack (V5.2.6 or later)
Version 5.2.6 is being installed as the base release.	Review this document and use the installation instructions.

Installation Methods

Use one of the following methods to install your system:
- IBM Installation Manager (graphical user interface)
- IBM Installation Manager (response file)

Important: Install and run Sterling B2B Integrator as a non-root user.

General Installation Guidelines

The following are some general installation guidelines:
- Do not create the installation directory manually before the start of the installation. If you create the installation directory before you begin, the installation fails. The directory name that is provided during the installation process is used to create the new installation directory.
- The server on which you are installing must have adequate free disk space.
- *install_dir* refers to the installation directory where the new software is installed. Do not use any pre-existing directory name or an old version of the Sterling B2B Integrator installation directory; other wise, you could inadvertently overwrite the existing installation.
- *parent_install* is the directory one level above the *install_dir* directory.
- Ensure that the *parent_install* directory has the proper read/write permissions.
- If you need to install more than one instance of Sterling B2B Integrator on the same server, you must install the second instance in a different directory.
- The directory path to the SI_*<build_number>*.jar file cannot include any spaces.
- If you are using FTP to copy the files, verify that your session is set to binary mode.
- If you are using AIX with the DB2 database, the directory path cannot be longer than 108 bytes.
- The installation program validates the initial port number and confirms that you have enough disk space for the installation. These port assignments are written to the */install_dir*/install/properties/sandbox.cfg file.

- If you are using an IPv6 address, see "Guidelines for IPv6 addresses" on page 167.
- If you are installing Sterling B2B Integrator on VMware, provide the IP address of the virtual machine, and not the IP address of the VMware host. For example, if 10.251.124.160 is the IP address of the VMware host and 10.251.124.156 is the IP address of the Windows 2003 server it is hosting, use 10.251.124.156 as the correct IP address to install Sterling B2B Integrator.

General IBM Installation Manager information:

IBM Installation Manager V1.8.2 is required to install Sterling B2B Integrator on all supported platforms.

Installation Manager is a Java based multiplatform installation application and provides a consistent approach across various platforms. It does not rely on platform-specific installation technology or mechanism.

Installation Manager uses the local Sterling B2B Integrator offering repositories to install or update Sterling B2B Integrator and its add-on features. It determines the packages that must be installed and displays them including the products, fix packs, and interim fixes. It checks that all prerequisites and interdependencies are met before installing the selected product package and feature sets.

Important: The **Uninstall** option only unregisters Sterling B2B Integrator from Installation Manager. The uninstall procedure as described in the related sections must be performed to completely uninstall Sterling B2B Integrator.

Installation Manager must be installed on each computer on which Sterling B2B Integrator is being installed. If you already have Installation Manager installed on your computer for use with other IBM applications, it can be used with installing Sterling B2B Integrator as long as it's the correct version. If you do not have Installation Manager installed, it is provided as part of the Sterling B2B Integrator installation media.

Supported bit-versions

A 64-bit version of IBM Installation Manager V 1.8.2 is provided with the Sterling B2B Integrator installation package. However, you can also install with a 32-bit version of Installation Manager.

Before you start the installation, consider the following options:
- If you are a new customer, use the version of Installation Manager that is provided with the Sterling B2B Integrator installation package and install Sterling B2B Integrator.
- If you have an earlier version of Installation Manager, you can update it to V1.8.2 using the Installation Manager that is provided with the installation package, then install Sterling B2B Integrator .
- If you are a current customer who did not use Installation Manager earlier, install the version of Installation Manager that is provided with the installation package, then upgrade your Sterling B2B Integrator installation.
- If you have a 32-bit Installation Manager installed, you must download the 32-bit Installation Manager V1.8.2 from Fix Central or IBM Passport Advantage, upgrade it, then proceed with the installation of Sterling B2B Integrator. Ensure you have the required libraries that support screen presentation of the text.

Checking for updates

To check for Installation Manager updates, select **Search for Installation Manager updates** on the **File > Preferences > Updates** page. When the check box is selected, Installation Manager searches for updates when any one of the following pages are opened from the Installation Manager start page:
- Install Packages
- Modify Packages
- Update Packages

Installation Manager also searches for updates when you click the Check for Other Versions, Fixes, and Extensions button on the Install Packages page.

Starting Installation Manager

You should start the Installation Manager (and also install Sterling B2B Integrator) as a non-administrator user.

How you start Installation Manager depends on whether you are using the Installation Manager agent that is provided with Sterling B2B Integrator or if you have an Installation Manager instance that is installed on your system. It also depends on whether you have 32-bit or 64-bit Installation Manager.

Open a command prompt and do one of the following tasks to start the Installation Manager in GUI mode:
- Go to the `IM_<operating_system>` directory and type **./userinst** or **userinst.exe** (Windows) for the following scenario:
  - If you do not have Installation Manager installed and are using the Installation Manager agent that is provided with the Sterling B2B Integrator media.
  - If you have a 64-bit Installation Manager installed.
  - If you have Installation Manager installed on a platform that has only one download available for Installation Manager. For example, AIX, Solaris, HP, zLinux.
- Go to `<installation directory>/Installation Manager/eclipse` (for Windows system, replace / with \) and type **./IBMIM** or **IBMIM.exe** if you have 32-bit Installation Manager installed on a Linux or Windows system.

For information on starting Installation Manager in command mode for silent installation, see the Installing or updating with a response file.

For information on starting Installation Manager in command mode to record a response file, see Recording a response file.

Additional heap memory parameters

The heap memory parameters specify the amount of memory Installation Manager can use during the installation process. The heap memory pool sizes that are used by Installation Manager are hardcoded defaults. If these defaults are not sufficient for your environment, you can specify different values by adding parameters to the Installation Manager`config.ini` file.

Important: These additional parameters are required only if you are experiencing `Out Of Memory` errors during the installation process.

The following parameters can be added:

- `memoryMin=user.sb.INSTALL_<OS>_INIT_HEAP.<amount_of_memory>`
- `memoryMax=user.sb.INSTALL_<OS>_MAX_HEAP.<amount_of_memory>`

Where *<OS>* is your operating system and *<amount_of_memory>* is the specified amount of memory.

Operating System	Parameter	Example Entry
Sun-Solaris	Initial Heap Size **INSTALL_SUN_INIT_HEAP**	memoryMin=user.sb.INSTALL_SUN_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_SUN_MAX_HEAP**	memoryMax=user.sb.INSTALL_SUN_MAX_HEAP.3072m
Linux	Initial Heap Size **INSTALL_LINUX_INIT_HEAP**	memoryMin=user.sb.INSTALL_LINUX_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_LINUX_MAX_HEAP**	memoryMax=user.sb.INSTALL_LINUX_MAX_HEAP.3072m
AIX	Initial Heap Size **INSTALL_AIX_INIT_HEAP**	memoryMin=user.sb.INSTALL_AIX_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_AIX_MAX_HEAP**	memoryMax=user.sb.INSTALL_AIX_MAX_HEAP.3072m
HP-UX	Initial Heap Size **INSTALL_HPUX_INIT_HEAP**	memoryMin=user.sb.INSTALL_HPUX_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_HPUX_MAX_HEAP**	memoryMax=user.sb.INSTALL_HPUX_MAX_HEAP.3072m
Windows	Initial Heap Size **INSTALL_WIN_INIT_HEAP**	memoryMin=user.sb.INSTALL_WIN_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_WIN_MAX_HEAP**	memoryMax=user.sb.INSTALL_WIN_MAX_HEAP.3072m

Guidelines for IPv6 addresses:

The use of IPv6 addresses in an installation of Sterling B2B Integrator requires certain guidelines.

Before you use an IPv6 address during an installation, see the *IPv6 Capabilities* section in *System Requirements*.

Consider the following IPv6 address information when you plan the installation:

- If you use an IPv6 address, use a fully qualified address that includes square brackets around the address, and a zero (0) between colons where there are no other numbers. For example, use [fe80:0:0:0:213:72ff:fe3c:21bf] instead of fe80::213:72ff:fe3c:21bf.

- If you are installing with an IPv6 address, comment out the host name mapping to the IPv4 address and retain the mapping to the IPv6 address in the host file in the /etc/sysconfig/networking/profiles/default/hosts directory.
- You must install with a host name, not an IPv6 address, otherwise the Lightweight JDBC adapter and Graphical Process Modeler (GPM) do not work.
- If you are using an Oracle database, do not use an IPv6 address for the host name.
- If you are using an IPv6 address and are going to configure Sterling B2B Integrator as a dual stack host, after you complete the installation, you need to add the IPv6 address (as the **admin_host.3** property) to the noapp.properties_platform_ifcresources_ext .in file.

Installing or updating with a response file (V5.2.6 or later):

You can install or update (apply fix pack or interim fix) Sterling B2B Integrator with silent mode by using the sample response files or converting your existing response file to the required format.

Installing in a UNIX/Linux non-cluster environment using the IBM Installation Manager in GUI mode:

You can install Sterling B2B Integrator in a UNIX/Linux non-cluster environment with the IBM Installation Manager in a graphical user interface (GUI) mode. Use the X Window System for this installation.

Before you begin
- Complete the "Installation Checklist for UNIX/Linux Non-Cluster Environment" on page 242.
- Install an X Window windowing system (for example Cygwin or Xming) for UNIX/Linux operating systems on your PC.
- Install and configure a Telnet client (for example PuTTY) for use with the X Window System. The following parameters must be set:
    - X-11 forwarding must be enabled.
    - X display location must be set to localhost.
- If you are using the Standards Processing Engine (SPE) application with Sterling B2B Integrator, you must install SPE before you install Sterling B2B Integrator.
- If you are using the EBICS Banking Server application with Sterling B2B Integrator, the data encryption for storage within the installation location is not supported.
- Set the ulimit and language as follows:
    - ulimit -n 4096
    - ulimit -u 16000
    - export LANG=en_US

About this task

To install Sterling B2B Integrator in a Unix/Linux non-cluster environment with the Installation Manager in GUI mode:

Important: Following is a list of changes related to installing or upgrading to Sterling B2B Integrator V5.2.6:

- You can install and upgrade through the user interface or silent installation mode (response files). Console mode installation and upgrade is not supported.
- Sterling B2B Integrator JAR file is included in the repository. Therefore it is not required to manually select the JAR file when installing or upgrading.
- You must use Installation Manager V1.8.2 to install or upgrade Sterling B2B Integrator. `InstallService` is disabled, and cannot be used. You can use `InstallService`, only for a specific scenario related to Sterling File Gateway. For more information, see step 14.

Procedure

1. Start the X Window System client on your PC.

   Minimize the window after it opens.
2. Open a console window and log on to the UNIX/Linux host server where Sterling B2B Integrator is installed.
3. From the installation media, copy the compressed installation package to a UNIX/Linux directory on the host where Sterling B2B Integrator is installed.
4. Decompress the installation package on the host server.
5. Open the `InstallationManager` folder in the directory structure that is created when the installation package is decompressed. Several `IM_OperatingSystem.zip` files are displayed.
6. Decompress the file for your operating system.
   - `IM_AIX.zip` (for AIX)
   - `IM_HPIA.zip` (for HP-UX Itanium)
   - `IM_Linux.zip` (for Linux)
   - `IM_LinuxPPC.zip` (for Linux)
   - `IM_Solaris.zip` (for Solaris)
   - `IM_Win.zip` (for Solaris)
   - `IM_zLinux.zip` (for Linux for System z)

   This action creates a new `IM_OperatingSystem` folder.

   Important: Installation Manager V1.8.2 is required to install Sterling B2B Integrator V5.2.6.
7. Decompress the `Common_Repo.zip` from the installation package. The action creates two new folders `b2birepo` and `gmrepo`. The `IM_OperatingSystem`, `b2birepo`, and `gmrepo` folders must be at the same level in a directory.

   Important: `gmrepo` contains the repository file required to install Global Mailbox. For information about Global Mailbox, see Global Mailbox overview.
8. Open a command prompt and do one of the following tasks to start the Installation Manager:
   a. Go to the `IM_<operating_system>` directory and type **./userinst** for the following scenarios:
      - If you do not have the Installation Manager installed and are using the Installation Manager agent provided with V5.2.6.
      - If you have a 64-bit Installation Manager installed.
      - If you have the Installation Manager installed on a platform that has only one download available for Installation Manager. For example, AIX, Solaris, HP, zLinux.

b. Go to `<installation directory>/Installation Manager/eclipse` and type **./IBMIM**, if you have 32-bit Installation Manager installed on your Linux system.

9. On the Installation Manager home page, click **Install**.

   Important: If `IM_<operating_system>` and `b2birepo` directories are not in the same directory or if you already have Installation Manager installed, then you get a message saying that there no packages to install or Installation Manager could not connect to the repositories. You must add the Sterling B2B Integrator repository files to the Installation Manager repository. For more information about adding repository files, see Repository preferences.

10. On the Install Packages screen, select **IBM Sterling B2B Integrator**. This action selects the versions also. Click **Next**.

11. Review the license agreement and select the option **I accept the terms in the license agreement**.

    If you do not accept the agreement, the installation process does not continue.

12. Select the location for the shared resources directory and click **Next**. This directory is used by the Installation Manager for the Sterling B2B Integrator installation and other installations.

    The shared resources directory cannot be a subdirectory of the directory for the installation of Sterling B2B Integrator. The shared resources directory must be empty.

13. Choose **Create a new package group** and specify the path to Sterling B2B Integrator installation directory.

14. Select the required features to be installed. The available options are:
    - **IBM Sterling B2B Integrator**
    - **IBM Sterling File Gateway**

      Important: From Sterling B2B Integrator V5.2.6 onwards, Sterling File Gateway V2.2.6 is automatically installed if **IBM Sterling File Gateway** is selected. Any additional post installation tasks are not required to start Sterling File Gateway. It is strongly suggested to install Sterling File Gateway when installing Sterling B2B Integrator V5.2.6. If for any reason Sterling File Gateway is not installed with Sterling B2B Integrator, you cannot install Sterling File Gateway later using the Installation Manager. You must use `InstallService` to install it. For information about installing Sterling File Gateway by using `InstallService`, see Installing Sterling File Gateway (V2.2.6 or later).

    - **FIPS Module**
    - **AS2 Edition Module**
    - **Financial Services Module**
    - **EBICS Banking Server Module**
    - **B2B Advanced Communications Integration Module**

      Important: When installing Sterling B2B Integrator, select **B2B Advanced Communications Integration Module** to install Sterling B2B Integrator bridge. Sterling B2B Integrator bridge is required for communication between Sterling B2B Integrator and B2B Advanced Communications. If you are installing Global Mailbox and Sterling B2B Integrator, then **B2B Advanced Communications Integration Module** (Sterling B2B Integrator bridge) is installed by default, because Global Mailbox uses the storage module of B2B

Advanced Communications. However, you must configure the adapter containers and adapters for Sterling B2B Integrator bridge after installing.

Important: Sterling B2B Integrator is selected by default. Select only the licenses and features that were defined by your IBM contract. If you are unsure which to select, the installation can proceed without a selection and complete successfully. Startup and operation of the software, however, requires one of the licenses to be selected. See "License modifications" on page 58 to apply licenses after the installation.

Important: You must manually install the EBICS client. For more information about installing the EBICS Client manually, see the *EBICS Client User Guide.*

15. Type the path to your JDK directory and click **Next**.
16. Specify the configuration for the features to install and click **Next**.
    - **FIPS Compliance Mode (Must enable FIPS Module)**
    - **NIST 800-131a Compliance Mode**
      – **off** (default value)
      – **strict**
    - **SPE Integration Module (Requires pre-install of SPE, WTX optional)**

      If you select the SPE option, you are prompted for the following information:
      – SPE installation directory
      – (Optional) WebSphere Transformation Extender (WTX) installation directory
      – SPE UI port

      For more information, see the documentation for the integration of Sterling B2B Integrator and SPE.
17. Type the path to the JCE policy file and click **Next**.
18. Enter the following server location information and click **Next**:
    a. Type the explicit IP address or host name for the server or use the default value of `localhost`.
    b. Type the initial port number or use the default value of `8080`.
19. Enter the system passphrase information and click **Next**:
    a. Type a passphrase.
    b. Confirm the passphrase.
20. Type the email information and click **Next**:
    a. Type the email address to which you want system alert messages sent.
    b. Type the SMTP mail server (IP address or host name) that you want to use for system alert messages and other administrative notices.
21. Enter the following database information and click **Next**.
    a. Select the database vendor that you want to use:
       - Oracle
       - Microsoft SQL Server
       - DB2
       - MySQL
    b. Select all of the following options that apply to this installation:

Choices:	Action
(Not for MySQL) **This installation is for a cluster node 2 or higher**	Do not select this option because this installation is a non-cluster installation.
(Not for MySQL) **Apply database schema automatically?**	The default is to automatically apply the DDL (Data Definition Language) statements that apply the database schema. If you want to manually create the database schema, then clear the **Apply database schema automatically** check box and continue with the remaining installation steps. **Important:** If you manually apply the schema, the installation stops without error later in the installation process so that you can manually apply the schema.

22. Type the following database connection information. Do not click **Next** until you configure the JDBC driver in the next steps.
    - User name
    - Password (and confirmation)
    - Catalog name
    - Host
    - Port

23. Select a JDBC driver or drivers and click **Next**:
    a. Click **Add** to browse to the file location for the appropriate JDBC driver or drivers:
       - (Oracle, Microsoft SQL Server, and MySQL only) Absolute path and file name for one JDBC driver file.
       - (DB2 only) Absolute paths and file names for two JDBC driver files. Use the Type-4 JDBC driver. This type of driver converts JDBC calls into the network protocol that is used directly by DB2, allowing a direct call from the system to the DB2 server.
    b. Click **Test** to confirm that the driver is supported for the database and Sterling B2B Integrator.

       Tip: Make sure that you select the driver path in the **Database driver** field before you click **Test**.

       The Installation Manager must successfully validate the connection to the database before you can continue with the installation. If there is a validation failure, you can view the system log to determine more information about the failure. Perform the following tasks:

       1) Open the user's application directory: *local_path*/IBM/Installation Manager/logs
       2) Open the index.xml file in a browser.
       3) Identify the log file that is based on the time stamp of when you started the installation.
       4) Click the installation file to view a listing of errors that occurred during that installation.

24. Determine which of the following options apply to this installation. Select the applicable options and click **Next**:
    - **Verbose install?**

- **This installation is an upgrade from a prior version**

   Do not select this option because this installation is a new installation.

25. Determine what performance configurations apply to this installation and click **Next**. Accept the default value or type the appropriate value.
    - **Number of Processor Cores**
    - **Physical Memory (MB) allocated to Sterling B2B Integrator**

26. Review the installation package summary information. Click **Install** to apply your installation settings to the installation.

    If you did not select the option to automatically apply the database schema, the installation stops and you must perform these additional steps to complete the installation with manual DDL statements:

    a. Open the installation directory.
    b. Locate the `InstallSI.log` file and open it with a file editor.
    c. Search the file for these error messages:
       - `<SI_Install>/repository/scripts/EFrame_IndexAdds.sql must be applied to the database.`
       - `<SI_Install>//repository/scripts/EFrame_Sequence.sql must be applied to the database.`
       - `<SI_Install>//repository/scripts/EFrame_TableChanges.sql must be applied to the database. Exiting installation..."`

       Important: If you do not find these error messages in the log file, the installation failed because of another reason and you must resolve that error and attempt the installation again. If you find these messages, continue with the remaining steps.

    d. Edit each `.sql` script for the database. These changes might include changing the SQL delimiter or adding table space options.
    e. Log in to the database as the database schema user.
    f. Run the following SQL files manually in this order:

       Important: When you are running the scripts, you must run the SQL scripts in the specified order.
       - `EFrame_IndexDrops.sql`
       - `EFrame_TableChanges.sql`
       - `EFrame_IndexAdds.sql`
       - `EFrame_TextIndexAdds.sql`
       - `EFrame_Sequence.sql`
       - `EFrame_TextIndexModify.sql`
       - `EFrame_TextIndexUpdates.sql`
       - `EFrame_TextIndexUpgrade.sql`
       - `EFrame_Static.sql`

       Important: ActiveMQ uses dynamically generated table names that are based on the name of the installation node. Table generation is not included in these SQL scripts, but is performed automatically during the initial start of Sterling B2B Integrator or when a new cluster node is added. Table generation might fail if security restrictions reduced the Sterling B2B Integrator database user permissions. To avoid this issue, ensure that the DBADM role permissions are enabled during the initial startup. If further issues arise, contact IBM customer support for guidance.

g. Exit from the database.

h. Open the parent directory of the Sterling B2B Integrator installation directory.

i. Uninstall the Sterling B2B Integrator offering to clear out the Installation Manager metadata about the installation, and the delete (or rename as a backup) the Sterling B2B Integrator installation directory.

j. Restart the installation wizard and provide the same installation options that you provided before you cleared the **Apply database schema automatically** check box. If you have recorded a response file (as suggested in step 9), you can use the response file to install Sterling B2B Integrator.

The Installation Progress screen indicates which component of the installation is in process.

A status bar below the **Repository Information** heading displays the progress of the component installation. When the installation completes, a large green circle with a check mark displays with the message The packages are installed. A link is provided to view the installation log file.

27. Click **Finish**. The Installation Manager closes and you are returned to your desktop.

Check the InstallSI.log file to verify that all of the components were installed properly.

28. If you are using the AIX operating system and are using IPv6:

a. Open the /*install_dir*/install/properties directory.

b. Add the following value to the sandbox.config file: IPV4STACK=false

c. Open the /*install_dir*/install/bin directory.

d. Enter the ./setupfiles.sh command.

29. Determine whether you need to apply a fix pack or interim fix to the installation. For information about fix pack or interim fix installation, see "Applying a Fix Pack (V5.2.6 or later)" on page 625 and "Applying an interim fix (V5.2.6 or later)" on page 635.

Validating the Installation

After installing Sterling B2B Integrator, you should validate the installation to ensure that everything is working according to your needs.

Installation validation checklist:

As part of the installation, you need to run validation tests to ensure that the software installation was successful.

Complete the following tasks:

#	Validate Installation Checklist	Your Notes
1	Start Sterling B2B Integrator.	
2	Access Sterling B2B Integrator.	
3	Validate the installation.	
4	Stop Sterling B2B Integrator.	

Starting Sterling B2B Integrator in a UNIX/Linux noncluster environment:

After you run the upgrade software, you can start Sterling B2B Integrator.

Before you begin

If you are starting Sterling B2B Integrator after upgrading the application from version 5.1.0.4 to 5.2.5, change the values of the following properties in the `centralops.properties` file to 600. This action prevents the **run.sh** command from timing out before Sterling B2B Integrator starts. The `centralops.properties` file is in the *install_dir*`/install/properties` directory.

- **OpsServer.commandTimeout**
- **PassPhrase.urlTimeout**

Procedure

1. Open the */install_dir*`/install/bin` directory.
2. Enter `./run.sh`.
3. Enter your passphrase. The final startup processes run, concluding with the following message:

   `Open your Web browser to http://`*host:port*`/dashboard`

   Where *host:port* is the IP address and port number where Sterling B2B Integrator is located on your system. Depending on system load, it might take several minutes for the UI to be ready.
4. Record the URL address so that you can access Sterling B2B Integrator.

Accessing Sterling B2B Integrator:

You can access Sterling B2B Integrator through a web browser.

Procedure

1. Open a browser window and enter the address that is displayed at the end of the start.
2. On the login page, enter the default user ID and password. The default login is at an administrative level. One of your first tasks as an administrator is to change the administrative password and to register other users with other levels of permission.

Validating the installation with a sample business process:

You can validate the installation by testing a sample business process.

Procedure

1. From the **Administration Menu**, click **Business Process** > **Manager**.
2. In the **Process Name** field, type `Validation_Sample_BPML` and click **Go!**
3. Click **execution manager**.
4. Click **execute**.
5. Click **Go!** The `Status: Success` message is displayed on the upper left side of the page.

Stop Sterling B2B Integrator (Hard Stop):
About this task

A hard stop halts the system without waiting for business processes to finish. Hard stops may result in loss of data in unfinished processes.

To run a hard stop:

Procedure

1. Navigate to */install_dir/*install/bin.
2. Enter `./hardstop.sh`.
3. Enter your passphrase.

Stopping Sterling B2B Integrator (Soft Stop):

A soft stop of Sterling B2B Integrator halts the system after all the business processes finish running.

About this task

- In the user interface, click **Operations** > **System** > **Troubleshooter**and then click **Soft Stop**.
- You can soft stop Sterling B2B Integrator from the command-line interface.

For more information about the softstop user interface and command line options, see the performance management documentation.

Procedure

1. To soft stop from the command-line interface, navigate to the */install_dir/install/bin* directory.
2. Enter the following command:

   `./softstop.sh`
3. Enter your passphrase.

Post-Installation Configuration

After installing Sterling B2B Integrator and validating the installation, you may need to do additional configuration depending on your system and business needs.

Postinstallation configuration checklist for noncluster environment:

After you install Sterling B2B Integrator, you need to complete some postinstallation configuration.

Complete the items that are listed in the postinstallation checklist:

#	Postinstallation configuration checklist	Your Notes
1	Upon installation, several default user accounts are automatically created to get you started. For security purposes, the system administrator should update all default user account passwords immediately after installation is completed. See "Changing default user account passwords" on page 40.	
2	If you are using an IPv6 address in a dual stack configuration, complete the *Add the IPv6 Address for the Dual Stack Configuration*.	
3	Download Sterling B2B Integrator Tools.	
4	Determine whether you need to modify any property files.	

#	Postinstallation configuration checklist	Your Notes
5	If you installed Sterling B2B Integrator on the HP-UX or Solaris operating system with the IBM Hybrid JDK 1.7 SR5, do the following task: 1. Open the *install_dir*/install/bin directory. 2. Enter the following command: ./updateXercesJars.sh	
6	"Configure a Non-English Environment" on page 47	
7	"Configure Browser Settings for a Different Language" on page 50	

Changing default user account passwords:

When you install Sterling B2B Integrator, several default user accounts are automatically created to get you started. One of the first actions you must take after installation is to update these accounts with unique passwords, because the default ones can be known by all Sterling B2B Integrator customers.

About this task

Default user account passwords are preset at installation. For security purposes, the system administrator should update all default user account passwords immediately after installation is completed.

Default user accounts are listed below in the same order as they appear in the UI under **Accounts > User Accounts > List All**. You can use this table to track the user accounts you want to update.

User Account Name	Update password
MBX_daemon	
admin (*)	
aft_user (*)	
anon	
as2_user	
commandlineuser	
dash_oper (*)	
dash_part (*)	
dash_prtspon (*)	
dash_sponsor (*)	
fg_architect	
fg_operator	
fg_provisioner	
fg_sysadmin (*)	
gmbx_user	
ja_turbine	

User Account Name	Update password
jane	
jane_doe	
joe_employee	
joe_manager	
joe_supplier	
john	
sd_buyer	
sd_supplier	
turbine	
ws_buyer	
ws_director	
ws_employee	
ws_finance	
ws_hr	
ws_manager	
ws_purchaser	
ws_supplier	

(*) denotes a super user

To change the password for a user account, perform the following tasks.

Procedure
1. Log into Sterling B2B Integrator using ID = admin and password = password.
2. Go to **Accounts > User Accounts**. Under the List section click **Go!** All default user account names are listed.
3. Click **Edit** next to the user account name you want to update the password for.
4. In the New Password and Confirm New Password fields, enter a new, secure password for this User ID.

   Note: Passwords must be at least six characters long.
5. Click **Save** and **Finish**.

What to do next

Repeat steps 3 - 5 for all user account names you want to update.

Add the IPv6 Address for Dual Stack Configuration:
About this task

If you are using IPv6 and have Sterling B2B Integrator configured in a dual stack, you need to add the IPv6 address to the admin host list.

To add the IPv6 address:

Procedure
1. Navigate to the installation directory that contains the noapp.properties file.
2. Open the noapp.properties_platform_ifcresources_ext .in file.

3. Add following line to the properties file:

   `admin_host.3=FULL_IPv6_ADDRESS`

   Where FULL_IPv6_ADDRESS is the IPv6 address of the machine. (Make sure you surround the IPv6 address with square brackets.)
4. Save and close the file.
5. Run the setupfiles.sh.
6. Start Sterling B2B Integrator.

Download of the Sterling B2B Integrator tools:

After you install Sterling B2B Integrator, you can install tools like the Map Editor and the Graphical Process Modeler (GPM).

Sterling B2B Integrator includes tools that run on a desktop or personal computer. After you install Sterling B2B Integrator, you can install the following tools:

- Map Editor and associated standards

  Note: The Map Editor requires a 32-bit JDK. This JDK is not provided with the product download or media. For more information, see *System Requirements*.
- Graphical Process Modeler (GPM)
- Web Template Designer
- (If licensed) MESA Developer Studio plug-ins, including MESA Developer Studio Software Development Kit (SDK) and MESA Developer Studio Skin Editor
- (If licensed) Reporting Services, which require MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports

Attention: Conflicting IP addresses can cause problems when you download a desktop tool.

Property files configuration in a UNIX environment: Property files contain properties that control the operation of Sterling B2B Integrator. For example, the REINIT_DB property in the sandbox.cfg file controls whether or not a database is initialized when you install Sterling B2B Integrator.

By modifying the values of these properties, you can customize Sterling B2B Integrator to suit your business and technical needs. Most property files are in the:

- For UNIX, /*install_dir*/install/properties directory
- For Windows, *install_dir*\install\properties directory

After installing Sterling B2B Integrator, most property files and scripts do not need any further configuration for basic operation. However, if you want to customize any specific operations, for example setting a different logging level - you will need to edit (or in some cases, create) certain property or .xml files.

Before changing any property files, refer to Working with Property Files documentation for general information about how to work with Property Files.

Areas where you might need to make specific property files changes after an installation include:

- LDAP user authentication
- Prevention of cross-site script vulnerabilities

- Logging configuration
- Process-specific property file settings

Configure a Non-English Environment:

You can install Sterling B2B Integrator in an English or a non-English environment. The base language for the Configurator can be switched only once.

Use the following checklist to change to a non-English environment:

#	Non-English Environment Checklist	Your Notes
1	Install the Sterling B2B Integrator Language Pack.	
2	Load the Sterling B2B Integrator Language Pack Factory Defaults.	
3	Load the Sterling B2B Integrator Language Pack translators.	
4	Configure Encodings.	
5	Configure Locales.	

Language Settings: Language settings for Java applications involve both character sets and encoding:
- A character set is a set of characters (letters, numbers, and symbols such as #, $, and &) that are recognized by computer hardware and software.
- An encoding is a representation of data in a particular character set. An encoding set is a group of encodings.

For information about basic and extended encoding sets, see http://download.oracle.com/javase/1.5.0/docs/guide/intl/encoding.doc.html.

The default encoding set includes:
- UTF-8 (default)
- IS0-8859-1
- ISO-8859-5
- US-ASCII
- ISO_8859-1
- EUC-JP
- UTF-16
- ISO-2022-JP

Sterling B2B Integrator provides two property files that contain supported encoding sets. These properties files reside in the */install_dir/*install/properties directory.
- encodings.properties – Contains the default encoding set used in the user interface.
- encodings_large.properties – Contains all supported encoding sets.

You are not limited to the encodings in the encoding.properties file. Sterling B2B Integrator enables you to configure the encodings properties files to expand the number of encodings you can use.

Install the Language Pack:

About this task

Before installing the language pack be sure that you have successfully installed Sterling B2B Integrator.

To install the Sterling B2B Integrator language pack:

Procedure
1. Insert the language CDs into your CD-ROM drive.
2. Navigate to the directory that is appropriate for your operating system.
   - If you are using AIX, open the AIX directory.
   - If you are using HP-UX, open the HP directory.
   - If you are using Solaris, open the Sun directory.
   - If you are using Red Hat Linux, open the Linux directory.
   - If you are using SUSE Linux, open the Linux directory.
3. Enter `./setup.bin`.

Load the Language Pack Translations:
About this task

Prior to loading the Sterling B2B Integrator Language Pack factory defaults, be sure that you have successfully completed all instructions in the database chapter.

To load the language pack translation with custom localization literals:

Procedure
1. Run the LocalizedStringReconciler tool in the IMPORT mode from the */install_dir*/install/bin directory. Enter: `./ant.sh -f localizedstringreconciler.xml import -Dsrc=`*/install_dir*`/database/ FactorySetup/XMLS` This tool first inserts the value specified in the *<from_language>_<from_country>_*ycplocalizedstrings*_<to_language> _<to_country>*.properties file present in the */install_dir*/database/FactorySetup/ XMLS/<language>_<country> directory into the database.

   The basefilename refers to the file present in the `/database/FactorySetup/XMLS` directory, for which the translations are to be imported into the database.
2. Verify that your locale settings such as currency, time format, and date are correct.

Configure Encodings:
About this task

To configure your encoding set:

Procedure
1. Stop Sterling B2B Integrator and wait for shutdown to complete.
2. Navigate to */install_dir*/install/properties.
3. Open the encodings_large.properties file.
4. Select the encodings you want to add to the encodings.properties file.
5. Open the encodings.properties.in file.
6. At the end of the encodings.properties.in file, add the encodings you selected from the encodings_large.properties file. When adding encodings from one file to the other, first copy the encodings as they appear in the

encodings_large.properties file. After adding the new encodings, ensure that the index numbers are consecutive. If the index numbers are not consecutive, change the index number or numbers as needed. For example, encoding54 cannot follow encoding6. In this example, change encoding54 to encoding7.

The first name in the definition (before the comma) is the name that will appear in the Sterling B2B Integrator user interface. You can change this name to make it more descriptive. For example: encoding4 = 819,ISO8859_1 may be changed to encoding4 = WesternEurope,ISO8859_1. ISO8859_1 is the Java canonical name and should not be changed.

7. Update the first line in the encodings.properties.in file (numberof). Change *numberof* to the number of encodings added to the file. For example, if the current value is numberof = 6 and you add 5 new encodings, the new value is numberof = 11.

   numberof indicates the total number of encodings located in the file. You must update numberof to ensure that the encodings you added will be visible in the user interface.
8. Navigate to */install_dir*/install/bin.
9. Enter `./setupfiles.sh`.
10. Start Sterling B2B Integrator.

Configure Locale:
About this task

Sterling B2B Integrator runs in any locale that Java supports. If you want to run the in a non-default locale, then configure your environment to the specific locale you want to use.

To configure locale (default is English):

Procedure
1. Enter `local-a`. A list of locales is displayed.
2. Enter `export LANG <locale>`. Where <locale> is the language, for example to set the locale to Japanese, locale = ja_JP.
3. Enter `export LC_ALL <locale>`. Some UNIX shells require the setenv command instead of the export command.

Configure Browser Settings for a Different Language:

Some browsers and operating systems require additional configuration in order to correctly render the Sterling B2B Integrator user interface in certain languages.

Use the procedures provided in this section to properly configure a browser to display the Sterling B2B Integrator user interface in the appropriate language.

Tip: If your browser is unable to display the user interface properly or you see a mixture of English and another language, this is an indication that the browser is configured incorrectly. You may also need to install additional fonts on the Sterling B2B Integrator server.

Support for other languages:

The Sterling B2B Integrator user interface includes support for several languages.

Attention: Sterling B2B Integrator product code is designed to work with Latin based English only input. The use of any other type of input might have uncertain results and is not supported.

The Sterling B2B Integrator user interface includes support for the following languages:
* French
* German
* Italian
* Japanese
* Korean
* Polish
* Portuguese (Brazilian)
* Simplified Chinese
* Traditional Chinese
* Dutch

Four of these languages involve expanded Unicode character sets:
* Japanese
* Korean
* Simplified Chinese
* Traditional Chinese

The implementation of these languages in your environment might require the addition of new Unicode fonts on your server:

If...	then...
Sterling B2B Integrator is on a server that already supports these languages	You do not need to install any additional fonts.
You are installing on a server that is only setup for the Latin alphabet and you have users who need to view the Sterling B2B Integrator user interface in any of the Asian languages	You need to have the fonts for these languages installed.

A way to test the implementation of a language is to create a user with one of the new languages and setup their browser to use that language as it's primary language. Log in to the system and review the user interface. If you see a mixture of English and the new language, your configuration is not correct. You need to verify that the browser is set up correctly and review the fonts that are installed on the server.

The installation of more fonts/languages on the server should be done in coordination with your technical support team. Be sure to include a Unicode Sans Serif font on your server.

Important: While multiple languages are supported, a user account should be configured to use one specific language to avoid user interface display issues.

Add a Custom Language Preference Code:
About this task

In order for your browser to display the Sterling B2B Integrator user interface and address bar text correctly in a foreign language, you must specify the appropriate language preference code for the browser.

Sterling B2B Integrator supports the following language preference codes:
* de
* en
* en-US
* es
* fr
* it
* ja
* ko
* pt-BR
* zh
* zh-TW
* du

Your browser must be configured to use one of these specific language preference codes to view the Sterling B2B Integrator user interface.

Note: Most browsers provide a default listing of language preference codes. However, Sterling B2B Integrator requires the use of the specific codes as listed here. For example, you cannot use the default German (Germany) [de-DE], you must use **[de]**.

You may need to add these supported codes as a custom language preference code in your browser.

Note: The instructions for configuring a browser's display will differ for each browser. Refer to your chosen browser's documentation for specific instructions on configuring that browser's display.

The following is an example of how to configure a client machine display for an IE window.

Procedure
1. Open a browser window.
2. Select **Tools > Internet Options**.
3. At the bottom of the window under Appearance, click **Languages**.
4. Click **Add** to display the Add Language window.
5. In the User defined: text box, enter the appropriate language preference code.
6. Click **OK**. The added code should display in the **Language: listing** in the Language Preference window. An example entry would be, **User Defined [de]**.
7. (Optional) Move the added language up to be the first one listed if there are multiple languages listed.
   a. Select the newly added language.

b. Click **Move up**.

   The newly added language should now appear first in the Language listing.

8. Click **OK** to save your Language Preference settings.

9. Click **OK** to close the Internet Options window.

10. Close your browser window.

11. Open a new browser window and access the Sterling B2B Integrator user interface to verify your changes have been applied.

Change Default Browser Font:
About this task

Some languages require the use of special fonts to properly display the Sterling B2B Integrator user interface. The client computer must be configured to display these types of fonts. Each Windows client must be configured appropriately.

Note: The instructions for configuring a browser's display will differ for each browser. Refer to your chosen browser's documentation for specific instructions on configuring that browser's display.

The following is an example of how to change the default browser font for an Internet Explorer (IE) window.

To configure a client machines display for IE:

Procedure

1. Determine which fonts are needed to support your needed language and verify they are installed on the server.

   Note: The installation of additional fonts/languages on the server should be done in coordination with your technical support team. Be sure to include a Unicode Sans Serif font on your server.

2. Open an IE browser window.

3. Select **Tools > Internet Options**.

4. At the bottom of the window under Appearance, click **Fonts**.

5. From the Language Script drop-down menu, change the Latin based value to the appropriate script for your needed language.

   Note: If your encoding is not available, you may need to install a new version of Internet Explorer, but make sure you install the appropriate international options.

6. Select a Webpage font and a Plain text font appropriate for the new language. A Plain text font is one in which all the characters take up the same amount of space and is associated with older computer terminals.

   Note: If no fonts are listed in the menus, then you need to install fonts designed for that encoding.

7. Click **OK** to close the Fonts window.

8. Click **OK** again to close the Internet Options window.

9. Close your browser window.

10. Open a new browser window and access the Sterling B2B IntegratorSterling B2B Integrator user interface to verify your changes have been applied.

Set the Client Character Display:
About this task

To use special characters, such as for various languages, the client computer must be configured to display these types of characters. In order for Unicode characters to display correctly in the application, each Windows client must be configured appropriately.

Note: The instructions for configuring a browser's display will differ for each browser. Refer to your chosen browser's documentation for specific instructions on configuring that browser's display.

The following is an example of how to configure a client machine display for an Internet Explorer (IE) window.

To configure a client machines display for IE:

Procedure
1. Open an IE browser window.
2. Select **View > Encoding > Auto-Select**.

Clearing Browser and Java Plugin Caches Before Initial Deployment:
About this task

Once the Sterling B2B Integrator is ready for deployment, each user must clear the browser and Java Plugin caches on their client machines before launching Sterling B2B Integrator. This requirement applies to all browsers.

To clear the browser and java caches, do the following:

Procedure
1. From the browser menu bar, select **Settings > Control Panel > Internet Options**.
2. Select the General tab, and in the Temporary Internet Files panel, click **Delete Files**. The Delete Files dialog displays.
3. Check the **Delete All Offline Content** checkbox. Click **OK** until the Internet Properties window closes. The browser cache is cleared.
4. From the Windows start menu, select **Settings > Control Panel > Java**.
5. Select the General tab, and in the Temporary Internet Files panel, click **Settings**. The Temporary Files Settings dialog displays.
6. In the Disk Space panel, click **Delete Files**. The Delete Temporary Files pop-up window displays.
7. Click **OK** until the Java Control Panel window closes.

General Internet Explorer Browser Settings: When using Sterling B2B Integrator without any customizations, you need to set the General Browser settings for your Internet Explorer in order to obtain the best browser performance.

Note: This can impact the display of reports and search listings.

To set your general browser settings:
1. From the Internet Explorer menu, select **Tools > Internet Options**.

    The Internet Options window opens to the General tab.

2. Locate the Browsing history section and click **Settings**.

   The Temporary Internet Files and History Settings window opens.

3. Below Check for newer versions of stored pages: select the **Everytime I visit the webpage** option.

4. Click **OK** to save your changes.

5. Click **OK** to apply the changes.

6. Close the browser window and re-open it.

   The browser is now set to check for updates to pages everytime a page is accessed rather than relying upon a cached version.

Internet Explorer Security Settings:
About this task

When using Sterling B2B Integrator without any customizations, you need to set security settings for your Internet Explorer to obtain the best browser performance.

To configure the Internet Explorer security and privacy settings:

Procedure

1. From the Internet Explorer menu, select **Tools > Internet Options**.

2. Click the **Security** tab.

3. Select the Web content zone from which Sterling B2B Integrator is accessed.

4. Set the security level to **Medium-low**.

5. Click **Custom Level** and set your security settings according to the following table:

Internet Explorer Security Setting	Sterling B2B Integrator
.NET Framework	
Loose XAML	Enable
XAML browser applications	Enable
XPS documents	Enable
.NET Framework-reliant Components	
Permissions for components with manifests	High Safety
Run components not signed with Authenticode	Enable
Run components signed with Authenticode	Enable
ActiveX Controls and Plugins	
Allow previously unused ActiveX controls to run without prompt	Enable
Allow Scriptlets	Enable
Automatic prompting for ActiveX controls	Enable
Binary and script behaviors	Enabled
Display video and animation on a webpage that does not use external media player	Disable
Download signed ActiveX controls	Prompt
Download unsigned ActiveX controls	Prompt
Initialize and script ActiveX controls not marked as safe for scripting	Prompt

Internet Explorer Security Setting	Sterling B2B Integrator
Run ActiveX controls and plugins	Prompt/Enable
Script ActiveX controls marked as safe for scripting	Enable
Downloads	
Automatic prompting for file downloads	Enable
File download	Enable
Font download	Prompt
Enable .NET Framework setup	Enable
Java VM	
Java permissions	Medium safety
Miscellaneous	
Access data sources across domains	Enable
Allow META REFRESH	Enable
Allow scripting of Internet Explorer web browser control	Enable
Allow script-initiated windows without size or position constraints	Enable
Allow webpages to use restricted protocols for active contents	Prompt
Allow websites to open windows without address or status bars	Enable
Display mixed content	Prompt
Do not prompt for client certificate selection when no certificates or only one certificate exists	Enable
Drag and drop or copy and paste files	Prompt
Include local directory path when uploading files to a server	Enable
Installation of desktop items	Prompt
Launching applications and unsafe files	Prompt
Launching programs and files in an IFRAME	Prompt
Navigate sub-frames across different domains	Enable
Open files based on content, not file extension	Enable
Software channel permissions	Medium safety
Submit non-encrypted form data	Prompt
Use Phishing Filter	Disable
Use Pop-up Blocker	Disable
Userdata persistence	Enable
Websites in less privilged web content zone can navigate into this zone	Prompt
Scripting	
Active scripting	Enable
Allow Programmatic clipboard access	Prompt
Allow status bar updates via script	Enable

Internet Explorer Security Setting	Sterling B2B Integrator
Allow websites to prompt for information using scripted windows	Enable
Scripting of Java applets	Enable
User Authentication	
Logon	Prompt for user name and password

6. Click **OK** to save your settings.
7. Click **OK** to save the new settings and **Apply** to implement the settings. The new settings are applied when a new browser window is opened.

System Maintenance

From time to time, you might need to perform system maintenance activities.

These activities might include:
- Performing a Checksum
- Adding or removing a license

System Maintenance: From time to time, you may need to perform system maintenance activities. These activities might include any or all of the following:
- Performing a checksum
- Modifying the license files

DB Checksum Tool:

A checksum is a simple redundancy check used to detect errors in data. The DB Checksum tool generates the difference in resource checksum between the default resource and the latest system resource from the database.

In Sterling B2B Integrator, a verification process compares the checksum between the existing default resource and the resource that was added after applying a fix pack or upgrading. The DB Checksum tool, a resource difference tool generates a granular report of the changes in the system that was not permitted to be set as defaults.

Performing a checksum:

Use a command to run the DB Checksum tool.

Procedure

To run the DB Checksum tool:
1. Open the */install_dir*/install/bin directory.
2. Enter the following command:

```
./db_checksum_tool.sh [-d] [-i [1 | 2 | 3 | 4 | 5]]
[-r [wfd | map | schema | sii | template]] [-o <output file>] [-g]
```

Where:
- **-d** is the mode to dump the difference of resource checksum between the default resource and latest system resource.
- **-i** is the resource type integer (optional).
- 1 is WFD.
- 2 is MAP.

- 3 is SCHEMA.
- 4 is SII.
- 5 is TEMPLATE.
- **-r** is the resource name (optional). For example, wfd, map, schema, sii, or template.
- **-o** is the file name to output all the messages (optional).
- **-g** is the file name that lists all the ignored resources (optional).
- **-h** is the help screen.

The DB Checksum tool performs the relevant checksum operation that is based on the command options and generates the output message.

License modifications:

After the installation finishes, you can modify the software licenses that you loaded with the **AddLicenseSet** command.

The **AddLicenseSet** command is in the `bin` directory of your UNIX or Windows installation. After the initial installation, the license files are in the following directories:
- UNIX - /*install_dir*/install/properties/licensefiles
- Windows - *install_dir*\install\properties\licensefiles
- iSeries - /*install_dir*/properties/licensefiles

You can add licenses or review the license list from the UI. On the Administration Menu, click **System** > **B2B Console** > **Operations** > **System** > **Licenses**.

AddLicenseSet Command Parameters

Use the **AddLicenseSet** command to modify a single license file or the entire license file directory.

To use the **AddLicenseSet** command, you must do the following:
- Open the `bin` directory
- Include the absolute path to the license file directory or to a license file

The **AddLicenseSet** command has the following parameters:

AddLicenseSet Parameter	Description
-reload	Use this parameter to reload the license files.
	This parameter deletes all of the license files from the database before the new files are loaded. The old license files are saved to the following locations:
	• UNIX - /*install_dir*/install/logs/security/ old_licenses
	• Windows - *install_dir*\install\logs\security\ old_licenses
	• iSeries - /*install_dir*/logs/security/old_licenses

AddLicenseSet Parameter	Description
`-upgrade`	Use this parameter during an upgrade only.
	This parameter deletes all of the old license files from the database and installs the new license files. The old license files are saved to the following locations: • UNIX - */install_dir*/install/logs/security/upgrade • Windows -*install_dir*\install\logs\security\upgrade • iSeries -/*install_dir*/logs/security/old_licenses

The **AddLicenseSet** command will check if Sterling B2B Integrator is running. If it is running, the command will call the Ops server to refresh the license from the database. If you have any problems with your licenses after running the **AddLicenseSet** command, stop and restart Sterling B2B Integrator.

License Modification: Examples:

There are several different ways you can use the **AddLicenseSet** command to modify your licenses.

UNIX Examples

From the *install_dir*/bin directory:

Scenario	Command usage (UNIX example)
Reload a single license file	./AddLicenseSet.sh */install_dir*/install/properties/licensefiles/SI_SFG_License.xml -reload
Reload all of the license files in the directory	./AddLicenseSet.sh */install_dir*/install/properties/licensefiles/ -reload
Upgrade a single license file	./AddLicenseSet.sh */install_dir*/install/properties/licensefiles/SI_SFG_License.xml -upgrade
Upgrade all of the license files in the directory	./AddLicenseSet.sh */install_dir*/install/properties/licensefiles/ -upgrade

Windows Examples

From the *install_dir*\bin directory:

Scenario	Command usage (Windows example)
Reload a single license file	AddLicenseSet.cmd*install_dir*\install\properties\licensefiles\SI_SFG_License.xml -reload
Reload all of the license files in the directory	AddLicenseSet.cmd*install_dir*\install\properties\licensefiles\ -reload
Upgrade a single license file	AddLicenseSet.cmd*install_dir*\install\properties\licensefiles\SI_SFG_License.xml -upgrade
Upgrade all of the license files in the directory	AddLicenseSet.cmd*install_dir*\install\properties\licensefiles\ -upgrade

Installing and Configuring Perimeter Servers

A perimeter server is an optional software tool for communications management. A perimeter server can be installed in a demilitarized zone (DMZ). A DMZ is a

computer host or small network inserted as a neutral zone between a company's private network and their public network. A perimeter server requires a corresponding perimeter client.

The perimeter server manages the communications flow between outer layers of your network and the TCP-based transport adapters. A perimeter server can solve problems with network congestion, security, and scalability, especially in high-volume, Internet-gateway environments.

Installation Guidelines for Perimeter Servers with Sterling B2B Integrator: The installation program installs a perimeter client and a local mode server. The local mode server is useful for testing purposes or in environments that do not require a secure solution. However, if you require high-volume, secure connections, you must install a perimeter server in a remote zone, either a more secure or less secure network than your integration server.

Consider the following before you install a perimeter server:
- Licensing for a perimeter server is determined by the licensing restrictions on the corresponding B2B adapters.
- Each perimeter server is limited to two TCP/IP addresses:
  - Internal interface is the TCP/IP address that the perimeter server uses to communicate with Sterling B2B Integrator.
  - External interface is the TCP/IP address that the perimeter server uses to communicate with trading partners. To use additional TCP/IP addresses, install additional perimeter servers.
- You can have multiple perimeter servers installed on the same computer interacting with one instance of Sterling B2B Integrator. To install a perimeter server on a computer with an existing instance, install the new perimeter server in a different installation directory.
- The combination of internal TCP/IP address and port must be unique for all perimeter servers installed on one computer.
  - If a perimeter server is installed using the wildcard address, then all ports must be unique. The assigned ports are not available for use by adapters that use the server or any other perimeter server on that computer.
  - The internal and external interface may use the same TCP/IP address. However, the port used by the perimeter server is not available to the adapters that use the server.

Perimeter Server Installation Methods: You can install perimeter server either in silent mode or in interactive mode. The default installation mode is silent. In the silent mode, you should specify the details in a silent file, whereas in the interactive mode, you should enter the value each time a prompt appears.

Perimeter Server Information Gathering Checklist: Before you install the perimeter server, you need to gather the following information and answer the following questions:

Perimeter Server Information Gathering Checklist	Your Notes
Path to java	
Path to the Sterling B2B Integrator installation directory	

Perimeter Server Information Gathering Checklist	Your Notes
Will this perimeter server be installed in a less secure network?	
TCP/IP address or the DNS address that the perimeter server will listen on.	
Listening port for the perimeter server.	
Local port that the perimeter server will use to connect to Sterling B2B Integrator. Port number must be higher than 1024.	

Perimeter Server Security Vulnerabilities: When Sterling B2B Integrator is deployed with a remote perimeter server in a more secure network zone, there is a security vulnerability. An intruder may compromise the host where the proxy resides, and take over the persistent connection to the perimeter server residing in the more secure zone. If this happens, the perimeter server will relay all the intruder's network requests past the firewall into this internal zone.

To prevent an intrusion, limit the activities the remote perimeter server can perform on behalf of the proxy to specifically those activities that the proxy needs to do for its operation.

Control these limitations by using a configuration residing in the secure network zone with the remote perimeter server, inaccessible by the proxy that could become compromised.

Installing a perimeter server in a less secure network in a UNIX or Linux environment:

Install a perimeter server in a UNIX or Linux environment in interactive mode.

Procedure
1. Copy the .jar installation files from the installation media to a UNIX/Linux directory. If you are using FTP to copy the file, make sure that your session is set to binary mode.
2. Enter: */path_to_java*/java -jar */install_dir*/install/packages/ *ps_filename*.jar —interactive

   The program verifies the operating system, minimum fix pack level, and the location and version of the JDK.
3. Enter the full path name of the installation directory.
4. If there is an existing installation in the directory you specify, you can update it using the same settings. Answer the question:

   There is an existing install at that location, update it while keeping existing settings?

   If **yes**, the installation proceeds without more entries.

   Note: If you want to change any of the settings, you must use a new directory, or delete the old installation before you reinstall the perimeter server. You cannot overwrite an existing installation, and you cannot use an existing directory that does not contain a valid installation.
5. Confirm that the installation directory is correct.

The program verifies the amount of available disk space.

6. Answer the question:

   `Is this server in a less secure network than the integration server?`
   Yes

7. Answer the question:

   `Will this server need to operate on specific network interfaces?`

   If **yes**, the program returns a list of the network interfaces available on your host. Select the interfaces for the server to use.

8. Enter the TCP/IP address or DNS name for the internal interface to use to communicate with the integration server (Sterling B2B Integrator). Press **Enter** to use a wildcard for this address.

9. Verify the TCP/IP address or DNS name for the internal interface.

10. Enter the TCP/IP address or DNS name for the external interface to use to communicate with trading partners. Press Enter to use a wildcard for this address.

11. Verify the TCP/IP address or DNS name for the external interface.

12. Enter the port that the perimeter server listens on for the connection from the integration server (Sterling B2B Integrator). The port number must be higher than 1024.

13. Verify the port.

    When the perimeter server is installed, the following message is displayed:

    `Installation of Perimeter Service is finished`

14. Change to the installation directory.

15. Enter `./startupPs.sh` to start the perimeter server.

Installing a perimeter server in a more secure network in a UNIX or Linux environment:

Install a perimeter server in a more secure network in a UNIX or Linux environment in interactive mode

Before you begin
- Sterling B2B Integrator must be installed.
- Complete the Perimeter Server information gathering checklist.

Procedure

1. Enter: */path_to_java*/java **-jar** */install_dir*/install/packages/ *ps_filename*.jar —interactive

   The installation program verifies the operating system, minimum fix pack level, and the location and version of the JDK.

2. Enter the full path name for the Sterling B2B Integrator installation directory and press **Enter**.

   If there is an existing installation in the directory you specify, you can update it using the same settings. Enter `yes`, and installation proceeds without more entries.

3. Enter `yes` to confirm that the installation directory is correct.

   The program verifies the amount of available disk space.

4. Is this server in a less secure network than the integration server, enter `no`.

   This installation is for a more secure network.

5. Answer the question: `Will this perimeter server need to operate on specific network interface?`
   - Enter yes to select from a list network interfaces available.
   - Enter `no.`
6. Enter the TCP/IP address or DNS name that the integration server listens on for the connection from this perimeter server.
7. Enter yes to confirm the TCP/IP address or DNS name.
8. Enter the port that the integration server listens on for the connection from this server. The port number must be higher than 1024.
9. Enter the local port number that the perimeter server uses for the connection to the integration server.

   The port number must be higher than 1024. Specify a port number of zero for the operating system to select any unused port.
10. Enter yes to confirm the port number.

    After the installation is complete, the following messages are displayed:

    `Installation of Perimeter Service is finished`

    `To start this Perimeter Server change to the install directory and run the startup script.`

    `You will also need to configure this server in your integration server (SI) UI.`

Silent Installation Method for an External Perimeter Server: You can install an external perimeter server using a silent install file. The perimeter server can be installed on the same machine where you have installed Sterling B2B Integrator or on a separate machine. It is recommended to install the perimeter server on an separate machine.

To use the silent installation method, you first create the silent install file and then you use to complete the installation.

Create the Silent Installation File for an External Perimeter Server:
About this task

Create a silent installation file with the following variables:

Entry	Description
INSTALL_DIR	(Required) The installation directory that stores perimeter server files and related directories. This directory must exist prior to running the silent install.
REVERSE_CONNECT	(Optional) Determines if the perimeter server is to be installed in a more secure network zone. Valid values: • Y - more secure network zone • N - less secure network zone
PS_PORT	(Required) Determines the perimeter server port to interact with the system.
PS_SECURE_IF	(Required) Determines the TCP/IP address or DNS name for the internal interface to communicate with the integration server (Sterling B2B Integrator). You can use a wildcard (*) for this address.
PS_EXTERNAL_IF	(Required) Determines the TCP/IP address or DNS name for the external interface to communicate with the trading partners. You can use a wildcard (*) for this address.

Entry	Description
REMOTE_ADDR	(Optional) Determines the remote perimeter server address. (Not required if REVERSE_CONNECT=N)
REMOTE_PORT	(Optional) Determines the remote perimeter server port. (Not required if REVERSE_CONNECT=N)
MAX_JVM_HEAP	(Required) Determines the maximum Java heap size allocated to the JVM.

Installing an external perimeter server with a silent installation file:

Install an external perimeter server with a silent installation file.

About this task

Before you begin, create the silent installation file.

Procedure
1. From the installation media, copy `SI.jar` to a UNIX/Linux directory.
2. Set up your silent installation file and record its location.
3. Go to your working directory.
4. To start the installation, enter: */absolutePath*/bin/java -jar */install_dir*/install/packages/*ps_filename*.jar -f silent.txt

   The installation starts. You can follow the progress of the installation on screen.

   The installation program verifies support for your operating system and JDK. It also verifies that you have enough space for the installation.

   When the installation is finished, the system displays the following message:

   `Installation has completed successfully.`
5. Determine whether you must apply any fix packs to the installation. Refer to *Installation Maintenance* to install the latest fix pack.

Install a Fix Pack in a Remote Perimeter Server UNIX or Linux Environment: About this task

Remote perimeter servers are not automatically updated by a fix pack. You must reinstall the perimeter server using the new perimeter server installation file supplied with the fix pack.

To update a Remote Perimeter Server:

Procedure
1. Update your installation with the latest fix pack. Obtain the fix pack from the Support Center web site.
2. Locate your perimeter server fix pack in the */install_dir*/install/packages directory of your installation. Download the file from the Support Center web site. These files have a name that identifies a version number. For example, ps_2006.jar.
3. Copy the file to a directory on the remote server.
4. Stop the perimeter server, enter `./stopPs.sh`.

5. To begin the installation, enter : */absolutePath*/bin/java -jar *filename*.jar
   -interactive

   absolutePath is the directory name where the Java version is installed.

   The program verifies the operating system, required patch level, and the location and version of the JDK.

6. Enter the full path to the installation directory. If you do not want to change any settings for your perimeter server, specify the same directory where the remote perimeter server was originally installed.

7. Answer the question:

   There is an existing install at that location, update it while keeping existing settings?

   If **yes**, the installation will proceed without additional entries.

   Note: If you want to change any of the settings, you must use a new directory, or delete the old installation before performing the new installation. You cannot overwrite an existing installation, and you cannot use an existing directory that does not contain a valid installation. The existing installation must be Sterling B2B Integrator 5.0 or later.

   When the perimeter server is installed, the following message is displayed:

   Installation of Perimeter Service is finished

8. Change to the installation directory.

9. Enter ./startupPs.sh to start the perimeter server.

**Grant Permissions for Specific Activities for a Perimeter Server:
About this task**

Before you begin:

- Remote perimeter server must be installed for a more secure zone.
- Know what permissions you want to grant
- Understand the content of the restricted.policy file. The first two grant sections in the restricted.policy file are required for correct perimeter server operation. Do not modify these sections.

Procedure

1. Install a remote perimeter server, choosing the option for a more secure network zone.

2. At the installation prompt *Is this server in a less secure network than the integration server?*, select **No**, which is the option for a more secure network zone.

3. Navigate to the perimeter server installation directory.

4. Open the restricted.policy file.

5. Add permission lines for each back-end server that you intend to allow the proxy to access. There are commented out examples for each type of server.

   The first two grant sections are required for correct perimeter server operation. Do not modify these sections.

   For example, you can grant permission to a target FTP Server. In the example, servers are configured to listen on the following ports: 33001 (for FTP), 33002 (for HTTP), and 1364 (for C:D). These port numbers can be edited.

   ```
   // To restrict or permit the required Host/Server to communicate with the
   PS, update the "ftphost/htttphost/snode" with that of the Server IP and
   provide the appropriate PORT number where the Server will listen. //
    // For each target FTP Server
    // permission java.net.SocketPermission "10.117.15.87:33001", "connect"; //
   ```

```
     Control connection.
     // permission java.net.SocketPermission "10.117.15.87:lowPort-highPort",
    "connect"; // Passive data connections.
     // 10.117.15.87 indicates IP of the FTP Server for which the permission is
    granted by PS for communicating with client //
     // For each target HTTP Server
     //
     // permission java.net.SocketPermission "10.117.15.87:33002", "connect";
     // 10.117.15.87 indicates IP of the HTTP Server for which the permission
    is granted by PS for communicating with client //

     // For each target C:D snode
     //
     // permission java.net.SocketPermission "snode:1364", "connect";
     //  10.117.15.87 indicates IP of the Connect Direct Node for which
    the permission is granted by PS for communication //
```

6. In the perimeter server installation directory, there is the perimeter server settings file called remote_perimeter.properties. Edit it to change the "restricted" setting to a value of true to turn on restrictions.

7. In the future, any attempt by the perimeter server to access disallowed network resources will be rejected and logged in the perimeter server log written to the perimeter server installation directory.

Perform DNS Lookup on Remote Perimeter Server:
About this task

By default, a perimeter server performs DNS lookup in the main server JVM. If you have limited DNS in your secure area, you can configure the remote perimeter server to look up trading partner addresses in the DMZ.

To enable DNS lookup, add the following property to customer_overrides.properties. Set the value to *true*:

Property Name	Description
perimeter.*.forceRemoteDNS=true	Forces resolution of DNS names at remote perimeter server. Set the value to *true* to configure remote perimeter servers to look up trading partner addresses.

Start Perimeter Servers in UNIX or Linux:
About this task

To start a perimeter server in UNIX or Linux:

Procedure

1. Navigate to the perimeter server installation directory.
2. Enter ./startPSService.sh.

Stop Perimeter Servers in UNIX or Linux:
About this task

To stop a perimeter server in UNIX or Linux:

Procedure

1. Navigate to the perimeter server installation directory.
2. Enter `./stopPSService.sh`.

Using IBM Sterling Gentran:Server for UNIX with Sterling B2B Integrator

Sterling B2B Integrator has the ability to access information located in Sterling Gentran:Server for UNIX. You can configure this immediately following the installation or at a later date.

By configuring Sterling B2B Integrator to run with Sterling Gentran:Server for UNIX, you can:

* View data from your Sterling Gentran:Server trading partners
* Start or stop Sterling Gentran:Server data managers
* View which data managers are running
* View, search, and track Sterling Gentran:Server Life Cycle event records

The following restrictions apply:

* You must have an UNIX or Linux environment
* You must be using one of the following Sterling Gentran:Server for UNIX products:
  – Sterling Gentran:Server for UNIX with Process Control Manager (PCM)
  – Sterling Gentran:Server for UNIX with EC Workbench (ECW)
  – Sterling Gentran:Server for UNIX with Advanced Data Distribution (ADD)

Install and Configure Attunity® Data Connect:
About this task

If you want Sterling B2B Integrator to use the trading partner information in your Sterling Gentran:Server for UNIX, you must install and configure Attunity Data Connect. The Attunity Data Connect software provides JDBC access to the Gentran DISAM database fields where the trading partner information is stored.

To install and configure Attunity Data Connect:

Procedure

1. Install Attunity Data Connect 3.3 or later using the installation procedures provided with the Attunity Data Connect software.
2. Ensure the Attunity Data Connect software runs as expected.
3. Create a new DISAM data source and refresh the Attunity Data Connect server. See the Attunity Data Connect documentation for the procedure.
4. Locate the following metadata description files in the */install_dir*/tp_import/ gentran/disam_mapping directory:

Find this file	Replace this string $YOUR_DATASOURCE with ..	Replace this string $YOUR_GENTRAN with ..
TP_MAST.XML	the name of the data source for your Sterling Gentran:Server for UNIX system	the path to the root directory of Sterling Gentran:Server for UNIX

Find this file	Replace this string $YOUR_DATASOURCE with ..	Replace this string $YOUR_GENTRAN with ..
TRADACOM.XML	the name of the data source for your Sterling Gentran:Server for UNIX system	the path to the root directory of Sterling Gentran:Server for UNIX
ORGANIZATION.XML	the name of the data source for your Sterling Gentran:Server for UNIX system	the path to the root directory of Sterling Gentran:Server for UNIX
TP_MISC.XML	the name of the data source for your Sterling Gentran:Server for UNIX system	the path to the root directory of Sterling Gentran:Server for UNIX

5. Run the Attunity Data Connect Dictionary (ADD) Editor.
6. Select the DISAM data source you created in Step 3.
7. Import the metadata description files you updated in Step 4. See the Attunity Data Connect documentation for the procedure.
8. Verify that the metadata description files are included in the list of tables.
9. Save your changes.
10. Exit the Attunity Data Connect Dictionary (ADD) Editor.

Configure Sterling B2B Integrator To Run with IBM Sterling Gentran:Server for UNIX:
About this task

To configure Sterling B2B Integrator to run with Sterling Gentran:Server:

Procedure
1. Set the umask to 002 in Sterling B2B Integrator.
2. Is Sterling B2B Integrator installed on a different computer than Sterling Gentran:Server?
   - If No, then continue to Step 3.
   - If Yes, then NFS mount the $EDI_ROOT of Sterling Gentran:Server onto the Sterling B2B Integrator host. Continue to Step 3.
3. Verify that the remote shell (rsh or remsh) is working. If you are unable to use the rsh/rmesh shell and can only use ssh shell, change the GS_RSHELL variable located in sandbox.cfg file.
4. Navigate to */install_dir*/bin.
5. Stop Sterling B2B Integrator, enter `./softstop.sh`.

   For more information about the softstop command line options, refer to the performance management documentation.

   Note: If you are in a clustered environment, softstop suspends all the scheduled business processes. It is recommended to run a hardstop when stopping individual nodes in a cluster.
6. Enter `./configGSUnix.sh`. This command starts the configuration.
7. Press **Enter** to continue the configuration.

8. If you currently use Sterling Gentran:Server Life Cycle and want to configure Tracking and Ops, then you need to enter the following the database information:
   - Database vendor
   - Absolute path to the JDBC drivers
   - Database user name
   - Database password
   - Database (catalog) name
   - Database host name using either the IP address or name of the computer where the data base is installed
   - Database port number

9. Is Sterling Gentran:Server installed on the same computer as Sterling B2B Integrator?
   - If Yes, enter EDI_ROOT for the local computer and continue with next step.
   - If No, enter the host name where Sterling Gentran:Server is installed, and the EDI root where Sterling Gentran:ServerSterling Gentran:Server is mounted. Verify the EDI root is installed.

10. Enter the version number for Sterling Gentran:Server.
    - Enter 1 for version 5.3.
    - Enter 2 for version 6.0.

11. If you want to configure Sterling B2B Integrator to view Trading Partner Administration, then you need to enter the following Sterling Gentran:Server database information:
    - Absolute path to the JDBC drivers (for example, /attunity_install_dir/java
    - Database user name
    - Database password
    - Database (catalog) name
    - Database host name where Attunity Data Connect is installed
    - Attunity port number

12. Enter yes and press **Enter** to continue the configuration. After the installation completed, the following message is displayed: *Deployment to the application server successful.*

13. Enter ./run.sh.

IBM Sterling Gentran:Server for UNIX and Sterling B2B Integrator Migration Information: When you are migrating maps and setting up processes in Sterling B2B Integrator from Sterling Gentran:Server for UNIX, Sterling Gentran:Server for UNIX now displays translation errors, if any, in the envelope segments and does not process the erroneous envelope segments.

Sterling Gentran:Server for UNIX 6.0 and 6.1 allowed EDI envelope segments (ISA, GS, ST, SE, GE, IEA, UNB, UNH, UNT, and UNZ) with errors to be processed successfully. This has been corrected and Sterling Gentran:Server for UNIX now issues translation errors when using X12 or EDIFACT deenvelope processes. The functional acknowledgments display the errors in the envelope segments.

The following examples illustrate scenarios where Sterling Gentran:Server for UNIX allowed successful processing of EDI segments with errors:

- Sterling Gentran:Server for UNIX did not display an error when the segment count in the UNT or SE segments did not reflect the correct count of segments in a transaction.
- Sterling Gentran:Server for UNIX did not display an error when the use of segment delimiters in the Map Input properties did not match the data. The user could not specify a delimiter in a map with multiple data files that used different delimiters. The user had to use the Syntax Record and specify the positions of the delimiters.

User Documentation

The user documentation is available from an online documentation site on the web.

Providing the documentation in an online environment allows for frequent updates of content that is based on user feedback and usability.

If you need a printed copy of the documentation, you can print topics of information through your Internet browser, or you can download documents in PDF format, after you add it to a collection on IBM Knowledge Center.

To access the documentation site from within Sterling B2B Integrator or one of its tools, select the help icon. The system must reside on a computer that supports Internet access and an Internet browser.

Improving your access to online documentation:

You can improve your access to online documentation by using several methods.

About this task

After you access the IBM Knowledge Center, you can perform the following tasks:
- Enter a word or phrase and search the entire library for information.
- Move through a hierarchy of contents pages to identify the topic you want to read or print.
- Print topics by using your browser's Print function.
- Add documents to your collection and download them in PDF format.

Uninstall Sterling B2B Integrator
Before you begin

If you have installed Sterling B2B Integrator software using IIM, then perform these steps to unregister Sterling B2B Integrator packages from the IIM registry:
- Launch IIM.
- Click **Uninstall** and select the required Sterling B2B Integrator package (Media, FixPack, or Interim Fix).
- Confirm and click **Uninstall**.

About this task

To uninstall Sterling B2B Integrator from a UNIX or Linux environment:

Procedure

1. Stop Sterling B2B Integrator and wait for shutdown to complete. If you begin removing files before all business processes and Sterling B2B Integrator are stopped, you may be unable to remove Sterling B2B Integrator successfully.

2. Back up the file system and database.

   This step is optional. However, by backing up the file system and database, you are ensured that Sterling B2B Integrator is completely recoverable.

3. Remove the installation directory by entering the following command in the parent directory of your installation directory: `rm -rf` *`install_dir`*

4. If you use an Oracle, Microsoft SQL Server, or DB2 database, these remain intact even after you remove the Sterling B2B Integrator from the server. If you no longer want to reference the data, contact your database administrator about removing unwanted tables and recovering the database space where Sterling B2B Integrator used to reside.

5. Manually remove the JDK:

   a. Navigate into the _uninst subdirectory of your JDK installation directory

   b. Enter `./uninstall.sh`

6. After you remove Sterling B2B Integrator from the server, you can remove Eclipse, and any tools that were downloaded to the desktop, including the following:

   • Map Editor and associated standards

     Refer to the *Map Editor Guide* for information about removing the Map Editor.

   • Graphical Process Modeler

     Refer to the *Graphical Process Modeler Guide* for information about removing the Graphical Process Modeler.

   • Web Template Designer

     Refer to the *Web Extensions Guide* for information about removing the Web Template Designer.

   • (If licensed) MESA Developer Studio plug-ins, including:

     – MESA Developer Studio Software Development Kit (SDK)

     – MESA Developer Studio Skin Editor

     Refer to the *MESA Developer Studio* guide for information about removing MESA Developer Studio.

   • (If licensed) Reporting Services, which requires MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports.

     Refer to the *MESA Developer Studio* guide for information about removing Reporting Services.

Troubleshooting Tips: UNIX/Linux Non-Cluster Environment

Situation	Message or Symptom	Explanation/Resolution
Installing	You encounter errors or problems during installation.	**Explanation** The installation creates several log files that you can use to diagnose problems like the failure of an installation. **Resolution** Examine the log files generated during installation: • ant.install.log (in the *install_dir* directory) • *install_dir*/PreInstallSI.log
Installing	When you entered an absolute path during installation, a message indicated that the command was not found.	**Explanation** You entered an incorrect path. Check the information entered. **Resolution** Enter the correct path.

Installing a desktop tool or resource	Cannot download any of the following:
	• Map Editor and associated standards
	• Graphical Process Modeler
	• Web Template Designer
	• (If licensed) MESA Developer Studio plug-ins, including:
	  – MESA Developer Studio Software Development Kit (SDK)
	  – MESA Developer Studio Skin Editor
	• (If licensed) Reporting Services, which requires MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports.
		Explanation
		
		When you install Sterling B2B Integrator, system files are created that contain an internal IP address. If you install Sterling B2B Integrator behind a firewall, and your firewall is configured to accept an external IP address from a client computer, you may not be able to download the desktop tools and resources. The firewall will reject the internal IP address from a client residing outside of the firewall.
		
		Resolution
		
		Modify the system files that contain the invalid IP address. Follow these steps:
		1. Navigate to /*install_dir*/install/bin.
		2. Stop Sterling B2B Integrator.
		3. Enter the following command followed by the external IP address:
		`./patchJNLP.sh external_IP_address`
		4. Restart Sterling B2B Integrator.

Situation	Message or Symptom	Explanation/Resolution
Installing	Memory and ulimit errors.	**Explanation** The installation fails with memory and ulimit errors. **Resolution** • Refer to the *Viewing and Editing Performance Configuration Settings* in the *Performance Management* documentation. Modify your memory setting accordingly. • Refer to the *Operating System Configuration Checklist* and tune the ulimit settings.
Installing (HP-UX 11.31)	When entering your email address the @ key is not recognized.	**Explanation** The @ key is being mapped to kill or eol, it needs to be mapped to another character. **Resolution** This resolution only applies to HP-UX 11.31. Map the @ key to another character. Note: If you need want to see what the key is mapped to, use the stty -a command.
e-Invoice Upgrade: Oracle Add Constraint Error	When you upgrade Sterling e-Invoicing and are using an Oracle database, if the upgrade fails with the error message `name is already used by an existing object`, this occurs because the default behavior for the "drop constraint" command changed in Oracle 10.	**Explanation** The index that is used to support the constraint is now only removed if the index was generated by the `create constraint` command. The indexes for Sterling e-Invoicing are always generated from constraints during an install. If you receive this error during a Sterling e-Invoicing upgrade, it is because of how the database was restored, the version of Oracle you are using, and because the Oracle `imp` command exported the indexes and constraints separately. There is no way to determine when the `imp` command will not add a create index command to the export file if it was generated by a constraint – but if it does add the command, the database restore process loses the association of the constraint and its underlying index. The database script that runs during a Sterling e-Invoicing upgrade executes two steps: 1. First, it drops the unique constraint so the next step can redefine it using additional columns. However, the drop constraint command does not remove the underlying index if the association with its index was lost. 2. The next command that redefines this constraint requires a different index definition, but in this scenario the name of the index the constraint wants to use already exists, which causes the `name is already used by an existing object` error. **Resolution** If you receive this error message, the solution for this problem is to drop the index and rerun the Sterling e-Invoicing upgrade. The drop index command you should use is: `drop index UNQ_EINV_CANON`

Situation	Message or Symptom	Explanation/Resolution
Apply a fix pack or Upgrade	The */install_dir/* install/ installed_data directory is created (if clustered, on each node) during an upgrade or when applying a fix pack. This directory can become very large and take up needed space on the file system.	**Explanation** The information in this directory is used when applying a fix pack or upgrading, but is not required afterward. The deployment/cleanup tasks for the upgrade or fix pack do not remove this directory. **Resolution** The directory can be manually removed to increase the available space for the file system: 1. Navigate to */install_dir*/install 2. Enter `rm -r installed_data`

iSeries Installation (V5.2.6 or later)

You may follow different installation and upgrade scenarios when you install and upgrade Sterling B2B Integrator in an iSeries environment.

Installation Scenarios

Important: Review the following Sterling B2B Integrator installation and upgrade scenarios.

Scenario	Instructions
Version 5.1.x is installed and it needs to be upgraded to V5.2.6.	See "Upgrading (V5.2.6 or later)" on page 320
Version 5.2.x is installed and it needs to be upgraded to V5.2.6.	See Applying a fix pack (V5.2.6 or later)
Version 5.2.6 is being installed as the base release.	Review this document and use the installation instructions.

Prerequisite knowledge for installation in the iSeries environment

The installation of Sterling B2B Integrator requires background knowledge in different areas.

Before you begin the installation, you must be knowledgeable on the following topics:
- Application servers
- Database administration
- *System Requirements* for this release of Sterling B2B Integrator.

Intended audience

This document can be used by different members of your organization.

This document is intended for use by:
- System administrators
- Installation engineers
- Database administrators.

Assumptions for this guide

The procedures in this guide are accurate as of the publication date and are specific to this version of the document.

Install the Software

Installation checklist for the iSeries environment:

Use this checklist to install Sterling B2B Integrator in an iSeries environment.

The checklist contains the following information:
* Brief descriptions for tasks (detailed procedures are provided after the checklist)
* Information that you need to gather to complete the installation

When you create a name, such as an account name, permissions name, profile name, or database name, follow these conventions:
* The first character must be alphabetic
* The remaining characters can be alphanumeric, but it's best to avoid special characters
* Do not use spaces or apostrophes.

Tip: You might want to make a copy of the following checklist and use it to record the information you collect.

#	iSeries Installation Checklist	Your Notes
1	Review your IBM contract to determine what software you licensed. You need to know this *License Information* so that you can select the correct components/features to install.	
2	Use the system requirements to verify that your system hardware and software meet the requirements that are specified for this release.	
3	For systems with multiple IP addresses, verify that the IP address on which Sterling B2B Integrator exists is accessible by any client computer that is running a browser interface. **Attention:** If you do not verify the IP address, your system might not operate properly after you install Sterling B2B Integrator. A good test is to ping the IP address from your iSeries command line.	
4	If you are using a non-English environment, confirm that you are using the appropriate character set.	
5	Configure the system to view Sterling B2B Integrator files by using Windows Explorer.	
6	Map a network drive to your working directory.	
7	Specify the QCCSID (Coded Character Set) for this installation.	
8	Record the collection name for the database.	
9	Record the system passphrase.	

#	iSeries Installation Checklist	Your Notes
10	Record the administrative email address. This address is where system alerts messages are sent.	
11	Record the SMTP Server IP address. This address is where alert messages are sent.	
12	Record the Initial Port Number.	
13	Record the Hostname (catalog name) on which you plan to install the software.	
14	Determine the host IP address for Sterling B2B Integrator. This step is required even if you have only 1 IP address for your system.	
15	Create the Sterling B2B Integrator user profile and the associated password. Be sure to record the user password so you can enter it during installation.	
16	Set the JDK for your user profile. Create a .profile file in the /home directory for your user profile that will point to the J9 JDK 1.7 64-bit JDK. If you have multiple JDKs loaded on your system, you need to point your user profile to correct version of the JDK. Verify that your user profile points to the correct JDK.	
17	Verify that your user profile is pointing to a job queue in a subsystem.	
18	Record the path to the Sterling B2B Integrator JAR file. The JAR file can exist in any directory on your system. During installation, you use this directory, but this directory is not the final directory where Sterling B2B Integrator exists.	
19	Record the directory name where you plan to install the software. The Sterling B2B Integrator installation directory must be a new directory and cannot already exist. A large subdirectory tree is created under this directory. During installation, this directory is referred to as *install_dir*.	
20	Record the path to the Core License file (Core_License.xml).	
21	Download the JCE distribution file.	
22	Install the Sterling B2B Integrator software.	

The Sterling B2B Integrator installation program automatically sets the umask to 002 during the installation. However, iSeries system administrators should consider

placing an appropriate **umask** command such as **umask 002** in their global or user login script because the default of 000 might allow many IFS files to be world-writable. Consult the IBM iSeries Information Center for more information on the **umask** command and customizing your Qshell environment.

License information:

A separate license is required for each Sterling B2B Integrator feature that you purchased. During installation, you must choose the license files according to what you purchased. Product licenses do not require an activation key.

IBM assumes customers will only install and use the products they purchased. IBM reserves the right to inspect installs for compliance at any time.

After the installation finishes, if you determine that you need to modify licenses files, see "License modifications" on page 58.

Product Licenses for Sterling B2B Integrator

Sterling B2B Integrator Standard and Enterprise Edition includes:
* MESA Studio
* eInvoicing
* Report Services
* all services and adapters not listed below

Sterling B2B Integrator Standard and Enterprise Financial Edition includes everything listed above plus:
* CHIPS
* SWIFTNet
* NACHA ACH CTX adapter
* FEDWIRE
* Fin Serv XML standard
* FIPS Mode
* Image Cash Letter service
* EBICS

Verification of the system requirements:

Before you begin the installation, verify that your system meets the hardware and software requirements that are specified for this release.

The hardware requirements that are listed in the *System Requirements* are the minimum requirements. Your system requirements might exceed these requirements if you are running other applications on the same machine as Sterling B2B Integrator.

The installation strictly enforces the following system requirements:
* Operating system version must match requirement exactly.
* The minimum patch level for the operating system is enforced, but you can apply higher patch levels.
* JDK version must match requirement exactly.

- The disk space is a minimum for the installation. The system must be separately sized to handle whatever load is going to be put on the system.
- Database version must match exactly.
- JDBC driver version supports exact matches and wildcard matches.

If any of these requirements are not met, the installation fails. If the installation fails, review the installation log for a list of non-compliant items.

Viewing files in an iSeries environment:

In the iSeries environment, you must configure your system to view Sterling B2B Integrator files with Windows Explorer.

About this task

Use the NetServer component of IBM i to set up file shares that are accessible through Windows networking. You must set up a file share to a working directory in your iSeries Integrated File System (IFS).

Mapping a network drive (iSeries):

In the iSeries environment, you must map a network drive to the working directory for Sterling B2B Integrator.

About this task

For more information, refer to the documentation on the IBM website.

Specifying the QCCSID (iSeries):

In the iSeries environment, you must specify the QCCSID (Coded Character Set) for Sterling B2B Integrator.

About this task

Refer to the IBM National Language Support Guide for valid coded character sets. It is recommended that you use the coded character set 037 for the United States English system.

Procedure

To specify the QCCSID:
1. From an iSeries command line, enter `DSPSYSVAL SYSVAL(QCCSID)`.
2. Determine if the QCCSID set to 65535.
3. If the QCCSID value is set to 65535, then perform one of the following actions:
   - Change the CCSID to a specific coded character set.
     Enter `CHGSYSVAL SYSVAL(QCCSID) VALUE(xxx)`, where xxx represents your coded character set and then IPL your iSeries.
   - Keep the QCCSID at 65535 and specify a specific CCSID other than 65535 when you create your Sterling B2B Integrator user profile.
4. If the QCCSID value is not set to 65535, continue with the next installation or upgrade task.

DB2 database configuration (iSeries):

In an iSeries environment, Sterling B2B Integrator uses the DB2 database that is included in the IBM i operating system. The installation process creates a new collection for Sterling B2B Integrator.

Before you install the Sterling B2B Integrator software, you must determine and record the collection name and the catalog name:

- The *collection name* is the name of the collection (or library) that contains the database, journal, and journal receiver for your Sterling B2B Integrator system. This collection must not yet exist. Example: SI*xx*db, where *xx* represents the version you are installing.
- The *catalog name* is the database name of your iSeries system, as defined by the **WRKRDBDIRE** command. Generally, this value is the name of your system.

All database files are required to be journaled when those files are being used by the translator in Sterling B2B Integrator. If your application files are not currently journaled, and you plan to access these files through Sterling B2B Integrator, refer to the IBM manuals for instructions on journaling physical files.

Sizing

Database sizing is designed to give you estimates of the database growth and to help you plan the disk requirements.

Capacity Planning

There are many factors to consider when you are estimating the amount of disk space that is required for Sterling B2B Integrator. As a result, trying to consider all growth factors is impractical because the user might not know the answers to many questions that are required to do a detailed forecast. Over the years, the cost of disks dramatically decreased, while their capacity and speed increased. How information system managers order disk capacity also changed from purchasing disk arrays that are dedicated to a particular database server and project to the concept of SANS.

Sterling B2B Integrator provides a way to estimate your initial disk requirements. Adjust your estimates to the confidence that you have in your data estimates when you are making the final purchase decision. After the initial purchase and production deployment, track the disk growth for future purchase forecasts.

Tracking and Estimating Future Disk Requirements

Track your actual database storage usage and the number of database records regularly. Correlating these two metrics helps you plan your future disk requirements. Moreover, determining the average space that is used for each order line or shipment line helps you accurately predict your future growth requirements.

Determination of port numbers (iSeries):

During installation, you are prompted to specify the initial port number.

Use the following port number guidelines:

- A range of 200 consecutive open ports between 10000 - 65535 are required for this installation.
- The initial port number represents the beginning port number in the range.
- Make sure that port numbers in the port range are not used by any other applications on your system.

After your installation, refer to the *install_dir*/install/properties/sandbox.cfg file for all of the port assignments.

In an iSeries environment, you can also view the port numbers currently in use on your system by using one of these methods:
- Select from the **iSeries Navigator Network** > **TCP/IP Configuration > Connections.**
-
  Enter WRKTCPSTS on an iSeries command line and select Option 3 (Work with TCP/IP connection status). Press F14 to sort the port numbers in numerical sequence.
-
  Enter NETSTAT *CNN on an iSeries command line and press Enter. Press F14 to sort the port numbers in numerical sequence.

Creating a user profile (iSeries):

In the iSeries environment, you must create a user profile for accessing the Sterling B2B Integrator databases. You use this user profile when you enter the installation command.

About this task

If your system value **QCCSID** is set to 65535, then set the **CCSID** parameter to a specific coded character set other than 65535 on the **CRTUSRPRF** command. See the IBM National Language Support Guide for valid coded character sets. For more information about creating user profiles, see the operating system documentation .

The job description that is assigned to the user profile must have a job queue defined that allows at least 10 active jobs. If the maximum number of active jobs is less than 10, Sterling B2B Integrator does not install correctly. This guideline also applies to starting Sterling B2B Integrator after the installation.

Setting the JDK for your user profile:

To set the JDK for your user profile, you must create a .profile file in the /home directory for the user.

Sterling B2B Integrator V5.2.6 or later on iSeries requires the J9 JDK 1.7. Create the .profile file to set the JDK to J9 JDK 1.7.

Creating a .profile File:

A .profile file includes a pointer to the J9 JDK 1.7 directory that you can use in Sterling B2B Integrator.

Procedure

To create a `.profile` file in an iSeries environment:

1. Log on with the Sterling B2B Integrator user profile.
2. Create a home directory for the Sterling B2B Integrator user profile. From an iSeries command line, enter `MKDIR /home/`*appuser*, where *appuser* represents the Sterling B2B Integrator user profile.
3. Type `EDTF` and press F4.
4. Type `/home/`*appuser*`/.profile` and press Enter. An edit session is displayed.
5. On the first line, type the following command:

   `export JAVA_HOME=/QOpenSys/QIBM/ProdData/JavaVM/jdk70/64bit`

   Important: Make sure that there is not a space in the first position of this line. If there is a space, the system does not recognize the proper JDK and the installation might fail.
6. Press F2.
7. Press F3.
8. Enter `WRKUSRPRF` to verify that the Sterling B2B Integrator user profile home directory is pointing to the `/home/`*appuser* directory.
9. Verify that the user id is pointing to the correct JDK:
   a. From an iSeries command line, type `qsh` to enter Qsh mode.
   b. Type `java -version`.
   c. Press Enter.

   Verify that the information listed reflects the JDK that you are using.

Verifying the user profile job queue requirements (iSeries):

A user profile must point to a job queue in a subsystem that meets certain requirements.

About this task

Verify that your user profile is pointing to a job queue in a subsystem that meets the following requirements:

- The subsystem has at least 4 GB (8 GB recommended) of dedicated memory in a private (non-shared) pool.
- The **Max Active** (maximum number of threads) parameter is set to at least 2000. This information can be viewed on the WRKSYSSTS screen and is broken down by subsystem. If you do not know which system pool your subsystem is defined to, press **F14**.
- The maximum jobs in the subsystem are set to `*NOMAX`.
- The **Max Active** parameter that is defined in the Job Queue is set to `*NOMAX`.

Downloading the JCE distribution file:

The Java Cryptography Extension (JCE) is a set of Java packages from IBM that provides a framework and implementations for encryption, key generation and key agreement, and Message Authentication Code (MAC) algorithms.

About this task

If you are installing Sterling B2B Integrator outside of the United States, check to see if you can get the JCE unlimited strength jurisdiction policy files. The unlimited strength jurisdiction policy files can be exported only to countries to which the United States permits the export of higher-level encryption.

Procedure

To obtain the JCE distribution file:
1. Browse to the Unrestricted SDK JCE policy files website.
2. Enter your IBM ID and password. If you do not have an IBM ID, follow the IBM registration instructions.
3. Click **Sign in**.
4. Select the **Files for Java 5.0 SR16, Java 6 SR13, Java 6 SR5 (J9 VM2.6), Java 7 SR4, and all later releases** check box and click **Continue**.
5. Review your personal information and the license agreement.
6. Select the **I agree** check box and click **I confirm** to continue.
7. Click **Download now**.
8. Save the `unrestricted.zip` file to your system.
9. Record the directory and the `.zip` file name. You need this information during the installation process.

Determining the IP address (iSeries):

The installation of Sterling B2B Integrator on iSeries requires an IP address.

Procedure

To determine the IP address of your iSeries installation:
1. Enter `WKRTCPSTS *IFC`.

   If this command brings up multiple IP addresses, another way to check your IP address is to ping your catalog name from an iSeries command line. This method displays the resolved IP address for your system.
2. Record the IP address to use for the Sterling B2B Integrator installation.

Translator requirements (iSeries):

All database files are required to be journaled when they are used by the translator in Sterling B2B Integrator.

If your application files are not currently journaled, and you plan to access these files through Sterling B2B Integrator, refer to the IBM manuals for instructions on journaling physical files.

Untarring the Sterling B2B Integrator File:

The installation of Sterling B2B Integrator requires that you first untar the installation jar file.

Procedure

Before you install the Sterling B2B Integrator product that you downloaded, you must perform the following steps to untar the jar file:

1. After downloading the file, type `qsh` from an iSeries command line and press **Enter**.
2. Type `set` and press **Enter**. A list of variables is displayed on the screen. You are looking for `QIBM_CCSID`. It will look like `QIBM_CCSID=0`. Record the value of this parameter.
3. Type `export QIBM_CCSID=819` and press **Enter**.
4. Change to the directory where the tar file is located.
5. Type `set` to verify that the **QIBM_CCSID** parameter is set to 819.
6. Type `tar –xvf` *name.of.tarfile*`.tar` and press **Enter**.
7. After it has performed the untar, set the **CCSID** parameter back to the original value.
8. Type `export QIBM_CCSID=0` and press **Enter**, where the 0 represents the value in step 2.
9. Type `set` and press **Enter** to verify the **QIBM_CCSID** parameter is set to what it was in step 2.
10. You need to verify that the untar was successful. At this point you will still be in the directory where the `SI.jar` file was untarred. Type `jar –tf SI.jar` and press Enter. If you get file names to scroll up on the screen, the untar worked. If you get the $ prompt back with no additional information, then the untar was not successful and you will have to untar again.

Results

You are now ready to continue.

Installing in an iSeries environment:

You can install Sterling B2B Integrator in an iSeries environment.

Before you begin

CAUTION:
Sterling B2B Integrator must be installed behind a company firewall for security purposes. For more information about secure deployment options, see the security topics in the Sterling B2B Integrator Knowledge Center.

- Complete the "Installation checklist for the iSeries environment" on page 288.
- Download Sterling B2B Integrator and decompress the downloaded file to an empty directory. Use this directory wherever there is a reference to the installation source directory in the following instructions.

  Important: To decompress the files, see "Untarring the Sterling B2B Integrator File" on page 295.
- If you are using the EBICS Banking Server application with Sterling B2B Integrator, the data encryption for storage within the installation location is not supported.

About this task

You can use only the batch mode to run this installation. You cannot use the interactive mode.

Procedure
1. Depending on the location of the installation source directory, choose one of the following methods to copy the installation JAR file to the iSeries server:
   - If the installation source directory is on your computer, copy or FTP the Sterling B2B Integrator JAR file from the installation source directory to the absolute path in the IFS root or QOpenSys file system.
   - If the installation source directory is in your iSeries, enter the following command:

     `cp /qopt/Sterling Integrator.jar absolutePath/Sterling Integrator.jar`

     Record the absolute path.
2. Copy the `instsijar.savf` file from the iSeries directory on the installation source directory to the mapped network drive.
3. Determine whether a save file that is named `INSTSIJAR` exists in QGPL on your iSeries server.
   - If the `INSTSIJAR` file exists, clear the save file by entering the command `CLRSAVF FILE(QGPL/INSTSIJAR)`.
   - If the `INSTSIJAR` file does not exist, enter the command `CRTSAVF FILE(QGPL/INSTSIJAR)` to create a save file on your iSeries server.
4. Copy the `instsijar.savf` file that you copied from the installation source directory to the save file that is created in QGPL. Enter the following command:

   ```
   CPYFRMSTMF
   FROMSTMF('/directory/filename of the savf'/) TOMBR('/QSYS.LIB/QGPL
   .LIB/INSTSIJAR.FILE') MBROPT(*REPLACE)
   CVTDTA(*NONE)
   ```
5. Enter the following command to restore the installation objects:

   ```
   RSTLIB SAVLIB(INSTSIJAR) DEV(*SAVF) SAVF(QGPL/INSTSIJAR) MBROPT(*ALL) ALWOBJDIF(*ALL)
   ```
6. Log in to your iSeries using the user profile you created during preinstallation.
7. Enter the command `ADDLIBLE LIB(INSTSIJAR)` from an iSeries command line to add the installation programs to your library list.
8. Enter the command `INSTSIJAR` and press **F4** to prompt the command. The system displays the list of configuration parameters that are needed to install Sterling B2B Integrator.
9. Refer to the installation checklist and enter the following configuration parameters.
   - Collection name
   - Upgrade from the prior version (default is No, because this installation is a new installation)
   - System passphrase (enter and verify)
   - Administrative email address
   - IP address for SMTP Server
   - TCP/IP port number
   - Catalog name
   - Host IP address

- Sterling B2B Integrator user profile
- Sterling B2B Integrator user password
- Full path to the Sterling B2B Integrator JAR file

10. Press **Page Down** and enter these parameters:
    - Full path to the Sterling B2B Integrator installation directory
    - Full path to the core license file
    - Full path to the JCE distribution file

11. Select **License/Features**, and enter YES to select:
    - Sterling B2B Integrator, Sterling File Gateway, or both
    - NIST 800-131a Compliance Mode (choose ***OFF** or ***STRICT**)
    - FIPS Module
    - AS2 Edition Module
    - Financial Services Module
    - EBICS Banking Server Module

    Select only the licenses/features that are defined by your IBM contract. If you are unsure which to select, the installation can proceed without making a selection and completes successfully. Startup and operation of the software, however, requires one of the licenses to be selected. See "License modifications" on page 58 to apply licenses after the installation.

12. Verify the parameters and press **Enter**. The installation runs in batch mode. The installation process takes 2 - 3 hours to complete. The installation time depends on the size of your iSeries server. Monitor the installation process to verify that no Java exception errors are generated.

    To monitor the progress of the installation, enter the WRKLNK command to view the log file (`gisinstall.log`). This file exists in the same directory where you placed the installation JAR file. In addition to the job that you submitted, various BCI jobs, command shells, and JVMs appear and disappear in your batch subsystem. This processing is normal.

13. (Optional, but recommended) Check IBM Fix Central to see if further fix packs or interim fixes are available. If so, download and install as needed. See "Installing a fix pack or interim fix" on page 307 for instructions.

What to do next

Check the `InstallSI.log` file to verify that all of the components were installed properly.

Installing Sterling B2B Integrator version 5.2.6 on iSeries as a fix pack:

You can install Sterling B2B Integrator V5.2.6 as a fix pack.

Before you begin

To run Sterling B2B Integrator on iSeries, you must have a V7R1 or V7R2 iSeries operating system with JDK 1.7 installed. Before you apply the fix pack, you might need to take one of following actions:

- If you are running the Classic JDK, you must move your instance of Sterling B2B Integrator to a V7R1 or V7R2 iSeries operating system.

    Then, update to JDK 1.7 with the **UPDATEJDK** command. See "Updating your JDK on iSeries" on page 313.

- If you are running the J9 JDK 1.6 version on a V6R1 iSeries operating system, you must move your instance of Sterling B2B Integrator to a V7R1 or V7R2 iSeries operating system.

  Then, update to JDK 1.7 with the **UPDATEJDK** command. See "Updating your JDK on iSeries" on page 313.
- If you are running the J9 JDK 1.6 version on a V71 iSeries operating system, you must update to JDK 1.7 with the **UPDATEJDK** command. See "Updating your JDK on iSeries" on page 313.

About this task

You must run this installation in interactive mode.

Procedure

1. Download the fix pack from the installation media.
2. Stop the system.
3. Perform a full backup of the installation directory, including all subdirectories.
4. Perform a backup of the database.
5. If you edited any property files, ensure that the associated `.properties.in` files have the most current changes. Property files are overwritten with the contents of the associated `.properties.in` files during the fix pack installation.
6. Sign on with your user profile and enter QSH (Qshell mode).
7. In QSH, open the `/install_dir/bin` directory and enter the following command:

   `cd /install_dir/bin`
8. Enter the following command:

   `./InstallService.sh path/patch_SI_fix pack_number.jar`

   where:

   > `path` is the fully qualified directory where the fix pack jar resides

   > `fix pack_number` is the fix pack number

   If the fix pack attempts to modify the database schema and the modification fails, you receive an error message about the failure. The message provides the error message code from the database and the SQL command that failed. The failure information is also logged to the `system.log` and `InstallService.log` files in the `/install_dir/install/logs` directory.

   Attention: Running **InstallService.sh** removes any previously installed interim fix to prevent conflicts with what is being installed.
9. Press Enter to continue.

   Information about the fix pack is displayed. After the fix pack is applied, the following message is displayed:

   `Deployment to application server successful`

   When the **$** is displayed, the fix pack process completes.
10. Start the system.

Validate the Installation

Installation validation checklist:

As part of the installation, you need to run validation tests to ensure that the software installation was successful.

Complete the following tasks:

#	Validate Installation Checklist	Your Notes
1	Start Sterling B2B Integrator.	
2	Access Sterling B2B Integrator.	
3	Validate the installation.	
4	Stop Sterling B2B Integrator.	

Starting Sterling B2B Integrator (iSeries):

The startup of Sterling B2B Integrator after installation requires several steps.

Before you begin

If you are starting Sterling B2B Integrator after upgrading from version 5.1.0.4, change the values of the following properties in the `centralops.properties` file to 600. This action prevents the start command from timing out before Sterling B2B Integrator starts. The `centralops.properties` file is in the *install_dir*/install/ properties directory.

- `OpsServer.commandTimeout`
- `PassPhrase.urlTimeout`

Procedure

To start Sterling B2B Integrator in an iSeries environment:

1. Sign onto iSeries with your Sterling B2B Integrator user profile.
2. Submit a batch job by entering the following command:

   ```
   SBMJOB CMD(QSH CMD('umask 002 ; cd install_dir/bin ; ./run.sh'))JOB(SIMAIN)
   ```

   The job queue to which you submit the command must allow at least 10 active jobs. If the maximum number of active jobs is less than 10, Sterling B2B Integrator does not start completely.

   To reduce keying errors at startup, create a command language (CL) program similar to the following example:

   ```
   PGM
   SBMJOB CMD(QSH CMD('umask 002 ; cd install_dir/bin ; ./run.sh')) +
   JOB(SIMAIN)
   ENDPGM
   ```

3. Wait for the startup to complete. This process takes 10 - 15 minutes.

   Startup creates a spool file. When the startup is finished, open the QPRINT spool file and check the end of the file for a message about how to connect to Sterling B2B Integrator. For example, you might see the following type of message:

   ```
   Open your Web browser to http://host:port/dashboard
   ```

   where *host:port* is the IP address and port number where Sterling B2B Integrator exists on your system.

   Make a note of the address so you can access Sterling B2B Integrator later. It might take several minutes for Sterling B2B Integrator to be available from the web browser, even after the URL message is displayed.

4. Optional: To verify that Sterling B2B Integrator started normally and completely, view the system by using the WRKACTJOB command.

Verify that the SIMAIN job ended and there are at least four QP0ZSPWP jobs (of yours) left running in your Sterling B2B Integrator batch subsystem.

5. Prepare your browser to log in to Sterling B2B Integrator. Configure your browser so that there is direct connection between the web browser and iSeries. Do not configure the browser to use any proxy server between you and iSeries (unless it is a requirement of your network).

Accessing Sterling B2B Integrator:

You can access Sterling B2B Integrator through a web browser.

Procedure

1. Open a browser window and enter the address that is displayed at the end of the start.
2. On the login page, enter the default user ID and password. The default login is at an administrative level. One of your first tasks as an administrator is to change the administrative password and to register other users with other levels of permission.

Validating the installation with a sample business process:

You can validate the installation by testing a sample business process.

Procedure

1. From the **Administration Menu**, click **Business Process** > **Manager**.
2. In the **Process Name** field, type `Validation_Sample_BPML` and click **Go!**
3. Click **execution manager**.
4. Click **execute**.
5. Click **Go!** The `Status: Success` message is displayed on the upper left side of the page.

Stopping Sterling B2B Integrator (iSeries):

Stopping Sterling B2B Integrator on iSeries requires several steps.

Procedure

To stop Sterling B2B Integrator in an iSeries environment:

1. Sign on to iSeries with your Sterling B2B Integrator user profile.
2. Enter the following commands:
   ```
   QSH
   cd /install_dir/bin
   ./hardstop.sh
   ```
   To reduce keying errors at shutdown, create a command language (CL) program similar to the following example:
   ```
   PGM
   QSH CMD('cd /install_dir/bin ; ./hardstop.sh')
   ENDPGM
   ```
3. Wait for shutdown to complete.

   The length of this process is determined by how many temporary objects must be cleaned up and how many spool files must be created.

To ensure that you do not restart Sterling B2B Integrator before shutdown is complete, monitor shutdown through either the `ps` command in Qshell or the `WRKACTJOB` display. Verify that the five QP0ZSPWP jobs are complete and disappear.

4. Enter the `./stopDAVServer.sh` command to stop the WebDAV server.

Post Installation Configuration

Postinstallation configuration checklist in an iSeries environment:

After you install Sterling B2B Integrator on iSeries, you must configure several items.

After you install Sterling B2B Integrator, you need to complete some postinstallation configuration. Complete the items that are listed in the postinstallation configuration checklist:

Item	Postinstallation Configuration Checklist	Your Notes
1	Upon installation, several default user accounts are automatically created to get you started. For security purposes, the system administrator should update all default user account passwords immediately after installation is completed. See "Changing default user account passwords" on page 40.	
2	Download Sterling B2B Integrator tools.	
3	Determine if you need to modify any property files.	
4	Change the Network Interface Bindings.	
5	"Support for other languages" on page 50	

Changing default user account passwords:

When you install Sterling B2B Integrator, several default user accounts are automatically created to get you started. One of the first actions you must take after installation is to update these accounts with unique passwords, because the default ones can be known by all Sterling B2B Integrator customers.

About this task

Default user account passwords are preset at installation. For security purposes, the system administrator should update all default user account passwords immediately after installation is completed.

Default user accounts are listed below in the same order as they appear in the UI under **Accounts > User Accounts > List All**. You can use this table to track the user accounts you want to update.

User Account Name	Update password
MBX_daemon	
admin (*)	
aft_user (*)	
anon	

User Account Name	Update password
as2_user	
commandlineuser	
dash_oper (*)	
dash_part (*)	
dash_prtspon (*)	
dash_sponsor (*)	
fg_architect	
fg_operator	
fg_provisioner	
fg_sysadmin (*)	
gmbx_user	
ja_turbine	
jane	
jane_doe	
joe_employee	
joe_manager	
joe_supplier	
john	
sd_buyer	
sd_supplier	
turbine	
ws_buyer	
ws_director	
ws_employee	
ws_finance	
ws_hr	
ws_manager	
ws_purchaser	
ws_supplier	

(*) denotes a super user

To change the password for a user account, perform the following tasks.

Procedure
1. Log into Sterling B2B Integrator using ID = `admin` and password = `password`.
2. Go to **Accounts > User Accounts**. Under the List section click **Go!** All default user account names are listed.
3. Click **Edit** next to the user account name you want to update the password for.
4. In the New Password and Confirm New Password fields, enter a new, secure password for this User ID.

   Note: Passwords must be at least six characters long.
5. Click **Save** and **Finish**.

What to do next

Repeat steps 3 - 5 for all user account names you want to update.

Download of the Sterling B2B Integrator tools:

After you install Sterling B2B Integrator, you can install tools like the Map Editor and the Graphical Process Modeler (GPM).

Sterling B2B Integrator includes tools that run on a desktop or personal computer. After you install Sterling B2B Integrator, you can install the following tools:
* Map Editor and associated standards

  Note: The Map Editor requires a 32-bit JDK. This JDK is not provided with the product download or media. For more information, see *System Requirements*.
* Graphical Process Modeler (GPM)
* Web Template Designer
* (If licensed) MESA Developer Studio plug-ins, including MESA Developer Studio Software Development Kit (SDK) and MESA Developer Studio Skin Editor
* (If licensed) Reporting Services, which require MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports

Attention: Conflicting IP addresses can cause problems when you download a desktop tool.

Properties files configuration in an iSeries environment:

Properties files contain properties that control the operation of Sterling B2B Integrator.

For example, the `REINIT_DB` property in the `sandbox.cfg` file controls whether a database is initialized when you install Sterling B2B Integrator.

By modifying the values of these properties, you can customize Sterling B2B Integrator to suit your business and technical needs. Most properties files are in the *install_dir*`/install/properties` directory.

After you install Sterling B2B Integrator, most properties files and scripts do not need any further configuration for basic operation. However, if you want to customize any specific operations, for example a different logging level, you need to edit (or in some cases, create) certain property or `.xml` files.

Before you change any property files, see the properties file documentation for general information about how to edit properties files.

You might need to make specific properties files changes after an installation in the following areas:
* LDAP user authentication
* Prevention of cross-site script vulnerabilities
* Logging configuration
* Process-specific property file settings

Changing the network interface bindings:

To increase the security of the Administrator Console user interface, Sterling B2B Integrator binds only to specific network interfaces.

About this task

After installing, if the URL returns the error message `Page cannot be displayed`, you can adjust the property settings to correct the problem.

Procedure

To change the network interface bindings:
1. On the server where Sterling B2B Integrator resides, edit the `noapp.properties_platform_ifcresources_ext.in` file.
2. Locate the **admin_host** parameter:
   - Where *hostname1* is the name of primary network interface, which is the one given highest priority by Sterling B2B Integrator.
   - Where *localhost* is the name of the network interface on the server where Sterling B2B Integrator resides.

   `admin_host.1 = hostname1`

   `admin_host.2 = localhost`
3. If no interface is being displayed, edit *hostname1* so that it correctly identifies the primary network interface that accesses Sterling B2B Integrator.
4. If an additional network interface needs to access Sterling B2B Integrator, add an additional `admin_host` entry. For example:
   - `admin_host.1 = hostname1`
   - `admin_host.2 = localhost`
   - `admin_host.3 = hostname2`
5. Stop Sterling B2B Integrator.
6. Open the *install_dir*/install/bin directory.
7. Enter the `setupfiles.sh` command.
8. Restart Sterling B2B Integrator.

Support for other languages:

The Sterling B2B Integrator user interface includes support for several languages.

Attention: Sterling B2B Integrator product code is designed to work with Latin based English only input. The use of any other type of input might have uncertain results and is not supported.

The Sterling B2B Integrator user interface includes support for the following languages:
- French
- German
- Italian
- Japanese
- Korean
- Polish
- Portuguese (Brazilian)

- Simplified Chinese
- Traditional Chinese
- Dutch

Four of these languages involve expanded Unicode character sets:

- Japanese
- Korean
- Simplified Chinese
- Traditional Chinese

The implementation of these languages in your environment might require the addition of new Unicode fonts on your server:

If...	then...
Sterling B2B Integrator is on a server that already supports these languages	You do not need to install any additional fonts.
You are installing on a server that is only setup for the Latin alphabet and you have users who need to view the Sterling B2B Integrator user interface in any of the Asian languages	You need to have the fonts for these languages installed.

A way to test the implementation of a language is to create a user with one of the new languages and setup their browser to use that language as it's primary language. Log in to the system and review the user interface. If you see a mixture of English and the new language, your configuration is not correct. You need to verify that the browser is set up correctly and review the fonts that are installed on the server.

The installation of more fonts/languages on the server should be done in coordination with your technical support team. Be sure to include a Unicode Sans Serif font on your server.

Important: While multiple languages are supported, a user account should be configured to use one specific language to avoid user interface display issues.

System Maintenance

Determining the need for a fix pack in an iSeries environment:

Fix packs contain cumulative fixes for a specific version of Sterling B2B Integrator.

About this task

Fix packs are available on IBM Fix Central. Because each fix pack contains the fixes from previous fix packs, you need to install only the most recent fix pack.

Information about a fix pack is in a PDF file with a similar name to the fix pack, and is available for download with the fix pack JAR file.

Before you install the fix pack, review the following items:
- Preserve your custom changes to system resources.

- The fix pack installation might use one or more fix pack property override files. Do not alter these files.
- Property changes made directly in `.properties` or `.properties.in` files might be overwritten during the fix pack installation. Properties that are overridden by the `customer_overrides.properties` file are not affected. IBM recommends that you maintain property file changes by using (when possible) the `customer_overrides.properties` file. For more information, see the documentation for using the `customer_overrides.properties` file.
- If you edited any of the `cdinterop` files, you must back them up before you apply the fix pack. The `cdinterop` files do not have initialization (`.in`) files. After you apply the fix pack, use the backup version of the files in your upgraded installation. These files include the following files:
  - `cdinterop-proxy-records.properties`
  - `cdinterop-spoe-auth.properties`
  - `cdinterop-spoe-policy.properties`
  - `cdinterop-user-records.properties`
- Information about the upgraded installation is automatically logged to the `/install_dir/install/logs/InstallService.log` file.
- If you need to roll back a fix pack, see "Fix Pack Changes Report" on page 309.
- During fix pack installation, the **dbVerify** utility compares the list of standard indexes with the indexes that are present in the database and drops the custom indexes. Recreate the custom indexes after the fix pack installation is complete.

Installing a fix pack or interim fix:

When available, you should install fix packs or interim fixes for Sterling B2B Integrator in iSeries to keep your system current.

Procedure

To install the latest fix pack or interim fix for Sterling B2B Integrator in an iSeries environment:
1. Open the IBM Fix Central website.
2. Download the most recent fix pack or interim fix for your version of Sterling B2B Integrator and record the absolute path to the downloaded file. Do not rename the file. If you use FTP, you must use Binary mode.
3. Log in to the server where Sterling B2B Integrator is installed with the user ID and password that was used for the installation.
4. Stop Sterling B2B Integrator.
5. Perform a full backup of the Sterling B2B Integrator installation directory, including all subdirectories.
6. Perform a backup of the database.
7. If you edited any property files, ensure that the associated `.properties.in` files have the most current changes. Property files are overwritten with the contents of the associated `.properties.in` files during the installation.
8. Sign on with your Sterling B2B Integrator user profile and enter into the QSH (Qshell) mode.
9. In QSH, navigate to the `/install_dir/bin` directory where `install_dir` is the Sterling B2B Integrator installation directory.
10. Enter:

    `./InstallService.sh <path>/<file_name>`

Where:

    <path> is the fully qualified path to the fix pack or interim fix file

    <file_name> is the name of the fix pack or interim fix file

If the fix pack or interim fix attempts to modify the database schema and the modification fails, you receive an error message about the failure. The message provides the error message code from the database and the SQL command that failed. The failure information is also logged to the `system.log` file (in the */install_dir/*`install` directory) and to the fix `pack.log` file.

Attention: Running **InstallService.sh** removes any previously installed interim fix to prevent conflicts with what is being installed.

11. Press **Enter** to continue.

    Information about the fix pack or interim fix is displayed. After the fix pack or interim fix is applied, the following message is displayed:

    `Deployment to application server successful`

    When the **$** is displayed, the process completes.

12. Start Sterling B2B Integrator.

Preserving custom changes for system resources:

When you update Sterling B2B Integrator, you can preserve your custom changes to system resources like workflow definitions and maps.

About this task

During updates, the system can identify when you make a custom change to Sterling B2B Integrator versus a change through an upgrade or fix pack.

When a fix pack, installation or upgrade is performed, a baseline record of system resources is created. This baseline is not affected by any subsequent customer changes. When another fix pack is installed, the resources in this baseline are compared to the resources in the existing system. If a baseline and existing resource are not the same, that means that the existing resource was customized and was not overwritten by the fix pack.

During an update, the baseline is updated with new system resource information, but not with custom changes to resources.

DB Checksum tool:

A checksum is a simple redundancy check used to detect errors in data.

In Sterling B2B Integrator, a verification process compares the checksum between the existing default resource and the resource that was added after applying a fix pack or upgrading. The DB Checksum tool, a resource difference tool generates a granular report of the changes in the system that was not permitted to be set as defaults.

The DB Checksum tool generates the difference in resource checksum between the default resource and the latest system resource from the database.

Performing a checksum:

Use a command to run the DB Checksum tool.

Procedure

To run the DB Checksum tool:

1. Open the */install_dir*/install/bin directory.
2. Enter the following command:

   ```
   ./db_checksum_tool.sh [-d] [-i [1 | 2 | 3 | 4 | 5]]
   [-r [wfd | map | schema | sii | template]] [-o <output file>] [-g]
   ```

   Where:

   - **-d** is the mode to dump the difference of resource checksum between the default resource and latest system resource.
   - **-i** is the resource type integer (optional).
   - 1 is WFD.
   - 2 is MAP.
   - 3 is SCHEMA.
   - 4 is SII.
   - 5 is TEMPLATE.
   - **-r** is the resource name (optional). For example, wfd, map, schema, sii, or template.
   - **-o** is the file name to output all the messages (optional).
   - **-g** is the file name that lists all the ignored resources (optional).
   - **-h** is the help screen.

   The DB Checksum tool performs the relevant checksum operation that is based on the command options and generates the output message.

Fix Pack Changes Report:

The Fix Pack Changes Report is used to obtain information if you need to roll back a fix pack.

The fix pack report can be found in the installation directory `fix pack_reports` folder. The report contains the following fix pack information:

- Fix pack ID
- Fix pack changes
- Number of files deleted
- Number of JAR files removed
- Number of JAR files added
- Number of files added
- Number of files changed
- Number of properties added
- Number of business processes added
- Number of service instances added
- Number of service definitions added
- Number of templates added
- Number of reports added
- Number of maps added
- Number of schemas added
- Number of business rules added

For example, the installation directory `fix pack_reports` folder contains the `fix pack_Report.html` file. When you open this file, you can view the fix pack information.

Example: Fix Pack Changes Report:

The Fix Pack Changes Report includes both summary and detailed report information.

The following is an example of a Fix Pack Changes Report:

```
Summary of Changes
Fix Pack ID: Platform_2.0
Fix Pack Changes: 1287
Number of Files Deleted: 0
Number of JARs Removed: 2
Number of JARs Added: 0
Number of Files Added: 3
Number of Files Changed: 3
Number of Properties Added: 4
Number of BPs Added: 4
Number of Service Instances Added: 2
Number of Service Definitions Added: 3
Number of Templates Added: 0
Number of Reports Added: 0
Number of Maps Added: 3
Number of Schemas Added: 3
Number of Business Rules Added: 0
_____
List of JARs Removed:
JAR Removed: /SAMPLE_INSTALL_1/jar/jaf/1_0_2/activation.jar
Time: Wed May 13 15:23:08 EDT 2009
JAR Removed: /SAMPLE_INSTALL_1/jar/commons_logging/1_0_3/commons-logging-api.jar
Time: Wed May 13 15:23:08 EDT 2009
_____
List of Files Added:
File Added: /SAMPLE_INSTALL_1/bin/sql/fix_db2_schema.sql
Time: Wed May 13 15:21:30 EDT 2009
File Added: /SAMPLE_INSTALL_1/bin/sql/fix_db2iseries_schema.sql
Time: Wed May 13 15:21:30 EDT 2009
File Added: /SAMPLE_INSTALL_1/bin/errorQueueManager.sh.in
Time: Wed May 13 15:21:30 EDT 2009
_____
List of Files Changed:
File Changed: /SAMPLE_INSTALL_1/properties/lang/en/Reports_en.properties
File Changed: /SAMPLE_INSTALL_1/properties/lang/es/Reports_es.properties
File Changed: /SAMPLE_INSTALL_1/properties/lang/fr/Reports_fr.properties
_____
List of Properties Added:
Property Added: /SAMPLE_INSTALL_1/properties/filesToRemove.txt
Property Added: /SAMPLE_INSTALL_1/properties/filesToRemove.txt.in
Property Added: /SAMPLE_INSTALL_1/properties/csr.properties.sample
Property Added: /SAMPLE_INSTALL_1/properties/csr.properties.sample.in
_____
List of BPs Added:
BP Added: Schedule_AssociateBPsToDocs.bpml version: 4
Time: Wed May 13 15:23:07 EDT 2009
BP Added: Recovery.bpml version: 17
Time: Wed May 13 15:23:07 EDT 2009
BP Added: Schedule_AutoTerminateService.bpml version: 10
Time: Wed May 13 15:23:07 EDT 2009
BP Added: Schedule_DBMonitorService.bpml version: 1
Time: Wed May 13 15:23:08 EDT 2009
_____
List of Service Instances Added:
Service Instance Added: RetentionProcessor version: 2
```

```
Time: Wed May 13 15:23:28 EDT 2009
Service Instance Added: MESAHttpServerAdapter version: 1
Time: Wed May 13 15:25:11 EDT 2009
_____
List of Service Definitions Added:
Service Definition Added: LockServiceType
Time: Wed May 13 15:22:58 EDT 2009
Service Definition Added: XAPIServiceType
Time: Wed May 13 15:22:59 EDT 2009
Service Definition Added: CleanLockServiceType
Time: Wed May 13 15:22:59 EDT 2009
_____
List of Templates Added:
Template Added: Normalize
Time: Wed May 13 15:23:26 EDT 2009
Template Added: Derive
Time: Wed May 13 15:23:26 EDT 2009
_____
List of Maps Added:
Map Added: IBMPutResponseToXML
Time: Wed May 13 15:24:05 EDT 2009
Map Added: http_headers
Time: Wed May 13 15:24:36 EDT 2009
Map Added: OracleHttpHeaders
Time: Wed May 13 15:24:51 EDT 2009
_____
List of Schemas Added:
Schema Added: E5_V20_Acknowledge_Result.dtd from file: E5_V20_Acknowledge_Result
Time: Wed May 13 15:24:36 EDT 2009
Schema Added: E5_V20_Acknowledge_Submit.dtd from file: E5_V20_Acknowledge_Submit
Time: Wed May 13 15:24:36 EDT 2009
Schema Added: E5_V20_APIs_Result.dtd from file: E5_V20_APIs_Result
Time: Wed May 13 15:24:36 EDT 2009
```

License modifications:

After the installation finishes, you can modify the software licenses that you loaded with the **AddLicenseSet** command.

The **AddLicenseSet** command is in the `bin` directory of your UNIX or Windows installation. After the initial installation, the license files are in the following directories:

- UNIX - /*install_dir*/install/properties/licensefiles
- Windows - *install_dir*\install\properties\licensefiles
- iSeries - /*install_dir*/properties/licensefiles

You can add licenses or review the license list from the UI. On the Administration Menu, click **System** > **B2B Console** > **Operations** > **System** > **Licenses**.

AddLicenseSet Command Parameters

Use the **AddLicenseSet** command to modify a single license file or the entire license file directory.

To use the **AddLicenseSet** command, you must do the following:

- Open the `bin` directory
- Include the absolute path to the license file directory or to a license file

The **AddLicenseSet** command has the following parameters:

AddLicenseSet Parameter	Description
-reload	Use this parameter to reload the license files. This parameter deletes all of the license files from the database before the new files are loaded. The old license files are saved to the following locations: • UNIX - /*install_dir*/install/logs/security/ old_licenses • Windows - *install_dir*\install\logs\security\ old_licenses • iSeries - /*install_dir*/logs/security/old_licenses
-upgrade	Use this parameter during an upgrade only. This parameter deletes all of the old license files from the database and installs the new license files. The old license files are saved to the following locations: • UNIX - /*install_dir*/install/logs/security/upgrade • Windows -*install_dir*\install\logs\security\upgrade • iSeries -/*install_dir*/logs/security/old_licenses

The **AddLicenseSet** command will check if Sterling B2B Integrator is running. If it is running, the command will call the Ops server to refresh the license from the database. If you have any problems with your licenses after running the **AddLicenseSet** command, stop and restart Sterling B2B Integrator.

License Modification: Examples:

There are several different ways you can use the **AddLicenseSet** command to modify your licenses.

UNIX Examples

From the *install_dir*/bin directory:

Scenario	Command usage (UNIX example)
Reload a single license file	./AddLicenseSet.sh /*install_dir*/install/properties/ licensefiles/SI_SFG_License.xml -reload
Reload all of the license files in the directory	./AddLicenseSet.sh /*install_dir*/install/properties/ licensefiles/ -reload
Upgrade a single license file	./AddLicenseSet.sh /*install_dir*/install/properties/ licensefiles/SI_SFG_License.xml -upgrade
Upgrade all of the license files in the directory	./AddLicenseSet.sh /*install_dir*/install/properties/ licensefiles/ -upgrade

Windows Examples

From the *install_dir*\bin directory:

Scenario	Command usage (Windows example)
Reload a single license file	AddLicenseSet.cmd*install_dir*\install\properties\ licensefiles\SI_SFG_License.xml -reload

Scenario	Command usage (Windows example)
Reload all of the license files in the directory	`AddLicenseSet.cmd\install_dir\install\properties\licensefiles\ -reload`
Upgrade a single license file	`AddLicenseSet.cmd\install_dir\install\properties\licensefiles\SI_SFG_License.xml -upgrade`
Upgrade all of the license files in the directory	`AddLicenseSet.cmd\install_dir\install\properties\licensefiles\ -upgrade`

Updating your JDK on iSeries:

Sometimes you need to update the JDK used by Sterling B2B Integrator.

To update from the classic JDK 1.6 to J9 JDK 1.6 or from J9 JDK 1.6 to J9 JDK 1.7, begin by stopping Sterling B2B Integrator.

To stop Sterling B2B Integrator on iSeries, in QSH, run the command: **./hardstop.sh**.

Then perform the following steps as needed:
1. "Preparing the user profile for the new JDK"
2. "Downloading the JDK Update Files" on page 314
3. "Running the Update JDK Program" on page 314

Preparing the user profile for the new JDK:

The Sterling B2B Integrator user profile must be set up to point to the correct JDK.

About this task

Perform the following steps if you are going from the Classic JDK 1.6 to the J9 JDK 1.6 or to J9 JDK 1.7. This will point your Sterling B2B Integrator user profile to the appropriate JDK:

Procedure
1. Log on to the Sterling B2B Integrator user profile.
2. Create a home directory for the Sterling B2B Integrator user profile.
   a. From an iSeries command line, enter: `MKDIR /home/appuser`, where *appuser* represents theSterling B2B Integrator user profile.

      If the home directory for your Sterling B2B Integrator user profile already exists, ignore this step.
   b. Enter `EDTF` and press **F4**.
   c. Enter `/home/appuser/.profile` and press **Enter**. An edit session is displayed.
   d. If you are converting to J9 JDK 1.6, enter the following on the first line:
      `export JAVA_HOME=/QOpenSys/QIBM/ProdData/JavaVM/jdk60/64bit`
   e. If you are converting to J9 JDK 1.7, enter the following on the first line:
      `export JAVA_HOME=/QOpenSys/QIBM/ProdData/JavaVM/jdk70/64bit`
   f. Press **F2**, then **F3** to save and exit.
3. Log off and then log back on.

Results

The Sterling B2B Integrator user profile should now be pointing to the correct JDK. To verify, perform the following steps:

1. At the iSeries command line, key in `qsh` and press **Enter**.
2. Key in `java –version` to verify that it displays the correct JDK version.

Downloading the JDK Update Files:

You will need to download some files to update your Sterling B2B Integrator JDK on iSeries.

About this task

To download the upgrade files necessary for upgrading your Sterling B2B Integrator JDK:

Procedure

1. Is there a saved file named `UPDJDKSAVF` in QGPL on your iSeries?
   - **Yes** - Enter `CLRSAVF FILE(QGPL/UPDJDKSAVF)` to clear the save file from your iSeries.
   - **No** - Enter `CRTSAVF FILE(QGPL/UPDJDKSAVF)` to create a save file on your iSeries.
2. Copy the `UPDJDKSAVF` file from *Sterling B2B Integrator Installation Directory*/bin/updjdksavf to the save file created in QGPL by entering: CPYFRMSTMF FROMSTMF(`Sterling B2B Integrator Installation Directory`/bin/updjdksavf') TOMBR(`/QSYS.LIB/QGPL.LIB/ UPDJDKSAVF.FILE') MBROPT(*REPLACE) CVTDTA(*NONE)
3. To restore the upgrade objects, enter: `RSTLIB SAVLIB(UPDATEJDK) DEV(*SAVF) SAVF(QGPL/UPDJDKSAVF)`
4. To add the installation programs to your library list, enter: `ADDLIBLE LIB(UPDATEJDK)`

Running the Update JDK Program:

Run the Update JDK program to update your Sterling B2B Integrator JDK on iSeries.

About this task

To run the Update JDK program in iSeries:

Procedure

1. Key in `UPDATEJDK` from an iSeries command line and press **F4**.
2. For the SI Installation Directory parameter, enter your Sterling B2B Integrator installation directory.
3. For the JDK switching from parameter:, enter:
   - 1 - If you are currently using the Classic JDK 1.6
   - 2 - If you are currently using the J9 JDK 1.6
4. For the New JDK parameter:, enter:
   - 1 - If you are upgrading to the J9 JDK 1.6
   - 2 - If you are upgrading to the J9 JDK 1.7

5. Press **Enter**
6. From an iSeries command line, enter `qsh` to enter into the qshell mode.
7. Change to your Sterling B2B Integrator *installdir*/bin directory.
8. Enter `./setupfiles.sh`. This changes the preliminary files to the new JDK.
9. Key in `./deployer.sh` and press **Enter**. This will change the remaining property files and point Sterling B2B Integrator to the new JDK location.

Results

Your JDK is now updated and you are ready to start Sterling B2B Integrator.

Uninstall the Software

Uninstalling Sterling B2B Integrator from an iSeries Environment:

When you uninstall Sterling B2B Integrator, the software is automatically removed from the server.

Procedure

To uninstall the software from an iSeries environment:
1. Stop Sterling B2B Integrator and wait for the shutdown to complete.
2. Sign onto iSeries with your Sterling B2B Integrator user profile.
3. In QSH, change to the directory above the installation directory. For example, if the installation directory is `/product/SI_Install`, then change to the `/product` directory.
4. Remove the installation directory by entering the following command:
   `rm -rf install_dir`
5. Wait for the command line to return.
6. Select **F3 exit from Qshell**.
7. Enter `DLTLIB <collection name>`. For example, `DLTLIB (Sterling B2B Integrator)DB`. The following kind of messages are displayed:
   `Receiver QSQJRN0001 in (Sterling B2B Integrator)DB never fully saved. (I C).`
8. Enter I to one or more of these messages until the library is deleted.
9. After you remove the software from the server, you can remove Eclipse and any tools that were downloaded to the desktop, including the following tools:
   - Map Editor and associated standards. Refer to the *Map Editor Guide* for information about removing the Map Editor.
   - Graphical Process Modeler. Refer to the *Graphical Process Modeler Guide* for information about removing the Graphical Process Modeler.
   - Web Template Designer. Refer to the *Web Extensions Guide* for information about removing the Web Template Designer.
   - (If licensed) MESA Developer Studio plug-ins, including the following tools:
     – MESA Developer Studio Software Development Kit (SDK).
     – MESA Developer Studio Skin Editor.
     Refer to the *MESA Developer Studio* guide for information about removing MESA Developer Studio.
   - (If licensed) Reporting Services, which require MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports. Refer to the *MESA Developer Studio* guide for information about removing Reporting Services.

User Documentation

User Documentation:

The user documentation is available from an online documentation site on the web.

Providing the documentation in an online environment allows for frequent updates of content that is based on user feedback and usability.

If you need a printed copy of the documentation, you can print topics of information through your Internet browser, or you can download documents in PDF format, after you add it to a collection on IBM Knowledge Center.

To access the documentation site from within Sterling B2B Integrator or one of its tools, select the help icon. The system must reside on a computer that supports Internet access and an Internet browser.

Improving your access to online documentation:

You can improve your access to online documentation by using several methods.

About this task

After you access the IBM Knowledge Center, you can perform the following tasks:
- Enter a word or phrase and search the entire library for information.
- Move through a hierarchy of contents pages to identify the topic you want to read or print.
- Print topics by using your browser's Print function.
- Add documents to your collection and download them in PDF format.

Troubleshooting Tips

Installation and upgrade troubleshooting tips: iSeries environment:

If you have trouble while installing or upgrading Sterling B2B Integrator on iSeries, different troubleshooting techniques are available.

Situation	Message or Symptom	Explanation/Resolution
Installing a desktop tool or resource	Cannot download any of the following tools: **Note:** MESA Developer Studio and Reporting Services are optional features that are purchased separately from Sterling B2B Integrator. These features each require a separate license in addition to your license for Sterling B2B Integrator. • Map Editor and associated standards • Graphical Process Modeler • Web Template Designer • (If licensed) MESA Developer Studio plug-ins (Software Development Kit (SDK), Skin Editor) • (If licensed) Reporting Services, which require MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports	**Explanation** When you install Sterling B2B Integrator, system files are created that contain an internal IP address. If you install Sterling B2B Integrator behind a firewall, and your firewall is configured to accept an external IP address from a client computer, you might not be able to download the desktop tools and resources. The firewall rejects the IP address from a client that exists outside of the firewall. **Resolution** Modify the system files that contain the invalid IP address: 1. Open the */install_dir*/bin directory. 2. Stop Sterling B2B Integrator. 3. Enter the following command followed by the external IP address: `patchJNLP.sh external_IP address` 4. Restart Sterling B2B Integrator.
Accessing	Attempts to access the URL for Sterling B2B Integrator display the message: Page cannot be displayed.	**Resolution** Change the Network Interface Bindings.

Situation	Message or Symptom	Explanation/Resolution
Stopping	Ending jobs from Sterling B2B Integrator when a hardstop is not successful.	**Explanation** There was a problem during the installation process or the subsystem was not defined correctly. **Resolution** 1. Enter `WRKACTJOB` and locate the job that did not end successfully. 2. Press F11 twice to obtain the job number that you want to end. 3. Press F3 to end the WRKACTJOB panel. 4. Enter `QSH` to enter Qshell mode. 5. Enter `ps` and press Enter. 6. Locate the pid number that corresponds to job number from the WRKACTJOB panel. 7. Enter `kill -kill <pid number>` `kill -kill <pid number>`. 8. Review the installation log to determine the error and resolution. 9. If the error is due to a problem with the installation, then delete the installation directory and install the software again. 10. If the error is due to the job queue having 1 as the maximum number of active jobs in the subsystem, then either change the subsystem that you start Sterling B2B Integrator in, or change the number of maximum active jobs.

Situation	Message or Symptom	Explanation/Resolution
e-Invoice Upgrade: Oracle Add Constraint Error	When you upgrade Sterling e-Invoicing and are using an Oracle database, the upgrade fails with the error message `name is already used by an existing object`. This error occurs because the default behavior for the **drop constraint** command changed in Oracle 10. The index that is used to support the constraint is only removed if the index was generated by the **create constraint** command. The indexes for Sterling e-Invoicing are always generated from constraints during an installation. If you receive this error during a Sterling e-Invoicing upgrade, it is because of how the database was restored, the version of Oracle you are using, and because the Oracle **imp** command exported the indexes and constraints separately. There is no way to determine when the **imp** command does not add a **create index** command to the export file if it was generated by a constraint. But if it does add the command, the database restore process loses the association of the constraint and its underlying index. The database script that runs during a Sterling e-Invoicing upgrade runs two steps: 1. The script drops the unique constraint so the next step can redefine it using additional columns. However, the drop constraint command does not remove the underlying index if the association with its index was lost. 2. The next command that redefines this constraint requires a different index definition, but in this scenario the name of the index the constraint wants to use exists, which causes the error `name is already used by an existing object`.	**Resolution** If you receive this error message, the solution for this problem is to drop the index and rerun the Sterling e-Invoicing upgrade. The drop index command that you should use is: `drop index UNQ_EINV_CANON`

Upgrading (V5.2.6 or later)

Upgrade your Sterling B2B Integrator software to the V5.2.6 release.

Windows Cluster Environment Upgrade (V5.2.6 or later)

You can upgrade the Sterling B2B Integrator software in a Windows cluster (multiple node) environment.

Clustering is not supported for Sterling B2B Integrator systems that use the MySQL database.

You should also review these documents:
- System Requirements
- Release Notes
- What's New
- Installation and Upgrade Information

It is important to remember that upgrading involves a full installation of Sterling B2B Integrator. You need to prepare for an upgrade the same way that you would prepare for an installation. It is also recommended that you thoroughly test this process in a test or development environment prior to implementing in a production environment.

This upgrade does not overwrite your current Sterling B2B Integrator directory structure on disk. Instead, it creates a new installation of Sterling B2B Integrator that points to and upgrade the database of your current installation of Sterling B2B Integrator. This means your original instance will no longer be operational after performing the upgrade. After the upgrade, you will be starting your Sterling B2B Integrator instance only from the newly created directory structure.

For new installations, use the *Sterling B2B Integrator Windows Cluster Installation Guide*.

Intended audience
This document can be used by different members of your organization.

This document is intended for use by:
- System administrators
- Installation engineers
- Database administrators.

Assumptions for this guide
The procedures in this guide are accurate as of the publication date and are specific to this version of the document.

Upgrade Scenarios (Clustered)
Upgrading to Sterling B2B Integrator can follow several paths. Keep these scenarios in mind as you plan for your upgrade:

Upgrade Scenario	High-Level Upgrade Steps
You have V5.2.x installed and want to upgrade by applying V5.2.6 as a fix pack.	The upgrade steps are as follows: 1. Ensure that your JDK version is supported. See the system requirements. Upgrade your JDK if needed. See "Upgrading your JDK (Windows and UNIX)" on page 3. 2. Ensure that your operating system and database versions are supported. 3. See "Applying a Fix Pack (V5.2.6 or later)" on page 625or "Applying Sterling B2B Integrator V5.2.6 Fix Pack using a script" on page 630

You have 5.1.x installed and want to upgrade to V5.2.6.	The upgrade steps are as follows:
	
	1. Ensure that your JDK version is supported. See the system requirements. Upgrade your JDK if needed. See upgrading your JDK.
	
	2. Ensure that your operating system version is supported. Upgrade your operating system if required.
	
	3. Ensure your database version is supported. Upgrade you database if required:
	
	  a. Export the configuration data.
	
	  b. Back up the database.
	
	  c. With help from a database administrator (DBA), copy the database to the new version.
	
	  d. Back up the newly created database.
	
	4. Upgrade to Sterling B2B Integrator V5.2.6 using the full installation media and this Upgrade Guide.
	
	5. Point to your supported database version. If the upgrade stops and leaves the newly created database in an incomplete state, you can re-start the upgrade using the backup of the database.

Upgrade Impacts

This documentation provides information on how system behavior has changed based on upgrading your instance. You should review this information before you begin your upgrade. Depending on which version you are upgrading to, you will need to review one or more topics listed. The upgrade impacts listed for each subsequent version are specific to that version. There is not a cumulative list.

Upgrade impacts for V5.2.6.2:

Upgrading to Sterling B2B Integrator V5.2.6.2 has unique impacts.

DB2 requires additional tablespace

When upgrading to V5.2.6.2 or later you must ensure that all tablespaces used by Sterling B2B Integrator tables have a minimum page size of 8K. Otherwise installation will fail.

Upgrade impacts for V5.2.6:

Upgrading to Sterling B2B Integrator 5.2.6 has unique impacts.

Support for SSLV3 has been removed - TLS 1.2 is the new default

Due to security concerns, Sterling B2B Integrator no longer supports the use of SSLV3. You should be aware of the following changes as you upgrade your system to this version:
* Several properties have been updated to use TLS 1.2 as the default. If your mail server cannot use TLS 1.2, you can change your SMTP and B2B Mail Client adapters to use TLS 1.0 or 1.1 instead.
* If any of your 3rd party programs do not support the use of TLS 1.2, you can change Sterling B2B Integrator to use TLS 1.0 or TLS 1.1.
* In all cases, requests to use "SSLV3" in Sterling B2B Integrator will use instead TLS 1.0, TLS1.1, or TLS1.2.
* TLS 1.2 is used as the default protocol in secure communications. This change applies to any system that is upgraded to V5.2.6.
* If your GPM, or WebSphere MQ or OFTP adapters are configured to use older, non-supported cipher suites (non-TLS 1.2), they will continue to work. However, if you edit them, only TLS 1.2 will be available to select.

JDK 7 is the only supported JDK version for V5.2.6

There are several impacts due to this change:
* If you are not already using JDK 7, you must upgrade your JDK before attempting to upgrade Sterling B2B Integrator to V5.2.6. If you currently have V5.2.4.1 or higher installed, there is a **upgradeJDK** script available to assist you. See *bin Directory Files* for more information.
* Only ciphers that are supported by JDK 7 can be used in Sterling B2B Integrator V5.2.6. You can update your cipher suites in `security.properties`.
* Previously defined ciphers in `customer_overrides.properties` are not changed upon upgrade to V5.2.6.
* **DefaultCipherSuite** contains a list of JDK 7 ciphers in V5.2.6 that can be used when others are not available.

Upgrade impacts for V5.2.5:

Upgrading to Sterling B2B Integrator V5.2.5 has unique impacts.

JDK 7 does not support the TLS_RSA_WITH_3DES_EDE_CBC_MD5 cipher

If you are using JDK 7 with Sterling B2B Integrator V5.2.5, and you want to use a cipher to secure the Sterling B2B Integrator dashboard, you must set one of the following values in the **dashboardCipherSuite** parameter in the `security.properties_platform_asi_ext.in` property file or in `customer_overrides`:
* *JDK* (includes all strong ciphers except the one not supported by JDK 7)

- *Weak*

Do not use *Strong* or *All* with JDK 7 or Sterling B2B Integrator will not start.

Reconciliation of HIPAA Level 5 code lists

When you upgrade to Sterling B2B Integrator V5.2.5, customized HIPAA Level 5 code lists from the previous version are preserved in the system where they were entered, but they are not the default code lists after the upgrade. After the upgrade, you must manually make any customized code lists the default code lists.

For example, you customized the ICD9 or HCPCSCPT code list in the previous version of Sterling B2B Integrator. After the upgrade to version 5.2.5, you must replace the default ICD9 or HCPCSCPT code list with the customized ICD9 or HCPCSCPT code list.

Properties file change to prevent timeout during start (V5.1.0.4 to V5.2.5 upgrade)

Before you start Sterling B2B Integrator after you upgrade the application from version V5.1.0.4 to V5.2.5, you must change the values of the following properties in the `centralops.properties` file to 600. This action prevents the start command from timing out before Sterling B2B Integrator starts. The `centralops.properties` file is in the `properties` subdirectory of the installation directory.

- **`OpsServer.commandTimeout`**
- **`PassPhrase.urlTimeout`**

jGroups upgrade in V5.2.5 prevents Sterling B2B Integrator from starting for some customers

jGroups is upgraded with V5.2.5. Some of the properties defined in jgroups_cluster.properties have changed. If you modified these files or added custom changes for them to customer_overrides.properties, the upgrade changes are not applied and Sterling B2B Integrator will not start.

This issue is fixed in V5.2.5, Interim Fix 1, where all necessary properties files are changed for you. You can also disable this fix if desired. See APAR IT06654 for more information.

Note: The original and modified properties are output to the noapp.log file. This allows you to see how your properties were modified. Search the log using the value "Initializing jgroups_cluster.property_string" to see the new and changed values for the two affected startup properties. The jgroups_cluster.lock.protocolStack property is also modified with this fix, but is only written to the log when it is used, not at startup.

If you want to manually fix your installation without applying V5.2.5, Interim Fix 1, complete the following steps:
1. Delete the following options (if they exist) from customer_overrides.properties for the jgroups.cluster property file. These occur in the jgroups_cluster.property_sting, jgroups_cluster.distributed_property_string, and jgroups_cluster.lock.protocolStack files:
   - gc_lag
   - up_thread
   - down_thread

- join_retry_timeout
- max_xmit_size
- shun

2. Remove the protocol parameter **VIEW_SYNC** and all of its attributes.
3. In the jgroups_cluster.property_string, replace 'start_port' with 'bind_port'.
4. In the jgroups_cluster.distributed_property_string and jgroups_cluster.lock.protocolStack properties, add the following items:
   - In distribution_property_string the attribute **thread_pool_rejection_policty=run** should be added to the protocol 'TCP'. For example,

     ```
     TCP(bind_port=22261;thread_pool_rejection_policy=run)
     ```
   - In lock.protocolStack: the protocol and attribute **CENTAL_LOCK(num_backups=2)** should be added to the end of the property. For example,

     ```
     lock.protocolStack=UDP(bind_addr=&HOST_ADDR;;bind_port=
     &MULTICAST_NODE_PORT3;;mcast_addr=239.255.166.17;<other
     protocol parameters here>pbcast.GMS(join_timeout=5000;print_local_
     addr=true):CENTRAL_LOCK(num_backups=2)
     ```

Upgrade Impacts for V5.2.0: Before you begin an upgrade, you should review the following information.

Features and Services Not Supported as of V5.2.0

The following features and services are no longer supported:
- Channels portlet
- Federated Systems
- Community Management (AFT Communities are still available)
- Sterling Community Management (SCM) Integration
- Archive Commandline Service
- Sync Engine Data Clean Manager Service
- Sync Engine Task Manager Service

If you need more information, please contact your IBM sales representative.

Port Allocation Changes

If you are upgrading to V5.2, and configured the CLA2 or the SWIFTNet HTTP Server Adapter, the remote port numbers have changed. The port numbers are as follows:

Table 1. Remote Port Numbers

Adapter Name	Version 5.2.0 Base Port	Version 5.2.1 Base Port	Version 5.2.2 Base Port	Version 5.2.3 Base Port
CLA2	+51	+52	+53	+54
SWIFTNet HTTP Server	+52	+53	+54	+55

Note: You should check adapter configurations and the sandbox.cfg file for ports greater than 51 which may have changed.

After upgrading to 5.2.x, you need to change any references to the old remote port numbers. For example, if you have any business processes that use the CLA2 adapter, you will need to update the remote ports in the business process.

Database Table Sizes

While upgrading if you encounter any database table size issues, you may have to manually adjust the database tables and restart the upgrade process. An upgrade using the production database in a test environment can be used to help you determine what tables need to be manually adjusted.

Resource Tags

If you are using resource tags in your current version, you should check all of your existing resource tags before you start the upgrade process. The resource tags you should check are:
- Adapter Policies
- Agreements
- Sterling Connect:Direct® Netmaps
- Proxy Servers
- Security Tokens
- SSH Resources
- SWIFTNet Copy Service Profiles
- SWIFTNet Service Profiles

You can check the resource tags by running the following SQL query from the SQL Manager page (**Operations > Support Tools**):

```
SELECT * FROM TAG_RESOURCE_ASSOC WHERE TYPE=41 OR TYPE=42 OR TYPE=43 OR TYPE=44 OR
TYPE=45 OR TYPE=52 OR TYPE=53
```

The TAG_NAME column in the SQL results will contain the names of any resource tags that need to be edited or deleted.

If any of the resource tags contain tagged resources using the types listed, remove those resources from the resource tags or delete the resource tags that contain these resource types.

Silent Installation Parameters

The following parameters are new or have an updated definition:

What has changed	parameter	Definition
Parameter definition has changed	LICENSE_FILE_PATH	(Required) Full path to Core_License.xml.

What has changed	parameter	Definition
New parameter	LICENSE_FILE_# (where # is a number between 1 and 99)	(Required) This is required for each license you install. You must add an entry for each license file to the silent install file. The LICENSE_FILE numbering (#) does not need to be sequential.
		For example:
		LICENSE_FILE_1= SI_SFG_License.xml
		LICENSE_FILE_2= Fin_Serv_License.xml
		LICENSE_FILE_3= SI_SFG_FIPS_License.xml
		LICENSE_FILE_4= AS2_License_.xml
		LICENSE_FILE_5= EBICS_License_.xml

Channels and Community Management Tabs (Optional)

The Dashboard PSML files are not updated during an upgrade. The PSML file impacts any custom tabs you may have configured, such as Channels or Operator. The Channels and Community Management tabs appear in your browser but are no longer operational.

To remove the Channels and Community Management tabs:

Warning: The psmlRestore command gets the 5200 psml file which resets ALL of the custom tabs from the previous release.

1. Navigate to the installation directory.
2. Navigate to the bin directory.
3. Enter this command: `./psmlRestore.sh admin`

Custom BI Fact Models Need to be Upgraded

Scripts named recreateBITablePKs.cmd.in (Windows) and recreateBITablePKs.sh.in (UNIX) are now provided which allow you to upgrade any custom BI fact models tied to a separate BI repository.

BI fact models need to be upgraded to continue to work with the Entity Framework, which replaced Hibernate usage in the BI framework in version 5.2.0.

Backups Are Not Generated During Install, Upgrade, or When Applying a Fix Pack or Interim Fix: Before you begin an upgrade, review the following backup information.

Some of the standard resources installed during install or upgrade use the import mechanism available to customers to load the standard resources into the database. The standard import mechanism by default creates a backup of the table containing the resource prior to importing to provide the ability to restore to the previous state if later it was decided that the import should not have been performed. This table backup was also being performed by default during the basic installation processes. And, since the import mechanism was sometimes used multiple times during the installation processes, some of the tables were backed up

several times. Depending on the size of the table, this could add a very large amount of time to the installation process. Since it is recommended that a backup is completed prior to beginning any of these installation processes, the default behavior has changed to not perform the backup by default. If you would like backups to be performed, then `SKIPIMPORTBACKUP=false` should be added to the **sandbox.cfg** file.

Capitalization Insensitivity for Header Value:
About this task

Before you begin an upgrade, review the following AS3 information.

For AS3, when searching for a header value in a multipart/report, you do not need to consider whether the header value contains any capitalization. The search has been enhanced to be capitalization insensitive.

For example, the following searches will result in a match:
* Multipart/Report
* Multipart/report
* multipart/Report
* multipart/report

The search would not find the following as a match:
* MulTiPart/RePorT

CA Certificates Impacts: Before you upgrade, review the following information on CA certificates.

Users may add multiple copies of the same certificates to the database. Having multiple copies of the same certificate in the database is not, in principle, a problem for the system except for the minor amount of wasted storage. Each copy has a different object ID in the database and is a separate database object.

The specific changes in this release is the ability to easily populate the product database with the set of authority root certificates distributed with the JVM.

Perimeter Server Installation:
About this task

Before you begin an upgrade, review the following Perimeter Server installation information.

Silent install is the default installation mode. If you want to complete the Perimeter Server installation using an interactive mode, you need to use the following command:
```
java -jar ps_xxxx.jar -interactive
```

where ps_xxx.jar is the perimeter server jar file name for the version of Sterling B2B Integrator you are upgrading to.

Retry Logic Added to WebSphereMQ Suite Adapter PUT Service:
About this task

Before you begin an upgrade, review the following WebSphereMQ Suite Adapter PUT Service information.

Retry logic has been added to the WebSphereMQ Suite. To accommodate this new functionality, you need to configure two new parameters for the PUT service:

- wsmq_send_retryCount
- wsmq_send_retrySleepInterval

To configure the new parameters:

Procedure

1. Log into Sterling B2B Integrator.
2. From the **Admin Console Home**, you need to start the Graphical Process Model (GPM).
3. Log into the GPM. You will need a **User ID** and **Password**.
4. In the GPM, select **View > Stencil > Services**.
5. Select **File > New**.
6. Drag the **WebSphereMQ Suite Put Message Service** from the **All Services** pane into the center pane.
7. Double click the **WebSphereMQ Suite Put Message Service**.
8. Select the configuration from the **Config** dropdown.
9. Enter the number of retries in to the **wsmq_send_retryCount** value.
10. Enter the sleep interval in seconds in to the **wsmq_send_retrySleepInterval** value.
11. Save the changes to the service configuration.
12. Exit from the GPM.

Services and Adapters - Show Advance State Button: Before you begin an upgrade, review the following Show Advance State button information.

The Show Advanced State check box has been removed from the Services Configuration search screen. Instead, the default has been changed to always show the advanced state without needing to check a checkbox on the search screen to display it.

Some Certificate Fields Are Optional:
About this task

Before you begin an upgrade, review the following certificate field information.

When generating certificate keys, the following fields may have been missing in the release you are upgrading from, but the entries are now optional:

- alt.name.dns
- alt.name.IP

Support for Multiple AS2 Organizations: Before you begin an upgrade, review the following AS2 schema information.

Sterling B2B Integrator now supports multiple sponsoring organizations and multiple partners for AS2. During upgrade, the single organization will be flagged as the default organization.

Once you have upgraded to this version, a prefix designation is used to differentiate between an AS2 organization (AS2_ORG_) and an AS2 partner (AS2_PART_). Each of these will require the full configuration of a trading partner

to allow for a partner to trade with multiple organizations as well as an organization that trades with multiple partners.

The AS2_TRADEPART_INFO and AS2_EMAIL_INFO tables have been modified and the AS2_PROFILE table is newly introduced. Updates to these tables will occur during the SI in-place upgrade process in the following manner:

- Identify the default organization and populates the AS2_PROFILE table with organization information. A default organization is an AS2 organization profile named "profile_ORGANIZATION" present in the system before upgrade.
- Identify partner records and populates the AS2_PROFILE table with partner information.
- Populate the new columns of table AS2_TRADEPART_INFO with the default organization information.
- Populate the new PROFILE_ID column in the AS2_EMAIL_INFO table with the profile id of the AS2 organization profile present in the system.

Web Services: Before you begin an upgrade, review the following Web Services information.

Many of the Web Services configuration settings that were generated from the WebServices Provider Configuration UI have moved from the property files into database tables. This change was made to allow a single location of these settings in cluster environments and to ensure that these settings would not be reset during a fix pack installation.

After you have completed your upgrade, you should run the convertWSSoaProperties script found in the installation bin folder. This script reads the settings from the property file and places them into the proper database tables. You can then review the results in the WebServices Provider Configuration UI.

Windows 2008 Does Not Start with Response File Install:
About this task

Before you begin an upgrade using IBM Installation Manager and the response file method, review the following information.

If you used the response file install method for your upgrade, you must manually run the InstallWindowsService.cmd file to register the service.

Upgrade Planning
Proper planning will help ensure a trouble-free upgrade.

Before you begin an upgrade you should:

- Read and become familiar with this document so that you have a clear understanding of what the upgrade requires.
- Review upgrade scenarios to determine which scenario you want to use.
- Review and record system configuration information.
- Review and record performance and tuning information.

Upgrade Planning Checklist: To assist you with your upgrade planning, review the following planning checklist:

#	Upgrade Planning Checklist	Your Notes
1	Read through this entire document so that you have a clear understanding of what the upgrade requires.	
2	Download and review the following information from the Sterling B2B Integrator documentation library. • *System Requirements* - With each release, IBM introduces leading edge technology to improve and enhance its software. Review the *System Requirements* to confirm that your system and databases meet the requirements for this release. • *Release Notes* - Review the release notes to obtain information about issues and resolutions which have been identified for this release. • *What's New in this Release* - Review this guide to find out about new features and functionality provided in this release. • *Installation and Upgrade Information* - Lists the installation and upgrade documents available for this version of Sterling B2B Integrator.	
3	**CAUTION:** **Before upgrading to the latest product version, contact your sales representative to verify that it includes all of your current functionality. Depending on the timing, even though it's in a higher version that the one you have installed, a particular mod release or fix pack might not include all the functionality in your current version or fix pack.**	
4	Collect information on third-party libraries used for adapter configurations that were added to your current release. You will need to add each of these libraries to the upgraded system.	
5	Locate any configuration file changes for JDBC adapter or Lightweight JDBC adapter in your current release. You will need to copy these changes to the upgraded system.	
6	Record your performance tuning configuration. You will need to restore these settings after the system has been upgraded.	
7	Review and note the adapters, business processes, and other configurations in your current release. This information will help you identify the need for updating transport messages, third-party adapters, or configurations to adapters, such as File System or Command Line adapters.	

#	Upgrade Planning Checklist	Your Notes
8	Determine if you have edited any of the property files (.properties or .properties.in). The upgrade process overwrites these property files, unless these changes were made using the customer_overrides.properties file. Your previous property file edits might not be applicable this version of the software.	
9	Determine if you edited any of the following cdinterop files: • cdinterop-proxy-records.properties • cdinterop-spoe-auth.properties • cdinterop-spoe-policy.properties • cdinterop-user-records.properties You must back them up before upgrading. The cdinterop files do not have initialization (*.in) files. After the upgrade, use the backup version of the files in your upgraded installation.	
10	Determine if you have LDAP (Lightweight Directory Access Protocol) configuration information in the security.properties file. This information will automatically be moved to the authentication_policy.properties file.	
11	Determine whether Sterling B2B Integrator is using an application server (JBoss™, WebLogic® or WebSphere®). Sterling B2B Integrator does not require an application server for installation or at runtime. Sterling B2B Integrator supports integration with JBoss and WebLogic during the installation. You can also integrate with WebSphere, JBoss, or WebLogic by using the Sterling B2B Integrator EJB Adapter. This does not represent a WebLogic server for deploying the Application Console.	
12	If you use a File System as your document storage method, determine and record the path to the File System. You will need the File System path structure so that after the upgrade, you can copy/mount the documents to the new installation directory. The directory structure (path to the File System) must be the same in the current and in the upgraded system.	
13	Review the EDI Sequence Check Queue to ensure that no interchanges are in the queue. The EDI Sequence Check Queue is used for X12 and EDIFACT sequence and duplicate checking.	
14	Determine if you have any JVM Containers configured. If yes, you will have to reconfigure the JVM containers after you have upgraded the software.	

Prepare Your System for the Upgrade

To help ensure a trouble-free upgrade, be sure to prepare your system before beginning the upgrade.

Before you begin the upgrade :
- Complete all Pre-Upgrade Checklists.
- Verify that your system meets all system requirements.
- Obtain the upgrade media.
- Create a process output log (optional).
- (Microsoft SQL Server only) Configure the snapshot feature (optional).
- (DB2 only) Upgrade DB2 to version 10.1 or 10.5, if needed.

Pre-Upgrade System Checklist:

Use the Pre-Upgrade System Checklist to help ensure that your system is ready for upgrading and reduce the chance of errors or other problems during upgrade.

Before you begin an upgrade:

#	Pre-Upgrade System Checklist	Your Notes
1	Use the system requirements to verify that your system hardware and software meet the requirements specified for this release. Verify you have the correct: • Patches required by Java™ for the operation system • Version of the JDK • JDK Patches • Absolute path to JDK and patches • Database must match the version listed in the requirements If any of the above requirements are not met, the installation will fail and print/log a report of all items that were non-compliant. Ensure that you have the correct license file and JCE file. **Important:** Do not remove the existing license file or JCE file from your system. The files specified by the **LICENSE_FILE_PATH** and **JCE_DIST_FILE** parameters in the sandbox.cfg file must be present during the upgrade, or the upgrade will fail.	
2	For systems with multiple IP addresses, verify that the IP address on which Sterling B2B Integrator resides is accessible by any client computer that is running a browser interface. If you do not verify the IP addresses, your system may not operate properly after installing Sterling B2B Integrator.	
3	If you are using a non-English environment, confirm that you are using the appropriate character set.	
4	Verify the file system has adequate free disk space.	
5	Obtain the upgrade media. It is a best practice to check the Product Updates and Downloads site to ensure you have the latest version of the media.	

#	Pre-Upgrade System Checklist	Your Notes
6	Backup your Sterling B2B Integrator installation directory and the database. If there are problems with your upgraded system, the only way to ensure that you can roll-back to your previous version is to back up Sterling B2B Integrator and the database.	
7	Archive your data. Archived data can only be restored from the same version of Sterling B2B Integrator from which it was archived. If you need to restore archived data that was archived prior to performing the upgrade, then you must have a running instance of Sterling B2B Integrator that matches the version from which the archive was taken.	
8	Purge any unneeded data.	
9	Export any business objects that can not be upgraded. Including business processes, service configurations, trading partners, and maps. The exported business object can be imported into the upgraded system if you need them.	
10	Create a process output log.	
11	Disable the virus protection software on the server. If the virus protection software is enabled, the upgrade will fail.	

Pre-Upgrade Database Checklist (Cluster Environment): Before you begin an installation, you need to:

#	Pre-Upgrade Database Checklist (Cluster Environment)	Your Notes
1	If required, copy your Microsoft SQL Server Database to a supported version. This is an optional procedure, and it is the customer's responsibility to perform it. (IBM Customer Support can not help with this procedure.)	
2	If required, update your Oracle database to a supported version. If you plan to import an Oracle database, while upgrading to this version of Sterling B2B Integrator, you must import the database without the indexes. For example, if you are using the Oracle import (imp) tool, you should use the INDEXES=N option. If you attempt upgrading to this version of Sterling B2B Integrator with indexes turned on, the upgrade will fail. If you had created any custom indexes in Oracle database, add them after performing the upgrade as they are not imported.	

#	Pre-Upgrade Database Checklist (Cluster Environment)	Your Notes

3	If you are using MySQL, a new MySQL database will be created in this version of Sterling B2B Integrator and information will be copied from the MySQL database in your previous version of Sterling B2B Integrator to the new database.
	
	The MySQL database in your previous version of Sterling B2B Integrator will still work. When you copy your database, if you encounter Data Overflow or Invalid Time Format errors while copying the WORKFLOW_CONTEXT table, run this query:
	
	`UPDATE WORKFLOW_CONTEXT SET ENTERQ = NULL,`
	`EXITQ = NULL where ENTERQ IS NOT NULL OR EXITQ`
	`IS NOT NULL`	

Pre-Upgrade Operating System Verification Checklist:

Before you begin the upgrade, you need to verify your operating system configuration.

For the Operating System	Operating System Configuration Checklist	Your Notes

HP-UX Operating System	Verify these settings:
	• Verify kernel parameters and establish the following minimum settings by running the **kctune** command:
	  – kctune max_thread_proc 1024
	  – kctune maxdsiz 2147483648
	  – kctune maxdsiz_64bit 8589934592
	  – kctune maxssiz 369098752
	  – kctune maxssiz_64bit 536870912
	• Run ulimit utility, verify, and establish the following minimum settings:
	  – ulimit -d = 2097152 (in kilobytes) or higher
	  – ulimit -s = 360448 (in kilobytes) or higher	

For the Operating System	Operating System Configuration Checklist	Your Notes

AIX Operating System	You must specify the name of the installation directory name. The installation process creates the directory and beneath it, a directory called "install".
	
	 To ensure that /*install_dir*/install has the necessary permissions, AIX users must run the following command on the parent directory of /*install_dir*/install before installation:
	 `chmod -R a-s <absolute path>/install_dir_parent`
	
	 where *install_dir_parent* is the directory in which /*install_dir*/install will be created.
	
	 For example, to specify
	
	 `AIX_1/applications/test1/my_install` as your installation directory, you could run the command from the AIX_1/applications directory (directly above the test1 directory):
	 `chmod -R a-s test1`
	
	 or from another location on the file system:
	 `chmod -R a-s /AIX_1/applications/test1`
	
	 This ensures that when the *my_install* directory is created during installation, it inherits the correct permissions from test1.	

Solaris Operating System	Set the following entries in the /etc/security/limits file:
	 `nofiles = 4096`
	 `set rlim_fd_max=4096 (limit is 65535) - hard limit`
	 `set rlim_fd_cur=4096 - soft limit`
	
	 For **nofiles**, the value shown is an example. The possible values are unlimited, so the number for **nofiles** can be much larger. Revise the value as appropriate for your business needs.
	 • To make the setting effective as the hard limit, reboot the server or run the following command:
	 `kill -1 inetd`
	 • To make the setting effective as the soft limit, use the parent shell configuration (for example, .profile). Then, reboot the server.	

Linux Operating System	You need to disable SELinux by enter the following: `/etc/sysconfig/selinux: SELINUX=disabled` Ensure that /etc/hosts has short-names first for all entries. For example, 127.0.0.1localhostlocalhost.localdomain If the base locale is English, verify: • that the LANG variable is en_US • LANG variable is exported	

For the Operating System	Operating System Configuration Checklist	Your Notes

RedHat Enterprise Linux Operating System	Make the following system changes:
	
	• If the base locale for the system is English, edit the `/etc/sysconfig/i18n` file by changing the SUPPORTED variable from en_US.utf8 to en_US. You can also allow multiple support using the following format: en_US.utf8:en_US
	
	• Save and close the `/etc/sysconfig/i18n` file. Edit the `/etc/security/limits.conf` file by adding the following lines:
	  – `* hard nofile 8196`
	  – `* soft nofile 4096`
	  – `* hard memlock 3000000`
	  – `* soft memlock 3000000`
	  – `* hard nproc 16000`
	  – `* soft nproc 16000`
	  – `* hard stack 512000`
	  – `* soft stack 512000`
	  This updates the system ulimits.
	
	  For **nofile**, the values shown are examples. The possible values are unlimited, so the numbers for **hard nofile** and **soft nofile** can be much larger. Revise these values as appropriate for your business needs.
	
	• Save and close the `/etc/security/limits.conf` file.
	• Reboot the system.
	
	IBM Installation Manager in UI mode may fail to start on an RHEL 6.1 or higher x86_64 (64-bit) OS because Installation Manager is a 32-bit application and is dependent on some of the 32-bit libraries.
	
	For information on installing the required 32-bit OS libraries, refer to the IBM Support Website (https://www-304.ibm.com/support/docview.wss?uid=swg21459143)
	
	CAUTION:
	Due to a known issue with the IBM JDK on RHEL 6.1 or higher, a performance degradation might be seen in comparison to previous RHEL releases. To avoid this issue, disable the CFS on RHEL 6.1 or higher.
	
	To disable CFS:
	• **Log in as root**
	• **Edit /etc/sysctl.conf and add "kernel.sched_compat_yield = 1"**
	• **Reboot the system**
	
	For more information go to the IBM SDK and Runtime Environment Java Technology Edition Version 6 Information Center and search for *known limitations on linux*.	

For the Operating System	Operating System Configuration Checklist	Your Notes

SUSE Linux Operating System	Make the following system changes:
	
	• If the base locale for the system is English, edit the /etc/sysconfig/i18n file by changing the SUPPORTED variable from en_US.utf8 to en_US. You can also allow multiple support using the following format: en_US.utf8:en_US
	
	• Save and close the /etc/sysconfig/i18n file. Edit the /etc/security/limits.conf file by adding the following lines:
	  – * hard nofile 8196
	  – * soft nofile 4096
	  – * hard memlock 3000000
	  – * soft memlock 3000000
	  – * hard nproc 16000
	  – * soft nproc 16000
	  – * hard stack 512000
	  – * soft stack 512000
	This updates the system ulimits.
	
	For **nofile**, the values shown are examples. The possible values are unlimited, so the numbers for **hard nofile** and **soft nofile** can be much larger. Revise these values as appropriate for your business needs.
	
	• Save and close the /etc/security/limits.conf file.
	• Reboot the system.	

Verification of the system requirements:

Before you begin the installation, verify that your system meets the hardware and software requirements that are specified for this release.

The hardware requirements that are listed in the *System Requirements* are the minimum requirements. Your system requirements might exceed these requirements if you are running other applications on the same machine as Sterling B2B Integrator.

The installation strictly enforces the following system requirements:
• Operating system version must match requirement exactly.
• The minimum patch level for the operating system is enforced, but you can apply higher patch levels.
• JDK version must match requirement exactly.
• The disk space is a minimum for the installation. The system must be separately sized to handle whatever load is going to be put on the system.
• Database version must match exactly.
• JDBC driver version supports exact matches and wildcard matches.

If any of these requirements are not met, the installation fails. If the installation fails, review the installation log for a list of non-compliant items.

Upgrading your JDK (Windows and UNIX):

Sometimes you need to upgrade your JDK version to support a new version of Sterling B2B Integrator.

About this task

If you have V5.2.4.1 or higher installed, you can use the **upgradeJDK** script to upgrade your version of the JDK. See *bin Directory Files* for more information.

If you have V5.2.4.0 or lower installed, follow the steps below to upgrade your JDK.

Procedure
1. Download the new JCE file. For example, the `UnrestrictedPolicy.zip` policy file for the IBM JDK.
2. Back up the existing JDK in `<Install Dir>`/jdk. Change the folder name to `jdk_back`)
3. Copy the new IBM JDK (1.7.0) folder to the installation Directory. Directory Name should be `jdk`)
4. Copy all the jars present in `<Install Dir >`jdk_back\jre\lib\ext to `<install Dir>`jdk\jre\lib\ext directory.
5. If your installation of V5.2.4 or lower was built using the Oracle (SUN) JDK, continue to the next step. Otherwise skip to step 6.
   a. Edit the `sandbox.cfg` property file.
   b. Set JCE_DIST_FILE=`<New Path of Supported JCE File>`. For example, `JCE_DIST_FILE=D\:\\IBM\\unrestrictedpolicyfiles.zip`.
   c. Back up the `local_policy.jar` and `US_export_policy.jar` files present in `<Install Dir>`jdk\jre\lib\security.
   d. Unzip the new JCE file. For example, `Unrestrictedpolicyfiles.zip` file. Copy `local_policy.jar` and `US_export_policy.jar` to `<Install Dir>`jdk\jre\lib\security.
6. Run updateJavaSecurity.cmd `<path_to_new_jdk><Install Dir>`/jdk.
7. Verify that security providers have been updated in `<Install Dir>`\jdk\jre\lib\security\java.security.
8. Follow the Upgrade Guide instructions for your upgrade scenario.

Obtain Upgrade Media:
About this task

Before you upgrade, ensure that you have the latest version of the upgrade media from the Passport Advantage online site or have downloaded the fix pack from Fix Central..

For the latest version and for online support, go to: http://www.ibm.com/software/howtobuy/passportadvantage/pao_customers.htm

Note: For V5.2.6, the fix pack download used for upgrading from V5.2.x to V5.2.6 is very large. It includes the new functionality for Global Mailbox. You must download the full fix pack file to upgrade to V5.2.6 by installing a fix pack even if you do not plan to install Global Mailbox.

Create Process Output Log:

About this task

A log of process activity during the upgrade will help if troubleshooting is required. Output is automatically logged to the upgrade log files (PreInstallSi.log and InstallSi.log). Use this procedure to generate a separate output log for each process you want to log.

To create a process output log:

Procedure

1. From any directory, run the script command to record the processes, ensuring that you have created and specified the name of the file in which to save the process output.

   For example, to start recording output to a file named processoutput.log, type script processoutput.log at the command line. The processoutput.log file will be created in the directory where you ran the script command.

2. After the upgrade is complete, enter exit at the command line to stop recording.

3. You can now retrieve the file containing the process output.

   The following example shows a session after starting the script command, specifying the output to be saved to the file named listing.log, and typing exit to stop the script command from running:

   ```
   [2]%script listing.log
       Script started, file is listing.log
       [3]%ls
       Custard.Recipe FavoriteRecipes Curry.Recipe
       VindalooCurry.Recipe Jelly.Recipe
       [4]%exit
        Script done, file is listing.log
   ```

Configuring the snapshot feature for Microsoft SQL Server:

The snapshot feature in Microsoft SQL Server allows you to view a read-only copy of the database even when it is locked. Configuring the snapshot feature can also reduce deadlocks. To enable the snap shot feature, enter the following command:
ALTER DATABASE db_name SET READ_COMMITTED_SNAPSHOT ON;

Upgrading DB2 to version 10.1 or 10.5:

To upgrade from DB2 9.5 or 9.7 to 10.1 or 10.5, you must make configuration changes.

Procedure

1. Complete the steps in the following table that pertain to your version of Sterling B2B Integrator before you proceed to step 2.

   Important: Back up all files before you change any settings.

If you are upgrading from ...	Do the following steps:
Sterling B2B Integrator 5.1.x	Upgrade Sterling B2B Integrator to V5.2.6 and point to your DB2 9.5 or 9.7 database
Sterling B2B Integrator 5.2.x	Upgrade your 5.2.x installation to V5.2.6

2. Copy your DB2 9.5 or 9.7 database content to DB2 10.1 or 10.5.

3. Take a backup of the database driver located at `/install_dir/dbjar/jdbc/DB2/` and then replace it with the DB2 10.1 or 10.5 version.

4. Update the following `sandbox.cfg` file fields with your environment-specific parameters:

```
DB_PASS=
DB_SCHEMA_OWNER=
DB_DRIVERS_VERSION=
YANTRA_DB_PORT=
DB_DATA=
DB_HOST=
YANTRA_DB_USER=
DB_PORT=
YANTRA_DB_PASS=
YANTRA_DB_DATA=
YANTRA_DB_HOST=
DB_DRIVERS=
DB_USER=

DB2_PORT=
DB2_USER=
DB2_PASS=
DB2_DATA=
DB2_HOST=
```

5. Edit the following in the `activemq.xml` file:

   `activemq.xml: <value>jdbc:db2//DB_HOST:DB_PORT/DB_DATA</value>`

6. Run the `setupfiles` script.

7. Run the `deployer` script.

8. Start Sterling B2B Integrator.

Information Gathering Checklist

Information Gathering Checklist for Upgrades (Windows Cluster): Before you begin the upgrade, you should review the information in the Information Gathering Checklist. The checklist contains all of the information that you will need to have while running the upgrade scripts. Supporting information and details are included at the end of this chapter.

The checklist contains:

- Brief descriptions for tasks (detailed procedures are provided after the checklist)
- Information you need to gather to prior the starting the upgrade

You may want to make a copy of the following checklist and use it to record the information you collect for each node in the cluster.

The cluster environment does not support the following items:

- MySQL database
- AS2 Edition

#	Information Gathering Checklist for Windows Cluster Upgrades	Your Notes
1	Review your IBM contract to determine what software you have licensed. You need to know this *License Information* so that you can select the correct components/features to upgrade.	

#	Information Gathering Checklist for Windows Cluster Upgrades	Your Notes
2	Determine which upgrade method you are going to use: • IBM Installation Manager (Graphical User Interface) • IBM Installation Manager (Response File) • Apply V5.2.6 as a fix pack (manual) • Apply V5.2.6 as a fix pack (script)	
3	Determine if you are going to run the pre-upgrade checks during the upgrade.	
4	Determine if you are going to use multicast ports.	
5	Decide which type of security certificates you will use: • The default self-signed SSL (Secure Sockets Layer) certificate that is automatically installed. • A Certificate Authority-related certificate that you install before installing the software.	
6	If you are using an Oracle, SQL Server, or DB2 database, decide if you are going to manually or automatically apply Database Definition Language (DDL) Statements (schema) to the database.	
7	If you are using an Oracle 11.1 database, you must set it up for native compilation by allocating space and by setting the plsql_native_library_dir parameter.	
8	Determine if you are going to use FIPS (Federal Information Processing Standards) mode.	
9	Record the Hostname on which you plan to install the software.	
10	Record the Directory Name where you plan to install the software.	
11	Record the Login to host machine.	
12	Record the Password to the host machine.	
13	Record the path to the JDBC drivers.	
14	Record the path to the installation wizard and file name.	
15	Record the path to JDK.	
16	Record the path to JCE file.	
17	Record the Host IP address.	
18	Record the Initial Port Number.	
19	Record the System passphase.	
20	Record the Administrative e-mail address to which system alert messages are sent.	
21	Record the SMTP Server IP address used for sending alert messages.	
22	Record the Database vendor name.	
23	Record the Database user name.	

#	Information Gathering Checklist for Windows Cluster Upgrades	Your Notes
24	Record the Database password.	
25	Record the Database (catalog) name.	
26	Record the Database host name.	
27	For Oracle, Microsoft SQL Server, and DB2 record the path and file name for the JDBC Driver.	

Supporting Information:

Pre-Upgrade Check for Clusters: Pre-upgrade check reviews Oracle, SQL Server, and DB2 database environments prior to starting the upgrade. This is an optional installation feature which looks for are common upgrade errors. You only need to run the pre-check for node 1.

The pre-upgrade checks ensure:
- SI_VERSION table exists
- Database character set is correct for Oracle and DB2
- Schedule start times are not later than the end times
- Passphrase entered matches the existing passphrase in the database
- Database implementation for Oracle Long Raw and BLOB
- User has permission to perform the upgrade
- Collation settings are validated for MS SQL
- OBJECT_NAME is table SCI_ENTITY is no longer than 100 characters
- Default schema you identified during upgrade matches the existing database

If any of these items are not validated, the upgrade fails. You are provided with an error message and must correct the situations and then restart the upgrade.

License information:

A separate license is required for each Sterling B2B Integrator feature that you purchased. During installation, you must choose the license files according to what you purchased. Product licenses do not require an activation key.

IBM assumes customers will only install and use the products they purchased. IBM reserves the right to inspect installs for compliance at any time.

After the installation finishes, if you determine that you need to modify licenses files, see "License modifications" on page 58.

Product Licenses for Sterling B2B Integrator

Sterling B2B Integrator Standard and Enterprise Edition includes:
- MESA Studio
- eInvoicing
- Report Services
- all services and adapters not listed below

Sterling B2B Integrator Standard and Enterprise Financial Edition includes everything listed above plus:

- CHIPS
- SWIFTNet
- NACHA ACH CTX adapter
- FEDWIRE
- Fin Serv XML standard
- FIPS Mode
- Image Cash Letter service
- EBICS

Multicast ports in node to node communications:

Cluster nodes are configured to communicate with each other using JGroups, an open source toolkit that provides flexibility for protocol configuration.

JGroups provides rich open management features, along with multiple protocol support. JGroups supports multicast (UDP) and TCP-based communication protocols.

When JGroups is configured to use multicast (UDP), all cluster nodes communicate with each other on a specific IP address and port. The configuration of multicast ports is based on the installation base port. All clusters that are on the same subnet that is configured on the same base port send multicasting messages on the same multicast IP address and port.

To avoid this situation, each cluster on the same subnet needs to be configured on different base ports. Install your clusters on different port ranges or on different network segments with multicast forwarding restricted, so that they do not interfere with each other. The default multicast address is 239.255.166.17. This address is configurable, with a port range of 10 ports, starting with the multicast base port for the instance.

All nodes that are participating in the same cluster must be installed on the same multicast base port (the **multicastBasePort** property in the noapp.properties_platform_ifcresources_ext.in file). This value is usually computed from the system base (non-multicast) port, but can be configured separately in the noapp.properties_platform_ifcresources_ext.in file, to allow different nodes in a cluster to be installed at different (non-multicast) port ranges. Also, all the nodes in the cluster must be installed in the same subnet.

For node to node communications, the properties are defined in the jgroups_cluster.properties file. The following attributes are used to define communications:
- **property_string** - default value is UDP.
- **distribution_property_string** - default value is TCP. This attribute must never be set to UDP.

If you want to change the communication for cluster multicast from the UDP protocol to TCP, you need to change the value of the **property_string** property in the jgroups_cluster.properties.in file (after you back up the file). Then, run the **setupfiles** command. You can change this value right after the installation or after you start running the cluster. If you change the file after you start the cluster, you need to stop all nodes of the cluster, change the value on each node, and then restart your cluster.

To change the communication for cluster multicast from the UDP protocol to TCP, use the following value for the **property_string** property in the jgroups_cluster.properties.in file:

```
property_string=TCP(start_port=any_available_port_number):
TCPPING (initial_hosts=this_instance_host_ip[start_port_number],
theothernode_instance_host_ip[theothernode_start_port_number];port_range=2;
timeout=5000;num_initial_members=3;up_thread=true;down_thread=true):
VERIFY_SUSPECT(timeout=1500):pbcast.NAKACK(down_thread=true;up_thread=true;
gc_lag=100;retransmit_timeout=3000):pbcast.GMS(join_timeout=5000;
join_retry_timeout=2000;shun=false;print_local_addr=true;
down_thread=true;up_thread=true)
```

For more information about UDP, TCP, and JGroups communications, see the *Sterling B2B Integrator Clustering* documentation.

Security certificates:

You can choose between different security certificates before you install Sterling B2B Integrator.

Before you begin the installation, you must decide which of the following security certificates to use:
- The default self-signed SSL (Secure Sockets Layer) certificate that is automatically generated by the installation.
- A Certificate Authority-related certificate that you generate before you install the software.

If you install with the default SSL certificate, but you later want to switch to a CA-related certificate, you can change the certificate with the **sslCert** property in the noapp.properties_platform_ifcresources_ext.in file.

Port Numbers in a Windows Environment: During installation or an upgrade, you are prompted to specify the initial port number for Sterling B2B Integrator.

To specify an initial port number, follow these guidelines:
- Sterling B2B Integrator requires a range of 200 consecutive open ports between 1025 and 65535. The port range starts with the initial port number and ends with the number that equals the initial port number plus 200. For example, if you specify 10100, then you need to make sure that 10100 through 10199 are not used by any other applications on your system.

  Note: Because of RMI, on occasion, a port number outside the range may be assigned.
- The initial port number represents the beginning port number in the range.
- Make sure that port numbers in the port range are not used by any other applications on your system.

During the upgrade, about 50 default ports are pre-assigned for different services. For example, if you do not want xxx32 (10132) to be a default port, you could assign that port to xxx97 or another number within the port range.

After your installation or upgrade, refer to the *install_dir*\install\properties\ sandbox.cfg file for all of the port assignments.

Database Definition Language (DDL) Statements: When you install Sterling B2B Integrator, you can manually apply Database Definition Language (DDL) statements to your database tables instead of requiring the installation process to do it directly.

This feature increases database security by reducing the database permissions of the Sterling B2B Integrator database user. The rights to database objects can be reserved for a secure user like a customer database administrator (DBA). A business can require that only a DBA with the proper permissions can make database changes.

Upgrade the Software

General Windows Cluster Upgrade Information: **CAUTION:** Sterling File Gateway should be installed behind a company firewall for security purposes. See the *Perimeter Server* and *Security* topics in the Sterling B2B Integration documentation library for more information on secure deployment options.

Windows Cluster Information

The cluster environment does not support the following items:
- MySQL database
- AS2 Edition

Upgrading Sterling File Gateway cluster nodes is similar to upgrading a Sterling File Gateway single node, with the following restrictions on all nodes:
- All nodes must use the same database.
- All nodes must use the same passphrase.
- All nodes must use the same operating system.
- When installing nodes on different machines, the initial port numbers must be the same. Installing nodes on different machines helps you take more advantage of the reliability, availability, and scalability features of clustering, including failover.
- When installing nodes on the same machine, you must install nodes 2 and higher in different directories and use different initial port numbers. Each initial port number must be at least 100 higher or lower than other initial port numbers.
- Nodes must be installed sequentially, one at a time, starting with the first node.
- After installing all of the nodes, nodes must be started sequentially, one at a time, starting with the first node.
- Obtain a valid Sterling File Gateway license for multiple IP addresses of all the nodes where Sterling File Gateway will be installed and configured as a cluster.
- To install more than one instance of Sterling File Gateway on the same Windows server, you must install the second instance in a different directory.
- If you are using FTP to copy the files, verify that your session is set to binary mode.
- Sterling File Gateway does not support IPv6 installation on Windows. Before applying an IPv6 address, see the *IPv6 Capabilities* section in Sterling File Gateway *System Requirements* guide.
- If you are installing Sterling File Gateway on VMware, provide the IP address of the virtual machine, not the IP address of the VMware host. For example, if 10.251.124.160 is the IP address of the VMware host and 10.251.124.156 is the IP

address of the Windows 2003 server it is hosting, you should use 10.251.124.156 as the correct IP address to install Sterling File Gateway.

- The installation creates subsequent ports based on the initial port number. For all of the port assignments, see the *install_dir*\install\properties\sandbox.cfg file.
- If you are running the upgrade on an active installation of Sterling File Gateway, you will need to run the soft stop command to gracefully stop traffic. For more information, see the Soft Stop documentation in the System Administration Guide.

General IBM Installation Manager information:

IBM Installation Manager V1.8.2 is required to install Sterling B2B Integrator on all supported platforms.

Installation Manager is a Java based multiplatform installation application and provides a consistent approach across various platforms. It does not rely on platform-specific installation technology or mechanism.

Installation Manager uses the local Sterling B2B Integrator offering repositories to install or update Sterling B2B Integrator and its add-on features. It determines the packages that must be installed and displays them including the products, fix packs, and interim fixes. It checks that all prerequisites and interdependencies are met before installing the selected product package and feature sets.

Important: The **Uninstall** option only unregisters Sterling B2B Integrator from Installation Manager. The uninstall procedure as described in the related sections must be performed to completely uninstall Sterling B2B Integrator.

Installation Manager must be installed on each computer on which Sterling B2B Integrator is being installed. If you already have Installation Manager installed on your computer for use with other IBM applications, it can be used with installing Sterling B2B Integrator as long as it's the correct version. If you do not have Installation Manager installed, it is provided as part of the Sterling B2B Integrator installation media.

Supported bit-versions

A 64-bit version of IBM Installation Manager V 1.8.2 is provided with the Sterling B2B Integrator installation package. However, you can also install with a 32-bit version of Installation Manager.

Before you start the installation, consider the following options:
- If you are a new customer, use the version of Installation Manager that is provided with the Sterling B2B Integrator installation package and install Sterling B2B Integrator.
- If you have an earlier version of Installation Manager, you can update it to V1.8.2 using the Installation Manager that is provided with the installation package, then install Sterling B2B Integrator .
- If you are a current customer who did not use Installation Manager earlier, install the version of Installation Manager that is provided with the installation package, then upgrade your Sterling B2B Integrator installation.
- If you have a 32-bit Installation Manager installed, you must download the 32-bit Installation Manager V1.8.2 from Fix Central or IBM Passport Advantage,

upgrade it, then proceed with the installation of Sterling B2B Integrator. Ensure you have the required libraries that support screen presentation of the text.

Checking for updates

To check for Installation Manager updates, select **Search for Installation Manager updates** on the **File > Preferences > Updates** page. When the check box is selected, Installation Manager searches for updates when any one of the following pages are opened from the Installation Manager start page:
* Install Packages
* Modify Packages
* Update Packages

Installation Manager also searches for updates when you click the Check for Other Versions, Fixes, and Extensions button on the Install Packages page.

Starting Installation Manager

You should start the Installation Manager (and also install Sterling B2B Integrator) as a non-administrator user.

How you start Installation Manager depends on whether you are using the Installation Manager agent that is provided with Sterling B2B Integrator or if you have an Installation Manager instance that is installed on your system. It also depends on whether you have 32-bit or 64-bit Installation Manager.

Open a command prompt and do one of the following tasks to start the Installation Manager in GUI mode:
* Go to the `IM_<operating_system>` directory and type **`./userinst`** or **`userinst.exe`** (Windows) for the following scenario:
  – If you do not have Installation Manager installed and are using the Installation Manager agent that is provided with the Sterling B2B Integrator media.
  – If you have a 64-bit Installation Manager installed.
  – If you have Installation Manager installed on a platform that has only one download available for Installation Manager. For example, AIX, Solaris, HP, zLinux.
* Go to `<installation directory>/Installation Manager/eclipse` (for Windows system, replace / with \) and type **`./IBMIM`** or **`IBMIM.exe`** if you have 32-bit Installation Manager installed on a Linux or Windows system.

For information on starting Installation Manager in command mode for silent installation, see the Installing or updating with a response file.

For information on starting Installation Manager in command mode to record a response file, see Recording a response file.

Additional heap memory parameters

The heap memory parameters specify the amount of memory Installation Manager can use during the installation process. The heap memory pool sizes that are used by Installation Manager are hardcoded defaults. If these defaults are not sufficient for your environment, you can specify different values by adding parameters to the Installation Manager`config.ini` file.

Important: These additional parameters are required only if you are experiencing `Out Of Memory` errors during the installation process.

The following parameters can be added:
- memoryMin=user.sb.INSTALL_<OS>_INIT_HEAP.<amount_of_memory>
- memoryMax=user.sb.INSTALL_<OS>_MAX_HEAP.<amount_of_memory>

Where *<OS>* is your operating system and *<amount_of_memory>* is the specified amount of memory.

Operating System	Parameter	Example Entry
Sun-Solaris	Initial Heap Size **INSTALL_SUN_INIT_HEAP**	memoryMin=user.sb.INSTALL_SUN_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_SUN_MAX_HEAP**	memoryMax=user.sb.INSTALL_SUN_MAX_HEAP.3072m
Linux	Initial Heap Size **INSTALL_LINUX_INIT_HEAP**	memoryMin=user.sb.INSTALL_LINUX_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_LINUX_MAX_HEAP**	memoryMax=user.sb.INSTALL_LINUX_MAX_HEAP.3072m
AIX	Initial Heap Size **INSTALL_AIX_INIT_HEAP**	memoryMin=user.sb.INSTALL_AIX_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_AIX_MAX_HEAP**	memoryMax=user.sb.INSTALL_AIX_MAX_HEAP.3072m
HP-UX	Initial Heap Size **INSTALL_HPUX_INIT_HEAP**	memoryMin=user.sb.INSTALL_HPUX_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_HPUX_MAX_HEAP**	memoryMax=user.sb.INSTALL_HPUX_MAX_HEAP.3072m
Windows	Initial Heap Size **INSTALL_WIN_INIT_HEAP**	memoryMin=user.sb.INSTALL_WIN_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_WIN_MAX_HEAP**	memoryMax=user.sb.INSTALL_WIN_MAX_HEAP.3072m

Installing or updating with a response file (V5.2.6 or later):

You can install or update (apply fix pack or interim fix) Sterling B2B Integrator with silent mode by using the sample response files or converting your existing response file to the required format.

Upgrading in a Windows cluster environment with the IBM Installation Manager in GUI mode:

You can upgrade Sterling B2B Integrator in a Windows cluster environment with the IBM Installation Manager in a graphical user interface (GUI) mode.

Before you begin
* Ensure that your system is ready for the upgrade. See "Prepare Your System for the Upgrade" on page 332.

  Attention: Failure to properly prepare your system can cause the upgrade to fail.
* Complete the "Information Gathering Checklist for Upgrades (Windows Cluster)" on page 340.
* You must have administrative privileges and a login on the host machine to do an upgrade.
* If you are using the Standards Processing Engine (SPE) application with Sterling B2B Integrator, you must upgrade SPE before you upgrade Sterling B2B Integrator.
* If you are using the EBICS Banking Server application with Sterling B2B Integrator, the data encryption for storage within the installation location is not supported.

About this task

This upgrade changes the administrative password to the default password. After the upgrade, change the password back to the administrative password to minimize security risks. This is the Admin password for logging into the user interface (/dashboard or /ws).

Important: Following is a list of changes related to installing or upgrading to Sterling B2B Integrator V5.2.6:
* You can install and upgrade using IIM through the user interface or (response files. Console mode installation and upgrade is not supported. IF you already have V5.2.x installed, you can upgrade using a script.
* Sterling B2B Integrator JAR file is included in the repository. Therefore it is not required to manually select the JAR file when installing or upgrading.
* You must use Installation Manager V1.8.2 to install or upgrade Sterling B2B Integrator. `InstallService` is disabled, and cannot be used. You can use `InstallService`, only for a specific scenario related to Sterling File Gateway. For more information, see step 13.

Procedure
1. Close all open Windows programs and any command prompt windows.
2. From the installation media, copy the compressed upgrade package to a location on your desktop.
3. Decompress the upgrade package.
4. Open the `InstallationManager` folder in the directory structure that is created when the installation package is decompressed. Several `IM_OperatingSystem.zip` files are displayed.
5. Decompress the `IM_Win.zip` file. This action creates the `IM_Win` folder.

   Important: Installation Manager V1.8.2 is required to upgrade to Sterling B2B Integrator V5.2.6. If Installation Manager was not used to install your current Sterling B2B Integrator instance, the installation process installs the Installation Manager when you start the upgrade to Sterling B2B Integrator V5.2.6. After successful installation, restart the Installation Manager, and proceed with upgrading to Sterling B2B Integrator V5.2.6.

6. Decompress the `Common_Repo.zip` from the installation package. The action creates two new folders `b2birepo` and `gmrepo`. The `IM_Win`, `b2birepo`, and `gmrepo` folders must be at the same level in a directory.

   Important: `gmrepo` contains the repository file required to install Global Mailbox. For information about Global Mailbox, see Global Mailbox overview.

7. Do one of the following tasks to start the Installation Manager:

   a. Go to the `IM_Win` directory and double-click **userinst.exe** for the following scenarios:

      - If you do not have the Installation Manager installed and are using the Installation Manager agent provided with V5.2.6.
      - If you have a 64-bit Installation Manager installed.

   b. Go to `<installation directory>\Installation Manager\eclipse` and double-click **IBMIM.exe**, if you have 32-bit Installation Manager installed on your Windows system.

   Important: It is suggested to record a response file. The response file can be used to install Sterling B2B Integrator after applying database schema manually or install second and subsequent nodes in a cluster. For more information, see Installing or updating with a response file.

8. On the Installation Manager home page, click **Install**.

   Important: If `IM_<operating_system>` and `b2birepo` directories are not in the same directory or if you already have Installation Manager installed, then you get a message saying that there no packages to install or Installation Manager could not connect to the repositories. You must add the Sterling B2B Integrator repository files to the Installation Manager repository. For more information about adding repository files, see Repository preferences.

9. On the Install Packages screen, select **IBM Sterling B2B Integrator**. This action selects the versions also. Click **Next**.

10. Review the license agreement and select the option **I accept the terms in the license agreements** to continue.

    If you do not accept the agreement, the upgrade process is canceled.

11. Select a location for the Shared Resources directory and a location for the Installation Manager to reside:

    a. Specify a **Shared Resources Directory**.

    b. (Optional if previously installed) Specify an **Installation Manager Directory**.

       Note: The Shared Resources directory cannot be a sub-directory of the Installation Manager installation.

       The specified Shared Resources and Installation Manager directories must be empty.

12. Choose **Create a new package group** and specify the path to Sterling B2B Integrator installation directory.

13. Select the required features to be installed. The available options are:

    - **Sterling B2B Integrator**
    - **IBM Sterling File Gateway**

      Important: If your current installation includes Sterling File Gateway, then Sterling File Gateway is also updated to V 2.2.6 when upgrading to Sterling

B2B Integrator V5.2.6. If Sterling File Gateway was not installed, it is not installed when upgrading to Sterling B2B Integrator V5.2.6, when you select the **IBM Sterling File Gateway** option. In this case, to install Sterling File Gateway when upgrading, you must do one of the following tasks:

– When upgrading Sterling B2B Integrator, if you are installing Sterling B2B Integrator to a fresh directory, and pointing to the previous database, then you can install Sterling File Gateway V2.2.6.

– Use `InstallService` to install Sterling File Gateway. For information about installing Sterling File Gateway by using `InstallService`, see Installing Sterling File Gateway (V2.2.6 or later).

- **FIPS Module**
- **AS2 Edition Module**
- **Financial Services Module**
- **EBICS Banking Server Module**
- **B2B Advanced Communications Integration Module**

Important: When upgrading to Sterling B2B Integrator V5.2.6, select **B2B Advanced Communications Integration Module** to install Sterling B2B Integrator bridge. Sterling B2B Integrator bridge is required for communication between Sterling B2B Integrator and B2B Advanced Communications. If you are installing Global Mailbox and Sterling B2B Integrator, then **B2B Advanced Communications Integration Module** (Sterling B2B Integrator bridge) is installed by default, because Global Mailbox uses the storage module of B2B Advanced Communications. However, you must configure the adapter containers and adapters for Sterling B2B Integrator bridge after upgrading.

Important:

Sterling B2B Integrator is selected by default. Select only the licenses and features that were defined by your IBM contract. If you are unsure which to select, the installation can proceed without a selection and complete successfully. Startup and operation of the software, however, requires one of the licenses to be selected. See "License modifications" on page 58 to apply licenses after the installation.

Features that are not part of your current Sterling B2B Integrator installation are disabled and you cannot select them when upgrading or applying a fix pack. To include them in your Sterling B2B Integrator setup, you must first upgrade to the current version, and then install them separately. If the fix pack or upgrade JAR includes updates to features that are part of your current Sterling B2B Integrator installation, the features are upgraded regardless of whether you select the them or not.

Important: If you are upgrading to Sterling B2B Integrator from a previous version, you must manually install the EBICS client. For more information about installing the EBICS Client manually, see the *EBICS Client User Guide.*

14. Enter the full path to the **JDK directory**.
15. Specify the configuration for the features to install and click **Next**.
    - **FIPS Compliance Mode (Must enable FIPS Module)**
    - **NIST 800-131a Compliance Mode**
      - **off** (default value)
      - **strict**

- **SPE Integration Module (Requires pre-install of SPE, WTX optional)**

  If you select the SPE option, you are prompted for the following information:

    - SPE installation directory
    - (Optional) WebSphere Transformation Extender (WTX) installation directory
    - SPE UI port

  For more information, see the documentation for the integration of Sterling B2B Integrator and SPE.

16. Enter the full path to your **JCE file**.
17. Enter your **Installation panel properties** information:
    a. Enter the explicit IP address for the server or use the default value of localhost.
    b. Enter the Initial Port number or use the default value of 8080.
18. Enter your **System Passphrase** information:
    a. Enter a passphrase.
    b. Confirm the passphrase.
19. Enter you **E-Mail Information**:
    a. Enter the E-mail address to which you want system alert messages sent.
    b. Enter the SMTP mail server (IP address or host name) that you want to use for system alert messages and other administrative notices.
20. Specify if you want to **Enable FIPS** (Federal Information Processing Standards) mode, select the check box. The default is FIPS mode is disabled.
21. Select the database vendor you want to use:
    - Oracle
    - Microsoft SQL Server
    - DB2
    - MySQL

    Clustering is not supported for Sterling B2B Integrator systems that use the MySQL database, even though it appears as an option.
22. Select all options that apply to this node:

Choices:	Action
This installation is for a cluster node 2 or higher (Not applicable for MySQL)	- For node 1: Do not select the check box. - For node 2 or higher: Select the check box. **Important:** In a cluster setup, if you are upgrading to a new installation directory, run the **startCluster** command after installing the first node (node 1) from the \install_dir\install\bin directory, on the host where you installed the node. The syntax is startCluster.cmd *nodeNumber true*. Replace *nodeNumber* with *1*. After you run the **startCluster** command for the first node, the subsequent nodes will have clustering automatically started by the installer when they are installed. If you are upgrading in the existing installation directory, then it is not required to run the **startCluster** command.

Choices:	Action
Apply database schema automatically? (Not applicable for MySQL)	If yes, no action required. The default is to automatically apply the DDL statements. If you want to manually create the database schema, then clear the **Apply database schema automatically** check box and continue with the remaining upgrade steps. **Important:** Once the upgrade starts, it runs for a short time and stops without error. When the upgrade stops, you must perform additional actions as given in Step 29 of this procedure.

23. Enter the **Database Connection Information**.
    - Database user name.
    - Database password (and confirmation).
    - Database catalog name.
    - Database host name.
    - Database port.
    - For Oracle, Microsoft SQL Server, and MySQL - Absolute path and file name for one JDBC driver file.
    - For DB2 - Absolute path and file name for the JDBC driver file. Use the Type-4 JDBC driver. This type of driver converts JDBC calls into the network protocol used directly by DB2, allowing a direct call from the system to the DB2 server.
24. Click **Add** to browse to the file location for the appropriate JDBC driver.
25. Click **Test** next to the database driver path.

    Important: The Installation Manager must successfully validate the connection to the database before you can continue with the upgrade. If there is a validation failure you can view the system log to determine more information about the failure. Perform the following:
    a. Identify the location of the user's application directory. Select **Start -> Run** and enter %APPDATA%.
    b. Navigate to the user's application directory: *local_path*\IBM\Installation Manager\logs
    c. Open the **index.xml** file in a browser.
    d. Identify the log file based upon the timestamp of when you started your upgrade.
    e. Click on the install file to view a listing of errors that occurred during that upgrade.
26. Determine what **Other options** apply to this installation. Select the applicable options:
    - **Verbose install**
    - **This installation is an upgrade from a prior version** - Select this option.

      Important: After you select the upgrade option, an additional option is displayed.
    - **Would you like to run upgrade pre-check?** - To run the pre-check, click **Test**.

27. Specify the **Performance configuration** that applies to this upgrade. Select the applicable options:

- **Number of Processor Cores** - Accept default value or enter appropriate value.
- **Physical Memory (MB) allocated to Sterling B2B Integrator** - Accept default value or enter appropriate value.

28. Review the installation package summary information

29. Click **Install** to continue.

   Important: If you did not select the option to **Apply database schema automatically** , the installation stops and you must perform these additional steps to complete the installation with manual DDL statements:

   a. Navigate to your install directory.

   b. Locate the InstallSI.log file and open it with a file editor.

   c. Search the file for these error messages:

   - <SI_Install>/repository/scripts/EFrame_IndexAdds.sql must be applied to the database.
   - <SI_Install>//repository/scripts/EFrame_Sequence.sql must be applied to the database.
   - <SI_Install>//repository/scripts/EFrame_TableChanges.sql must be applied to the database. Exiting installation..."

   Important: If you do not find the above error messages in the log file, the installation failed because of another reason and you must resolve that error and attempt the installation again. If you did find these messages, continue with the remaining steps.

   d. Edit each .sql script and make changes appropriate for your database. This may include changing the SQL delimiter or adding tablespace options.

   e. Log in to your database as the DB schema user.

   f. Execute the SQL files manually in this order:

   Important: When you are executing the scripts, it is important to execute the SQL scripts in the specified order.

   - EFrame_IndexDrops.sql
   - EFrame_TableChanges.sql
   - EFrame_IndexAdds.sql
   - EFrame_TextIndexAdds.sql
   - EFrame_Sequence.sql
   - EFrame_TextIndexModify.sql
   - EFrame_TextIndexUpdates.sql
   - EFrame_TextIndexUpgrade.sql
   - EFrame_Static.sql

   Important: ActiveMQ uses dynamically generated table names based on the name of the install node. Table generation is not included in the above scripts, but is performed automatically during the initial start of Sterling B2B Integrator or when a new cluster node is added. Table generation may fail if security restrictions have reduced the Sterling B2B Integrator database user permissions. To avoid this issue, ensure that the DBADM

role permissions are enabled during the initial startup. If further issues arise, contact IBM customer support for guidance.

   g. Exit from the database.

   h. Navigate to the parent directory of *install_dir*.

   i. Uninstall the Sterling B2B Integrator offering to clear out the Installation Manager metadata about the installation, and the delete (or rename as a backup) the Sterling B2B Integrator installation directory.

   j. Restart the installation wizard and provide the same installation options that you provided before you cleared the **Apply database schema automatically** check box. If you have recorded a response file (as suggested in step 8), you can use the response file to install Sterling B2B Integrator.

The **Installation Progress** screen indicates which component of the installation is currently in process.

A status bar below the **Repository Information** heading displays the progress of component installation. When the installation completes, a large green circle with a checkmark displays with the message `The packages are installed`. A link is provided to view the installation log file.

The installation completes automatically. When the installation is finished, the system displays a dialog box with the message `The install completed successfully`.

Installation information is in the InstallSI.log file.

30. Click **Finish**. The Installation Manager closes and you are returned to your desktop.

   Check the **InstallSI.log** to verify all the components have installed properly.

   You will need to perform the *Configure the Sterling B2B Integrator Desktop Icon for Windows Server 2008* procedure if you use Windows Servers 2008.

31. Upgrade each subsequent node, from node 2 onwards. Navigate to your working directory. For example, `cd` *parent_install* directory.

32. You need to start the Installation Manager for each additional node, click:

   install.exe You will follow the same steps as you did for node 1 until you get to Step 19. When prompted, select the **This installation is for a cluster node 2 or higher** check box.

33. If you used different base ports for node 2 onward, you need to complete the following additional steps:

Step	Action	Your Notes
1	Navigate to *install_dir*\install\properties for node 1.	
2	In the noapp.properies_platform_ifcresources_ext file, record the value for multicastBasePort.	
3	In the jgroup_cluster.properties file, record the value for mcast_port.	
4	For each subsequent node, you need to perform the remaining steps.	
5	Navigate to *install_dir*\install\properties for each node (node 2 and higher).	

Step	Action	Your Notes
6	In the noapp.properies_platform_ifcresources_ext.in file, update the value of the multicastBasePort to match the value for node 1. For example, replace the string &MULTICAST_NODE_PORT1; with the port number 45460: • (before) `multicastBasePort=&MULTICAST_NODE_PORT1;` • (after) `multicastBasePort=45460`	
7	In the `jgroups_cluster.properties.in` file, update all occurrences of the **mcast_port** property to match the value for node 1.	
8	After you have updated the attributes for all of the nodes, enter: *install_dir*\install\bin\setupfiles.cmd for node 2 and higher.	

34. After the cluster configuration is complete, go to the *install_dir*\install\bin directory for each node, starting with the first node, enter:

    `StartWindowsService.cmd`

    When prompted, enter the passphrase that you entered earlier.

    The final startup processes run, concluding with the following messages:

    Open your Web browser to http://host:port/dashboard, where host:port is the IP address and port number where Sterling B2B Integrator resides on your system.

    Depending on system load, it may take several minutes for the user interface to be ready.

    Make a note of the URL address so that you can access Sterling B2B Integrator later.

    To make a dynamic addition of new nodes to the cluster, install new nodes to the cluster as described above and configure the servers for the cluster.

35. Determine whether you need to apply a fix pack or interim fix to the installation. For information about fix pack or interim fix installation, see "Applying a Fix Pack (V5.2.6 or later)" on page 625 and "Applying an interim fix (V5.2.6 or later)" on page 635.

Configure the Sterling B2B Integrator Desktop Icon for Windows Server 2008: About this task

User Access Control (UAC) is a security component in Windows Server 2008. If you enable the UAC, it affects the installation process and the daily processing for Sterling B2B Integrator. If you disable the UAC, which requires a reboot, the installation process and daily processing for Sterling B2B Integrator remains the same as in previously supported Windows version.

If you installed or upgraded Sterling B2B Integrator on a Windows Server 2008 and you created a desktop icon for Sterling B2B Integrator, you must complete this task in order for the desktop icon to work.

Procedure

1. Right-click on the Sterling B2B Integrator **desktop icon**.
2. Click **Properties**.
3. In the Shortcut tab, click **Advanced**.

4. Select the check box for **Run as Administrator**.
5. Click **OK** to apply the changes to Advanced Properties.
6. Click **OK**.

Validate the Software

Validate the Cluster Upgrade Checklist: As part of the upgrade, you need to run the following tests to ensure that the software upgrade was successful. All of the following tests are not required. Complete the following tasks:

Number	Validate Cluster Upgrade Task	Completed
1	Verify the Cluster Environment Settings in Property Files.	
2	Configure the Nodes in Windows Cluster.	
3	Start the Windows Cluster.	
4	Access Sterling B2B Integrator.	
5	Validate the Installation (Sample Business Process).	
6	Verify the Cluster is Running from the User Interface.	
7	Stop a Node in the Windows Cluster Configuration.	
8	Stop Sterling B2B Integrator (Windows Cluster).	
9	Stop Sterling B2B Integrator in a Windows Cluster Environment (Hardstop or Softstop).	
10	Restart the Windows Cluster.	

Determine If You Need to Apply a Fix Pack (Windows):

Fix Packs contain cumulative fixes for a specific version of Sterling B2B Integrator.

About this task

Fix packs are available on the IBM Fix Central web site. Because each fix pack contains the fixes from previous fix packs, you only need to install the most recent fix pack.

Note: During installation, the dbVerify utility compares the list of standard indexes with those present in the database and drops the custom indexes. You should recreate the custom indexes after the installation is complete.

Fix packs are named using the following naming convention:

si_*<release number>_<build number>*.jar

Before you install the fix pack, review the following items:
* Preserve your custom changes to system resources.
* The installation may use one or more property override files. These files will be named *propertyFile_patch*.properties. Do not alter these files.
* Property changes made directly in *.properties or *.properties.in files may be overwritten during the installation. Properties overridden using the customer_overrides.properties file are not affected. IBM recommends that you maintain property file changes using (when possible) the customer_overrides.properties file. For more information about this file, refer to the property file documentation.

- If you edited any of the cdinterop files, you must back them up before applying the fix pack. The cdinterop files do not have initialization (*.in) files. After applying the fix pack, use the backup version of the files in your installation. These files include the following files: cdinterop-proxy-records.properties; cdinterop-spoe-auth.properties; cdinterop-spoe-policy.properties; and cdinterop-user-records.properties.
- Information about the installation is automatically logged to *install_dir*\install\logs\InstallService.log.
- If you need to rollback a fix pack, see the *Fix Pack Change Report*.

Verifying the cluster environment settings in the properties files:

Procedure

To verify the cluster environment is correct, check these properties file settings on node 2:
1. Verify that the value CLUSTER=true is in the sandbox.cfg property file.
2. Verify that the value CLUSTER=true is in the centralops.properties property file.
3. Verify that the value CLUSTER=true is in the noapp.properties property file.
4. Verify that the value cluster_env property=true is in the ui.properties property file.

Configure the Nodes in Windows Cluster:

The first time that you configure a cluster, you need to use the **startCluster** command with true option (startCluster.sh *nodeNumber* true).

About this task

The first time you configure a cluster, you need to use the **startCluster** command with true option (startCluster.sh *nodeNumber* true). Initial configuration should be the only time you need to use the **startCluster** command. However. if you need to use the command again, use the **startCluster** command with the false option (startCluster.sh *nodeNumber* false). The false option prevents any configuration changes from affecting the system, especially after installation of a fix pack or interim fix.

Important: For Sterling B2B Integrator V5.2.6 or later, you must run the **startCluster** command after installing the first node (node 1) on the host where you have installed the node. After you run the **startCluster** command for the first node, the subsequent nodes will have clustering automatically started by the installer when they are installed.

To configure the nodes in a Windows cluster environment, you need to perform the following task for each node, starting with node 1:

Procedure
1. Navigate to *install_dir*\install\bin for the node.
2. Enter startCluster.cmd <nodeNumber> <true or false>. Where <nodeNumber> is the number of the node, true performs database updates and false prevents database updates. For example for node 1, enter startCluster.cmd 1 true.

3. Enter `startWindowsService.cmd`. Perform this step for each node. The final startup processes run, concluding with the following message: `Open your Web browser to http://host:port/dashboard` where *host:port* is the IP address and port number on your system.

4. Record the URL address so that you can access Sterling B2B Integrator.

Starting Sterling B2B Integrator in a Windows cluster environment:

After you run the upgrade software, you can start Sterling B2B Integrator.

Before you begin

If you are starting Sterling B2B Integrator after you upgrade the application from version 5.1.0.4, change the values of the following properties in the `centralops.properties` file to 600. This action prevents the **StartWindowsService.cmd** command from timing out before Sterling B2B Integrator starts. The `centralops.properties` file is in the *install_dir*\install\properties directory.

- **OpsServer.commandTimeout**
- **PassPhrase.urlTimeout**

About this task

Perform this task for each node in the cluster, starting with node 1.

Procedure

1. Open the *install_dir*\install\bin directory.
2. Enter `startWindowsService.cmd`.
3. Enter your passphrase.
4. The final startup processes run, concluding with the following message: `Open your Web browser to http://host:port/dashboard`

   Where *host:port* is the IP address and port number where Sterling B2B Integrator is located on your system.

   Depending on system load, it might take several minutes for the UI to be ready.
5. Record the URL address so that you can access Sterling B2B Integrator.

What to do next

If you need to release all the locks in a cluster and both nodes are down, use the `restart` parameter for node 1.

Note: The `restart` parameter can be used on only node 1. It cannot be used on any other nodes.

For example:

For node 1, enter:

`startWindowsService.cmd restart`

For node 2 and higher, enter:

`startWindowsService.cmd`

Accessing Sterling B2B Integrator:

You can access Sterling B2B Integrator through a web browser.

Procedure

1. Open a browser window and enter the address that is displayed at the end of the start.
2. On the login page, enter the default user ID and password. The default login is at an administrative level. One of your first tasks as an administrator is to change the administrative password and to register other users with other levels of permission.

Validating the installation with a sample business process:

You can validate the installation by testing a sample business process.

Procedure

1. From the **Administration Menu**, click **Business Process** > **Manager**.
2. In the **Process Name** field, type `Validation_Sample_BPML` and click **Go!**
3. Click **execution manager**.
4. Click **execute**.
5. Click **Go!** The `Status: Success` message is displayed on the upper left side of the page.

Verifying from the user interface that the cluster is running:

You can use the user interface to verify that the cluster is running, including queue information and adapter status.

Procedure

1. From the **Administration Menu**, click **Operations** > **System** > **Troubleshooter**. Ensure you can view the Queue information for each node.
2. From the **Administration Menu**, click **Operations** > **System** > **Troubleshooter**. Ensure you can view the JNDI Tree for each node.
3. From the **Administration Menu**, click **Operations** > **System** > **Troubleshooter**. Ensure you can view the host, state, status, adapters, and memory usage information for each node.
4. From the **Administration Menu**, click **Operations** > **System** > **Troubleshooter**. Ensure you can view the adapter status for each node.

Stop a Node in the Windows Cluster Configuration (Hard Stop):
About this task

You can stop a single node Sterling B2B Integrator in a Windows cluster environment. To run a hardstop, perform this task for each node:

Procedure

1. Navigate to *install_dir*\install\bin.
2. Enter `StopWindowsService.cmd`.
3. Enter your passphrase. You can also perform this task by selecting **Operations** > **System** > **Troubleshooter**. Then click the **shutdown** link for the node you want to stop.

Stop Sterling B2B Integrator (Windows Cluster):
About this task

To stop the entire cluster in a Windows environment:

Procedure
1. From the Administration Menu, select **Operations > System > Troubleshooter**.
2. Click **Stop the System** and wait for shutdown to complete.

Stop Sterling B2B Integrator (Hardstop Windows):
About this task

To stop Sterling B2B Integrator in a Windows environment:

Procedure
1. Navigate to *install_dir*\install\bin.
2. Enter `StopWindowsService.cmd`. Your should receive a message that services have been stopped. Services include Noapps, Opsserver, WebDav, and Database-related service.

Stop Cluster (Softstop Windows):
About this task

Soft stop in a cluster environment suspends all scheduled bushiness processes. It is recommended to run the hardstop command on each of the nodes.

To soft stop the cluster:

Procedure
1. Navigate to *install_dir*\install\bin.
2. Enter `softstop.cmd`. You should receive a message that services have been stopped. Services include Noapps, Opsserver, WebDav, and Database-related service.

   For more information about the softstop command line options, refer to the performance management documentation.

Restart the Windows Cluster:
About this task

To restart the entire cluster in a Windows environment:

Procedure
1. Navigate to *install_dir*\install\bin.
2. Enter `startWindowsService.cmd restart`.

What to do next

If you need to release all the locks in a cluster and both nodes are down, use the `restart` parameter for **Node 1**.

Note: The `restart` parameter can only be used on **Node 1**. It cannot be used on any other nodes.

For example:

For **Node 1**, enter:

`startWindowsService.cmd restart`

For **Nodes 2 and higher**, enter:

`startWindowsService.cmd`

Post Upgrade Configuration

Post upgrade configuration checklist (Windows cluster):

After the upgrade software finishes running, you must perform some post upgrade procedures.

Review all of the procedures in the checklist. Some procedures might not be required.

Task number	Task	Your notes
1	Upon upgrade, all default user accounts are reset to their default value. For security purposes, the system administrator should update all default user account passwords immediately after upgrade is completed. See "Changing default user account passwords" on page 40.	
2	"Determine If You Need to Apply a Fix Pack (Windows)" on page 357	
3	"Configure Cluster Environment in Windows" on page 365	
4	"Change the Network Interface Bindings (Windows)" on page 366	
5	"Disable Services" on page 366	
6	"Download of the Sterling B2B Integrator tools" on page 43	
7	"Enable Business Processes" on page 367	
8	"Property files configuration in a Windows environment" on page 44	
9	"Add cdinterop Files" on page 367	
10	"Updating the sandbox.cfg file with a new JCE file" on page 368	
11	"Update the sandbox.cfg file for an IPv4 Address" on page 43	
12	"Add Third-Party Libraries" on page 368	
13	"Review the EDI Sequence Check Queue" on page 368	
14	"Configure Document File Systems" on page 369	
15	"Configure Services and Adapters" on page 369	
16	"Configure JDBC Adapter and Lightweight JDBC Adapter" on page 369	
17	"Configure File System Adapter and Command Line2 Adapters" on page 370	
18	"Configure Odette FTP Adapter" on page 370	

Task number	Task	Your notes
19	"Restore Performance Tuning Configuration" on page 373	
20	"Add Advanced File Transfer Tab" on page 373	
21	"Reconfigure Archive Settings" on page 373	
22	"Correct Missing Manager IDs" on page 374	
23	"Update the Database (dbupdate) with the startCluster Command" on page 374	
24	"Manage Nodes in a Cluster" on page 45	
25	"JMS Cluster Configuration for Failover" on page 41	
26	"Configure ActiveMQ for a Cluster Environment (Windows)" on page 42	
27	"Configure Shared File Systems as Document Storage (Windows Cluster)" on page 44	
28	"Add host[port] From all the Nodes to the jgroups_cluster.property.in for Each Node" on page 44	
29	"Configure JVM Containers" on page 378	

Changing default user account passwords:

When you install Sterling B2B Integrator, several default user accounts are automatically created to get you started. One of the first actions you must take after installation is to update these accounts with unique passwords, because the default ones can be known by all Sterling B2B Integrator customers.

About this task

Default user account passwords are preset at installation. For security purposes, the system administrator should update all default user account passwords immediately after installation is completed.

Default user accounts are listed below in the same order as they appear in the UI under **Accounts > User Accounts > List All**. You can use this table to track the user accounts you want to update.

User Account Name	Update password
MBX_daemon	
admin (*)	
aft_user (*)	
anon	
as2_user	
commandlineuser	
dash_oper (*)	
dash_part (*)	
dash_prtspon (*)	
dash_sponsor (*)	
fg_architect	

User Account Name	Update password
fg_operator	
fg_provisioner	
fg_sysadmin (*)	
gmbx_user	
ja_turbine	
jane	
jane_doe	
joe_employee	
joe_manager	
joe_supplier	
john	
sd_buyer	
sd_supplier	
turbine	
ws_buyer	
ws_director	
ws_employee	
ws_finance	
ws_hr	
ws_manager	
ws_purchaser	
ws_supplier	

(*) denotes a super user

To change the password for a user account, perform the following tasks.

Procedure
1. Log into Sterling B2B Integrator using ID = `admin` and password = `password`.
2. Go to **Accounts > User Accounts**. Under the List section click **Go!** All default user account names are listed.
3. Click **Edit** next to the user account name you want to update the password for.
4. In the New Password and Confirm New Password fields, enter a new, secure password for this User ID.

   Note: Passwords must be at least six characters long.
5. Click **Save** and **Finish**.

What to do next

Repeat steps 3 - 5 for all user account names you want to update.

Determine If You Need to Apply a Fix Pack (Windows):

Fix Packs contain cumulative fixes for a specific version of Sterling B2B Integrator.

About this task

Fix packs are available on the IBM Fix Central web site. Because each fix pack contains the fixes from previous fix packs, you only need to install the most recent fix pack.

Note: During installation, the dbVerify utility compares the list of standard indexes with those present in the database and drops the custom indexes. You should recreate the custom indexes after the installation is complete.

Fix packs are named using the following naming convention:

si_*<release number>*_*<build number>*.jar

Before you install the fix pack, review the following items:
*   Preserve your custom changes to system resources.
*   The installation may use one or more property override files. These files will be named *propertyFile_patch*.properties. Do not alter these files.
*   Property changes made directly in *.properties or *.properties.in files may be overwritten during the installation. Properties overridden using the customer_overrides.properties file are not affected. IBM recommends that you maintain property file changes using (when possible) the customer_overrides.properties file. For more information about this file, refer to the property file documentation.
*   If you edited any of the cdinterop files, you must back them up before applying the fix pack. The cdinterop files do not have initialization (*.in) files. After applying the fix pack, use the backup version of the files in your installation. These files include the following files: cdinterop-proxy-records.properties; cdinterop-spoe-auth.properties; cdinterop-spoe-policy.properties; and cdinterop-user-records.properties.
*   Information about the installation is automatically logged to *install_dir*\install\logs\InstallService.log.
*   If you need to rollback a fix pack, see the *Fix Pack Change Report*.

Configure Cluster Environment in Windows:
About this task

For each node in the cluster, starting with node1:

Procedure
1. Navigate to *install_dir*\install\bin.
2. On each node, starting with node 1, run the `command startCluster.cmd` nodeNumber. Where nodeNumber is the sequential number assigned to each node starting with 1. For example, on the first two nodes, you would run the following commands:

    For Node 1:

    `startCluster.cmd 1`

    When the cluster environment is configured, you will get the message *BUILD SUCCESSFUL.*

    For Node 2:

    `startCluster.cmd 2`

    Enter the passphrase.

When the cluster environment is configured, you will get the message *Deployment to application server successful*.

Change the Network Interface Bindings (Windows):
About this task

To increase the security of the Administrator Console user interface, Sterling B2B Integrator binds only to specific network interfaces. After installing, if the URL returns the error message **Page cannot be displayed**, you can adjust property settings to correct the problem.

To update the property settings:

Procedure

1. On the server where Sterling B2B Integrator resides, edit the noapp.properties_platform_ifcresources_ext.in file.
2. Locate the admin_host parameter.

   Where *hostname1* is the name of primary network interface, the one given highest priority by Sterling B2B Integrator.

   Where *localhost* is the name of the network interface on the server where Sterling B2B Integrator resides.

   ```
   admin_host.1 = hostname1
   admin_host.2 = localhost
   ```
3. If no interface is being displayed, edit hostname1 so that it correctly identifies the primary network interface that accesses Sterling B2B Integrator.
4. If an additional network interface needs to access Sterling B2B Integrator, add an additional admin_host entry. For example:
   - `admin_host.1 = hostname1`
   - `admin_host.2 = localhost`
   - `admin_host.3 = hostname2`
5. Stop Sterling B2B Integrator.
6. Navigate to *install_dir*\install\bin.
7. Enter setupfiles.cmd.
8. Restart Sterling B2B Integrator.

Disable Services:
About this task

The upgrade process enables services that might have been disabled before the upgrade. If you want to disable these services again, you must disable them in after the upgrade process.

Download of the Sterling B2B Integrator tools:

After you install Sterling B2B Integrator, you can install tools like the Map Editor and the Graphical Process Modeler (GPM).

Sterling B2B Integrator includes tools that run on a desktop or personal computer. After you install Sterling B2B Integrator, you can install the following tools:
- Map Editor and associated standards

Note: The Map Editor requires a 32-bit JDK. This JDK is not provided with the product download or media. For more information, see *System Requirements*.
- Graphical Process Modeler (GPM)
- Web Template Designer
- (If licensed) MESA Developer Studio plug-ins, including MESA Developer Studio Software Development Kit (SDK) and MESA Developer Studio Skin Editor
- (If licensed) Reporting Services, which require MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports

Attention: Conflicting IP addresses can cause problems when you download a desktop tool.

Enable Business Processes:
About this task

During the upgrade process, your customized business processes are preserved, but they may not be the default business process. Review the business processes and enable the customized versions.

Property files configuration in a Windows environment: Property files contain properties that control the operation of Sterling B2B Integrator. For example, the REINIT_DB property in the sandbox.cfg file controls whether or not a database is initialized when you install Sterling B2B Integrator.

By modifying the values of these properties, you can customize the Sterling B2B Integrator to suit your business and technical needs. Most property files are in the *install_dir*\\install\\properties directory.

After installing Sterling B2B Integrator, most property files and scripts do not need any further configuration for basic operation. However, if you want to customize any specific operations, for example setting a different logging level - you will need to edit (or in some cases, create) certain property or .xml files.

Before changing any property files, refer to the *Working with Property Files* documentation for general information about how to work with Property Files.

Areas where you might need to make specific property files changes after an installation include:
- LDAP user authentication
- Prevention of cross-site script vulnerabilities
- Logging configuration
- Process-specific property file settings

Add cdinterop Files:
About this task

During the upgrade, the cdinteropt files were replaced. Copy the customized version into the upgrade.

Updating the sandbox.cfg file with a new JCE file:

If you upgrade from Sterling B2B Integrator release 5.2.4.2 and you change the JDK from Sun to IBM, you must manually update the Java Cryptography Extension (JCE) policy file information in the `sandbox.cfg` file.

Procedure
1. Open the *install_dir*\install\properties directory.
2. Open the `sandbox.cfg` file.
3. Change the **JCE_DIST_FILE** property to the path to the JCE file that you specified during the upgrade.
4. Save and close the `sandbox.cfg` file.
5. Open the *install_dir*\install\bin directory.
6. Enter the `setupfile.cmd` command to update your installation with the new **JCE_DIST_FILE** property value.

Update the sandbox.cfg file for an IPv4 Address:
About this task

To update the sandbox.cfg file for an IPv4 address (complete this task for each node in the cluster):

Procedure
1. Navigate to the properties file directory for each node.
2. Open the sandbox.cfg file.
3. Add the following line to the file.

   `IPV4STACK=true`
4. Save and close the file.
5. Navigate to the bin directory for your installation.
6. Run `setupfiles.cmd` to update your installation.

Add Third-Party Libraries:
About this task

If you added third-party libraries to configure adapters for the previous release, you need to add each of the libraries again after you complete the upgrade. See the documentation for each third party adapter you use.

Review the EDI Sequence Check Queue:
About this task

The EDI Sequence Check Queue is used for X12 and EDIFACT sequence and duplicate checking. You can check the contents of the queue through the UI (**Trading Partner > Document Envelopes > EDI Sequence Check Queue**). Any interchanges that are in the queue will not be able to be processed after upgrade because the EDI compliance report serialized format has changed.

The EDI Post Processor displays the following error:

```
The compliance report for interchange <interchange document ID> could not be
deserialized because the format has changed. The entry for this interchange
should be manually removed from the EDI Sequence Check Queue through the UI,
and the inbound deenvelope workflow should be rerun (WF ID <wfid>).
```

If you receive this error, you should follow the instructions in the error message to correct the situation.

Configure Document File Systems:
About this task

If you use a File System as your document storage method, determine and record the path to the File System.

You will need the File System path structure so that after the upgrade, you can copy/mount the documents to the new installation directory. The directory structure (path to the File System) must be the same in the current and in the upgraded system.

Configure Services and Adapters:
About this task

You may need to reconfigure services and adapters after an upgrade. During an upgrade, packages for services and adapters are reprocessed to update the service configurations.

After an upgrade, the configurations of default adapters and services are re-set to their default configurations. This includes directory paths, which are restored to their default paths. You need to reconfigure those adapters and services, which include, but are not limited to:
- All default FTP adapters
- All default SFTP adapters
- Connect:Enterprise UNIX Server Adapter
- OdetteFTP Adapter
- SAP Suite Adapter
- SWIFTNet Client Service
- SWIFTNet Server Adapter

If you modified the standard configuration for a service or adapter, you may need to reconfigure or reactivate the service or adapter following an upgrade. You may also need to reconfigure adapters that used directories or scripts in the installation directory of your previous release.

Examples of services and adapters that commonly need to be reconfigured following an upgrade include:
- FTP adapter
- System services such as the Alert service and the BP Fault Log adapter

The following adapters need special consideration following an upgrade:
- JDBC Adapter and Lightweight JDBC Adapter
- File System Adapter and Command Line2 Adapters
- Odette FTP Adapter

Configure JDBC Adapter and Lightweight JDBC Adapter:
About this task

Storage locations of the database pool properties that allow the JDBC adapter and the Lightweight JDBC adapter to communicate with your external database have

been streamlined. The poolManager.properties file has been eliminated and some of its pool properties are now included in the jdbc.properties file, along with some new properties. You will need to manually update your existing jdbc_customer.properties.in file to add some new database pool properties. If you do not have a jdbc_customer.properties.in file, create one since customer.properties are not affected by product updates.

Configure File System Adapter and Command Line2 Adapters:
About this task

You must configure your File System and Command Line2 adapters before you remove the previous release directory. Reconfigure any File System and Command Line2 adapters that were configured to use directories or scripts in the installation directory for the previous release. Ensure that you create new directories and save scripts outside of the current installation directory and edit each configuration to use the appropriate directories and scripts.

Consider the following:
- If you are using the Command Line2 adapter and have located the CLA2Client.jar file anywhere other than the default location, you must replace it with the new version. For information about the default location and how to start the Command Line2 adapter, see the *Command Line2 adapter*.
- If you are upgrading to this version of Sterling B2B Integrator from a version lower than 4.0.1 and are using the Command Line2 adapter, you must update the version of the CLA2Client.jar file with the CLA2Client.jar located in the */install_dir*/install/client/cmdline2 UNIX directory or in the *install_dir*\install\client\cmdline2 for Windows. If you installed the CLA2Client.jar file anywhere other than the default location, you must replace each copy of the file with the new version. If you only installed it in the default location, the update occurs automatically during the upgrade process.
- If you are upgrading to this version of Sterling B2B Integrator from a version prior to 4.0 and are using the Command Line adapter, you must update the version of the CLAClient.jar file with the CLA2Client.jar located in the */install_dir*/install/client/cmdline2 UNIX directory or in the *install_dir*\install\client\cmdline2 for Windows. If you installed the CLAClient.jar file anywhere other than the default location, you must replace each copy of the file with the new version. If you only installed it in the default location, the update occurs automatically during the upgrade process.

The CLA instances are now pointing to the CLA2 Service definition. After importing old service instances of CLA onto Sterling B2B Integrator, you need to reconfigure the imported CLA services to re-set the Remote Name and Remote Port service configuration parameters. For more information, refer to the documentation for the Command Line Adapter and Command Line2 Adapter.

Configure Odette FTP Adapter:
About this task

If you use the Odette FTP Adapter and are using the Partner Profile XML file version 2.00 used in Sterling Gentran Integration Suite 4.3, you must modify it to match the new Partner Profile version 3.00. To modify the XML file, refer to the following table:

Section	Name of Structure or Field	Action	Comment
Partner Profiles	<GeneralParameters> <PartnerProfileVersion>3.00 </PartnerProfileVersion> </GeneralParameters>	Use correct version label of the Partner Profile.	New Version label: 3.00
Physical Partner	Description	Add field and description content	Mandatory in OFTP Partner database
Physical Partner	SubMailbox	Add field, if used.	Optional
Physical Partner	<AuthenticationCertificate type ="..."> <Subject>string</Subject> <Issuer>string</Issuer> <Serial> Bignumber_string </Subject> </AuthenticationCertificate>	Add Structure, if used.	OFTP 2.0: Mandatory for security only. Structure may be repeated.
Physical Partner	<AuthenticationCertificate type ="Private Key"> <Subject>string</Subject> <Issuer>string</Issuer> <Serial>Bignumber_string </Subject> </AuthenticationCertificate>	Add Stucture, if used.	OFTP 2.0: Mandatory for security only.
Physical Partner/ CAPI	DWindowSize	Delete field	
Physical Partner/ IP	IPFilter		Uses IPv4 or IPv6 addresses.
Physical Partner IP	SSL	Add field, if used.	OFTP 2.0: Mandatory for security only.
Physical Partner IP	CipherStrength	Add field, if used.	OFTP 2.0: Mandatory for security only.
Physical Partner IP	<SSLCertificate type ="..."> <Subject>string</Subject> <Issuer>string</Issuer> <Serial> Bignumber_string </Subject> </SSLCertificate>	Add structure, if used.	OFTP 2.0: Mandatory for security, only. Structure may be repeated.
Physical Partner Contract	Description	Add field and description content.	Mandatory in OFTP Partner database.

Section	Name of Structure or Field	Action	Comment
Physical Partner Contract	MultipleLoginSessions		Now used.
Physical Partner Contract	DuplicateFilePeriod	Rename DuplicateFileProcessingTestings To DuplicateFilePeriod	
Physical Partner Contract	SessionLogLevel	Add fields.	Optional
Physical Partner Contract	GroupNameList	Add fields, if used.	Optional
Physical Partner Contract	SecureAuthentication	Add fields.	OFTP 2.0: Mandatory
Physical Partner Contract	<TimeScheduleTable> ... <TimeScheduleTable>	Delete structure and create schedules in the Scheduler.	Initiator Business Process and Business Process user fields are still used.
Physical Partner Contract	OdetteFTPAPILevel	Rename OdetteAPILevel to OdetteFTPAPILevel	
Logical Partner	Description	Add field and description content.	Mandatory in OFTP Partner database.
Logical Partner	<FileServiceCertificate type ="..."> <Subject>string</Subject> <Issuer>string</Issuer> <Serial>string</Subject> </FileServiceCertificate>	Add structure, if used.	OFTP 2.0: Mandatory for security, only. Structure may be repeated.
Logical Partner Contract	Description	Add field and description content.	Mandatory in OFTP Partner database.
Logical Partner Contract	FileTransmissionRetries	Rename FileTransmitRetries to FileTransmissionRetries	
Logical Partner Contract	SignedEERPRequest	Add field, if used.	
Logical Partner Contract	EERP/NERPSignatureCheck	Add field, if used.	
Logical Partner Contract	File Signing	Add field, if used.	
Logical Partner Contract	File Encryption	Add field, if used.	
Logical Partner Contract	CipherSuite	Add field, if used.	
Logical Partner Contract	File Compression	Add field, if used.	
Logical Partner Contract	CharEncoding	Add field, if used.	
Logical Partner Contract	Receive VitualFilenamePattern	Add field, if used.	
Logical Partner Contract	EERPTimeout	Rename WaitForEERP to EERPTimeout	

Section	Name of Structure or Field	Action	Comment
Logical Partner Contract	FileScheduleTimeout	Add field, if used.	
Logical Partner Contract	InboundBusinessProcess	Add field, if used.	Optional
Logical Partner Contract	InboundBusinessProcessUser	Add field, if used.	Optional, if no Inbound business process is specified.

After changing the Partner Profile for version 3.00, import the Partner Profile into the new Odette FTP Partner Profile database. For additional information, see Odette FTP Partner Profile.

Restore Performance Tuning Configuration:
About this task

Before you begin this procedure, you need to add the Advanced File Transfer Tab.

To restore the performance tuning configuration:

Procedure

1. From the **Administration Menu**, select **Operations** > **System** > **Performance** > **Tuning**.
2. Next to **Edit Performance Configuration**, click **Go!**
3. Click **Edit settings**.

Add Advanced File Transfer Tab:
About this task

The Advanced File Transfer tab will not be enabled by default after an upgrade. If you have a license for Advanced File Transfer, perform the following steps to add the Advanced File Transfer tab:

Procedure

1. Log in as **Admin**.
2. Click **Manage Layout**.
3. Click **Add Pane**.
4. Enter the following name: `Advanced File Transfer`
5. Click **Apply**.
6. Click the **customize** icon for the new **Advanced File Transfer** tab.
7. Click **Add Portlet**.
8. Select the Add box for **Advanced File Transfer Management**.
9. Click **Apply**.
10. Select **Clear Borders and Title** from the Decoration menu.
11. Click **Save and Apply**.

Reconfigure Archive Settings:

About this task

The upgrade does not automatically reconfigure the archive configuration. You must reconfigure the Backup Directory setting in Archive Manager after an upgrade.

To reconfigure your Archive settings, use the following procedure:

Procedure
1. From the **Administration Menu**, select **Operations** > **Archive Manager**.
2. Next to **Configure Archive Settings**, click **Go!**
3. If a message displays about the UI Lock, click **OK** to continue.
4. Click **Next**.
5. Update the Backup Directory field with the correct path information:
6. Click **Save**.
7. Confirm the settings and click **Finish**.

Correct Missing Manager IDs:
About this task

If you created a Manager ID with no corresponding User ID in your previous version, the Manager ID may be missing after upgrading. If this occurs, create a user in the system with a User ID that matches the missing Manager ID.

Update the Database (dbupdate) with the startCluster Command:
About this task

The `startCluster.sh nodeNumber` command on node 1 will automatically update the database, unless you use the command `startCluster.sh 1 false`. The `startCluster.sh nodeNumber` command on all other nodes will not update the database.

When you configure Sterling B2B Integrator cluster for the first time, you should run the startCluster.sh command with the database update value set to true (startCluster.sh 1 true), or just startCluster.sh 1, since on node 1, dbupdate defaults to true. This makes all cluster-related configurations take effect. The database update will synchronize the scheduled jobs between the nodes by assigning them all to node 1.

The startCluster.sh command with the database update value turned off (startCluster.sh 1 false) prevents any configuration changes from affecting the system, especially after you install a fix pack or interim fix.

The following services and adapters are associated with node 1 in the cluster:
- File System adapter
- Command Line 2 Adapter
- Connect::Direct Server Adapter
- Connect::Direct Requester Adapter
- Connect:Enterprise for UNIX Server Adapter
- HTTP Server adapter
- HTTP Client adapter
- FTP Client adapter

- FTP Server adapter
- SFTP Client adapter

The following services and adapters have storage set to database:
- HTTP Server adapter
- Connect:Enterprise for UNIX Extract Service
- Connect::Direct Server Adapter

The default storage for all of the workflows is set to database.

Manage Nodes in a Cluster:
About this task

You can add or remove nodes in a cluster environment. The following prerequisites should be considered before performing any modification in the cluster environment:
- New nodes should have the same range of ports available as the current nodes.
- Sterling B2B Integrator license file should be updated to include the IP address of the new nodes.
- Directory structure on the new nodes should match with the directory structure of the existing nodes.
- Perimeter servers should be updated with the new IP addresses to ensure proper configuration.
- Any adapters, services, or business processes assigned to or scheduled to run on the node being removed should be assigned to run on other nodes.

Add a Node to the Cluster (Windows):

You do not need to stop the cluster environment while adding a new node.

About this task

To add a node into the cluster:

Procedure
1. Install a new Sterling B2B Integrator node to be added into the cluster during installation. Ensure that the new node being added is not a primary node.
2. Update the jgroups_cluster.properties file and the jgroups_cluster.properties.in file with the new node details.
3. Configure the new node by running the startcluster.cmd nodeNumber from the \install_dir\install\bin directory. The node number should be greater than 1.

   You should run startCluster.cmd only after you install Sterling B2B Integrator. You should not run startCluster.cmd when you restart a Sterling B2B Integrator instance.
4. Start the new node.

Remove a Node from the Cluster:
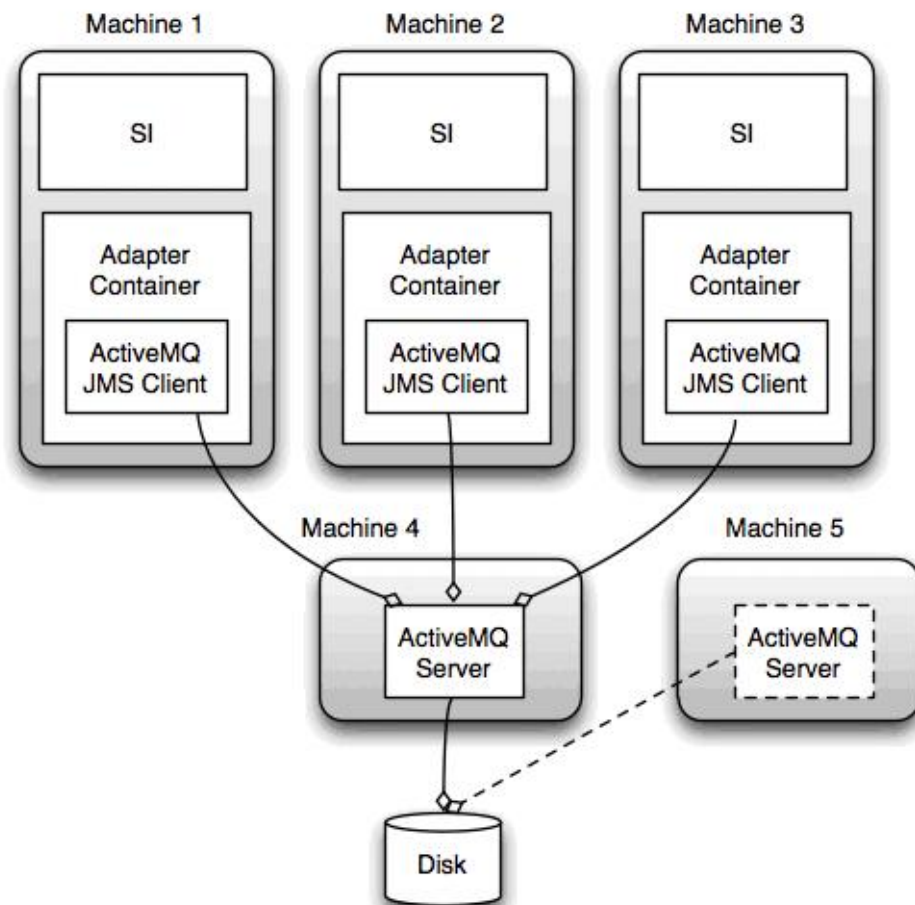**About this task**

To remove a node from the cluster:

Procedure

1. Reassign or stop any adapters, services, or business processes assigned to or scheduled to run on the node being removed.
2. Perform backup of the node being removed.
3. Edit the `jgroups_cluster.properties` file and the `jgroups_cluster.properties.in` file in all nodes to remove the IP address of the node being removed.
4. Restart the cluster environment.

   Important: Start node 1 with the **restart** option to update the node information.

JMS Cluster Configuration for Failover: To allow proper JMS execution and failover in the Sterling B2B Integrator cluster environment, you must configure an external ActiveMQ using the *Configure ActiveMQ for a Cluster Environment* task.

The following diagram illustrates how the ActiveMQ can be configured to increase availability and failover.

Configure ActiveMQ for a Cluster Environment (Windows):

About this task

To configure ActiveMQ for the windows cluster environment:

Procedure

1. Download ActiveMQ 5.2 from http://activemq.apache.org/activemq-520-release.html for the appropriate OS.
2. Deploy an instance of ActiveMQ 5.2. This can be on the same machine as Sterling B2B Integrator or on a separate machine.
3. Navigate to *install_dir*\install\properties.
4. Copy the **activemq.xml** file to the AMQ conf directory. This file configures the ActiveMQ to:
   - Use failover clustering,
   - Use the SI database for storage
   - Configures the AMQ port usage

   By default, ActiveMQ is configured to listen at the Sterling B2B Integrator base port + 64 and the ActiveMQ interface will be at base port + 65 (http://server:base port + 66/admin). The port can be changed by editing the config file directly. The port number must be higher than 1024.
5. Navigate to *install_dir*\install\properties.
6. On each Sterling B2B Integrator node and each Sterling B2B Integrator container node, the queue configuration must be re-directed to utilize the ActiveMQ cluster. In each node, add the following to the customer_overrides.properties:

   For FIFO Processing:

   ```
   fifo.broker.username=
   fifo.broker.password=
   fifo.broker.url=failover:(tcp://amq_master_hostname:amq_master_port,
   tcp://amq_slave_hostname:amq_slave_port)
   ```

   For adapters running in separate JVM containers:

   ```
   iwfcqueue.username=
   iwfcqueue.password=
   iwfcqueue.protocol_config=failover:(tcp://amq_master_hostname:amq_master_port,
   tcp://amq_slave_hostname:amq_slave_port)
   ```
7. Start the ActiveMQ instances. To start ActiveMQ, it is necessary to supply the activemq.hostname property with the hostname for the current system. For example:

   ```
   activemq.bat -Dactivemq.hostname=ExampleHostname
   ```

   See http://activemq.org for additional information about running an ActiveMQ instance.
8. Start Sterling B2B Integrator.

Configure Shared File Systems as Document Storage (Windows Cluster): About this task

To configure the shared file systems as document storage:

Procedure

1. Navigate to *install_dir*\install\properties.
2. Open the jdbc.properties.in file.

3. Update the value of the *document_dir* attribute to point to the shared files system directory where you store documents.

4. Save and close the file.

5. Navigate to *install_dir*\install\bin.

6. Enter `setupfiles.cmd`.

7. Restart Sterling B2B Integrator.

Add host[port] From all the Nodes to the jgroups_cluster.property.in for Each Node:
About this task

Complete this task for both vertical and horizontal clusters. You will need to complete this task for each node, starting with node 1.

Before you begin, it is important to note that you should never override mcast_addr in the jgroup_cluster.properties.

To add the host [port] to the jgroups_cluster.property.in file:

Procedure

1. Navigate to the properties file directory for the node.

2. Determine the initial_hosts port for each node:
   - Navigate to the properties file directory for the node.
   - Find the initial_hosts from the jgroups_cluster.property (initial_hosts=host{port}).
   - Record the value from the initial_hosts for each node.

3. Open the jgroups_cluster.property.in file.

4. Add the initial_hosts property to the file. For example, if node 1 is on host1 and node 2 is on host2. For node 1, you would add:

   `initial_hosts=host1[port1],host2[port2]`

   For node 2, you would add:

   `initial_hosts=host2[port2],host1[port1]`

5. Save and close the file.

Configure JVM Containers:
About this task

After you have upgraded the system, you will need to reconfigure the JVM containers.

Before you reconfigure the JVM containers, you need to know the container numbers from the previous installation.

For example, if you configured the container using the command, setupContainer.sh (or cmd) 1, then the container number is 1.

Use one of the following tasks to reconfigure your containers:
- *Set Up Adapter Container - iSeries*
- *Set Up Adapter Container - UNIX/Linux*
- *Set Up Adapter Container - Windows*

System Maintenance

From time to time, you may need to perform system maintenance activities.

These activities might include any or all of the following:
* Performing a Checksum
* Adding or removing a license

DB Checksum tool:

A checksum is a simple redundancy check used to detect errors in data.

In Sterling B2B Integrator, a verification process compares the checksum between the existing default resource and the resource that was added after applying a fix pack or upgrading. The DB Checksum tool, a resource difference tool generates a granular report of the changes in the system that was not permitted to be set as defaults.

The DB Checksum tool generates the difference in resource checksum between the default resource and the latest system resource from the database.

Perform a Checksum (Windows):
About this task

To run the DB Checksum tool in the Windows environment:

Procedure
1. Navigate to *install_dir*\\bin.
2. Enter db_checksum_tool.cmd [-d] [-i [1 | 2 | 3 | 4 | 5]] [-r [wfd | map | schema | sii | template]] [-o <output file>] [-g]

   Where:

   -d is the mode to dump the difference of resource checksum between the default resource and latest system resource.

   -i is the resource type integer (optional).

   1 is WFD.

   2 is MAP.

   3 is SCHEMA.

   4 is SII.

   5 is TEMPLATE.

   -r is the resource name (optional). For example, wfd, map, schema, sii, or template.

   -o is the file name to output all the messages (optional).

   -g is the file name that lists all the ignored resources (optional).

   -h is the help screen.

   The DB Checksum tool performs the relevant checksum operation based on the command options and generates the output message.

License modifications:

After the installation finishes, you can modify the software licenses that you loaded with the **AddLicenseSet** command.

The **AddLicenseSet** command is in the `bin` directory of your UNIX or Windows installation. After the initial installation, the license files are in the following directories:

- UNIX - /*install_dir*/install/properties/licensefiles
- Windows - *install_dir*\install\properties\licensefiles
- iSeries - /*install_dir*/properties/licensefiles

You can add licenses or review the license list from the UI. On the Administration Menu, click **System** > **B2B Console** > **Operations** > **System** > **Licenses**.

AddLicenseSet Command Parameters

Use the **AddLicenseSet** command to modify a single license file or the entire license file directory.

To use the **AddLicenseSet** command, you must do the following:
- Open the `bin` directory
- Include the absolute path to the license file directory or to a license file

The **AddLicenseSet** command has the following parameters:

AddLicenseSet Parameter	Description
`-reload`	Use this parameter to reload the license files.
	This parameter deletes all of the license files from the database before the new files are loaded. The old license files are saved to the following locations:
	- UNIX - /*install_dir*/install/logs/security/ old_licenses
	- Windows - *install_dir*\install\logs\security\ old_licenses
	- iSeries - /*install_dir*/logs/security/old_licenses
`-upgrade`	Use this parameter during an upgrade only.
	This parameter deletes all of the old license files from the database and installs the new license files. The old license files are saved to the following locations:
	- UNIX - /*install_dir*/install/logs/security/upgrade
	- Windows -*install_dir*\install\logs\security\upgrade
	- iSeries -/*install_dir*/logs/security/old_licenses

The **AddLicenseSet** command will check if Sterling B2B Integrator is running. If it is running, the command will call the Ops server to refresh the license from the database. If you have any problems with your licenses after running the **AddLicenseSet** command, stop and restart Sterling B2B Integrator.

License Modification: Examples:

There are several different ways you can use the **AddLicenseSet** command to modify your licenses.

UNIX Examples

From the *install_dir*/bin directory:

Scenario	Command usage (UNIX example)
Reload a single license file	`./AddLicenseSet.sh /install_dir/install/properties/licensefiles/SI_SFG_License.xml -reload`
Reload all of the license files in the directory	`./AddLicenseSet.sh /install_dir/install/properties/licensefiles/ -reload`
Upgrade a single license file	`./AddLicenseSet.sh /install_dir/install/properties/licensefiles/SI_SFG_License.xml -upgrade`
Upgrade all of the license files in the directory	`./AddLicenseSet.sh /install_dir/install/properties/licensefiles/ -upgrade`

Windows Examples

From the *install_dir*\bin directory:

Scenario	Command usage (Windows example)
Reload a single license file	`AddLicenseSet.cmd\install_dir\install\properties\licensefiles\SI_SFG_License.xml -reload`
Reload all of the license files in the directory	`AddLicenseSet.cmd\install_dir\install\properties\licensefiles\ -reload`
Upgrade a single license file	`AddLicenseSet.cmd\install_dir\install\properties\licensefiles\SI_SFG_License.xml -upgrade`
Upgrade all of the license files in the directory	`AddLicenseSet.cmd\install_dir\install\properties\licensefiles\ -upgrade`

User Documentation

The user documentation is available from an online documentation site on the web.

Providing the documentation in an online environment allows for frequent updates of content that is based on user feedback and usability.

If you need a printed copy of the documentation, you can print topics of information through your Internet browser, or you can download documents in PDF format, after you add it to a collection on IBM Knowledge Center.

To access the documentation site from within Sterling B2B Integrator or one of its tools, select the help icon. The system must reside on a computer that supports Internet access and an Internet browser.

Improving your access to online documentation:

You can improve your access to online documentation by using several methods.

About this task

After you access the IBM Knowledge Center, you can perform the following tasks:
- Enter a word or phrase and search the entire library for information.
- Move through a hierarchy of contents pages to identify the topic you want to read or print.
- Print topics by using your browser's Print function.
- Add documents to your collection and download them in PDF format.

Uninstall Sterling B2B Integrator from a Windows Cluster Environment
Before you begin

If you have installed Sterling B2B Integrator software using IIM, then perform these steps to unregister Sterling B2B Integrator packages from the IIM registry:

* Launch IIM.
* Click **Uninstall** and select the required Sterling B2B Integrator package (Media, FixPack, or Interim Fix).
* Confirm and click **Uninstall**.

About this task

To uninstall Sterling B2B Integrator from a Windows environment, perform the following steps for each node:

Procedure

1. Navigate to *install_dir*\install\bin.
2. Enter StopWindowsService.cmd. Wait for the shutdown to complete. If you begin removing files before all business processes and the system is stopped, you may be unable to remove the software successfully.
3. Back up the file system and database.

   This step is optional. However, by backing up the file system and database, you are ensured that Sterling B2B Integrator is completely recoverable.
4. Remove the installation directory by entering the following command in the parent directory of your installation directory: rd /s /q *install_dir*\install
5. If you use an Oracle, Microsoft SQL Server, or DB2 database, these remain intact even after you remove Sterling B2B Integrator from the server. If you no longer want to reference the data, contact your database administrator about removing unwanted tables and recovering the database space where Sterling B2B Integrator used to reside.
6. Navigate into the _uninst subdirectory of your JDK installation directory.
7. To manually remove the JDK, enter uninstall.cmd.
8. After you remove Sterling B2B Integrator from the server, you can remove Eclipse, and any tools that were downloaded to the desktop, including the following:
   * Map Editor and associated standards

     Refer to the *Map Editor Guide* for information about removing the Map Editor.
   * Graphical Process Modeler

     Refer to the *Graphical Process Modeler Guide* for information about removing the Graphical Process Modeler.
   * Web Template Designer

     Refer to the *Web Extensions Guide* for information about removing the Web Template Designer.
   * (If licensed) MESA Developer Studio plug-ins, including:
     - MESA Developer Studio Software Development Kit (SDK)
     - MESA Developer Studio Skin Editor

     Refer to the *MESA Developer Studio* guide for information about removing MESA Developer Studio.

- (If licensed) Reporting Services, which requires MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports. Refer to the *MESA Developer Studio* guide for information about removing Reporting Services.

Troubleshooting Tips for Windows Environment

Situation	Message or Symptom	Explanation/Resolution
Installing	You encounter errors or problems during installation.	**Explanation** The installation creates several log files that you can use to diagnose problems like the failure of an installation. **Resolution** Examine the log files generated during installation: - ant.install.log (in the *install_dir* directory) - *install_dir*\PreInstallSI.log
Installing	When you entered an absolute path during installation, a message indicated that the command was not found.	**Explanation** You entered an incorrect path. Check the information entered. **Resolution** Enter the correct path.
Installing	IM is installed successfully, but SI Fails to install.	Go to Start Open IM select Help and then Export logs to a file for analysis.

Installing a desktop tool or resource	Cannot download any of the following:
	- Map Editor and associated standards
	- Graphical Process Modeler
	- Web Template Designer
	- (If licensed) MESA Developer Studio plug-ins, including:
	  – MESA Developer Studio Software Development Kit (SDK)
	  – MESA Developer Studio Skin Editor
	- (If licensed) Reporting Services, which requires MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports.
		Explanation
		
		When you install Sterling B2B Integrator, system files are created that contain an internal IP address. If you install Sterling B2B Integrator behind a firewall, and your firewall is configured to accept an external IP address from a client computer, you may not be able to download the desktop tools and resources. The firewall will reject the internal IP address from a client residing outside of the firewall.
		
		Resolution
		
		Modify the system files that contain the invalid IP address. Follow these steps:
		1. Navigate to *install_dir*\install\bin.
		2. Stop Sterling B2B Integrator.
		3. Enter the following command followed by the external IP address:
		   `patchJNLP.cmd external_IP_address`
		4. Restart Sterling B2B Integrator.

Situation	Message or Symptom	Explanation/Resolution
Cluster Installation or Upgrade	When configuring TCPS the following warning can be found in the activemqbroker.log: sun.security.provider.certpath. SunCertPathBuilderException: unable to find valid certification path to requested target	**Resolution** Add the system certificate to the trust store using the KeyTool command.
Cluster Installation or Upgrade	When configuring TCPS the following warning can be found in the activemqbroker.log: Do not mention any SSL cipher in the ActiveMQconfig. xml. oracle.net.ns.NetException: Invalid cipher suites specified.	**Resolution** Do not mention any SSL cipher in the ActiveMQconfig.xml.
e-Invoice Upgrade: Oracle Add Constraint Error	When you upgrade Sterling e-Invoicing and are using an Oracle database, if the upgrade fails with the error message `name is already used by an existing object`, this occurs because the default behavior for the `drop constraint` command changed in Oracle 10.	**Explanation** The index that is used to support the constraint is now only removed if the index was generated by the `create constraint` command. The indexes for Sterling e-Invoicing are always generated from constraints during an install. If you receive this error during a Sterling e-Invoicing upgrade, it is because of how the database was restored, the version of Oracle you are using, and because the Oracle `imp` command exported the indexes and constraints separately. There is no way to determine when the imp command will not add a create index command to the export file if it was generated by a constraint – but if it does add the command, the database restore process loses the association of the constraint and its underlying index. The database script that runs during a Sterling e-Invoicing upgrade executes two steps: 1. First, it drops the unique constraint so the next step can redefine it using additional columns. However, the drop constraint command does not remove the underlying index if the association with its index was lost. 2. The next command that redefines this constraint requires a different index definition, but in this scenario the name of the index the constraint wants to use already exists, which causes the `name is already used by an existing object` error. **Resolution** If you receive this error message, the solution for this problem is to drop the index and rerun the Sterling e-Invoicing upgrade. The drop index command you should use is: `drop index UNQ_EINV_CANON`

Situation	Message or Symptom	Explanation/Resolution
Apply a fix pack or Upgrade	The *install_dir*\install\installed_data directory is created (if clustered, on each node) during an upgrade or applying a fix pack. This directory can become very large and take up needed space on the file system.	**Explanation** The information in this directory is used during upgrade or applying a fix pack, but is not required afterward. The deployment/cleanup tasks for the upgrade or fix pack do not remove this directory. **Resolution** The directory can be manually removed to increase the available space for the file system: 1. Navigate to *install_dir*\install 2. Enter `rd /S installed_data` 3. If prompted to confirm deletion, enter Y for yes.

Windows Non-Cluster Environment Upgrade (V5.2.6 or later)

You can upgrade the Sterling B2B Integrator software in a Windows non-cluster (single node) environment.

CAUTION: Sterling B2B Integrator should be installed behind a company firewall for security purposes. See the *Perimeter Server* and *Security* topics in the Sterling B2B Integration documentation library for more information on secure deployment options.

You should also review the following documents:
- System Requirements
- Release Notes
- What's New
- Installation and Upgrade Information

It is important to remember that upgrading involves a full installation of Sterling B2B Integrator. You need to prepare for an upgrade the same way that you would prepare for an installation. It is also recommended that you thoroughly test this process in a test or development environment prior to implementing in a production environment.

This upgrade does not overwrite your current Sterling B2B Integrator directory structure on disk. Instead, it creates a new installation of Sterling B2B Integrator that will point to and upgrade the database of your current installation of Sterling B2B Integrator. This means your original instance will no longer be operational after performing the upgrade. After the upgrade, you will be starting your Sterling B2B Integrator instance only from the newly created directory structure.

For new installations, use the Sterling B2B Integrator *Windows Non-Cluster Installation Guide*.

Intended audience

This document can be used by different members of your organization.

This document is intended for use by:
- System administrators
- Installation engineers
- Database administrators.

Assumptions for this guide

The procedures in this guide are accurate as of the publication date and are specific to this version of the document.

Upgrade Scenarios (Non-Clustered)

Upgrading to Sterling B2B Integrator can follow several paths. Keep these scenarios in mind as you plan for your upgrade:

Upgrade Scenario	High-Level Upgrade Steps
You have V5.2.x installed and want to upgrade by applying V5.2.6 as a fix pack.	The upgrade steps are as follows: 1. Ensure that your JDK version is supported. See the system requirements. Upgrade your JDK if needed. See "Upgrading your JDK (Windows and UNIX)" on page 3. 2. Ensure that your operating system and database versions are supported. 3. See "Applying a Fix Pack (V5.2.6 or later)" on page 625or "Applying Sterling B2B Integrator V5.2.6 Fix Pack using a script" on page 630

Upgrade Scenario	High-Level Upgrade Steps
You have 5.1.x installed and want to upgrade to V5.2.6.	The upgrade steps are as follows: 1. Ensure that your JDK version is supported. See the system requirements. Upgrade your JDK if needed. See upgrading your JDK. 2. Ensure that your operating system version is supported. Upgrade your operating system if required. 3. Ensure your database version is supported. Upgrade you database if required: a. Export the configuration data. b. Back up the database. c. With help from a database administrator (DBA), copy the database to the new version. d. Back up the newly created database. 4. Upgrade to Sterling B2B Integrator V5.2.6 using the full installation media and this Upgrade Guide. 5. Point to your supported database version. If the upgrade stops and leaves the newly created database in an incomplete state, you can re-start the upgrade using the backup of the database.

Upgrade Impacts

This documentation provides information on how system behavior has changed based on upgrading your instance. You should review this information before you begin your upgrade. Depending on which version you are upgrading to, you will need to review one or more topics listed. The upgrade impacts listed for each subsequent version are specific to that version. There is not a cumulative list.

Upgrade impacts for V5.2.6.2:

Upgrading to Sterling B2B Integrator V5.2.6.2 has unique impacts.

DB2 requires additional tablespace

When upgrading to V5.2.6.2 or later you must ensure that all tablespaces used by Sterling B2B Integrator tables have a minimum page size of 8K. Otherwise installation will fail.

Upgrade impacts for V5.2.6:

Upgrading to Sterling B2B Integrator 5.2.6 has unique impacts.

Support for SSLV3 has been removed - TLS 1.2 is the new default

Due to security concerns, Sterling B2B Integrator no longer supports the use of SSLV3. You should be aware of the following changes as you upgrade your system to this version:

- Several properties have been updated to use TLS 1.2 as the default. If your mail server cannot use TLS 1.2, you can change your SMTP and B2B Mail Client adapters to use TLS 1.0 or 1.1 instead.
- If any of your 3rd party programs do not support the use of TLS 1.2, you can change Sterling B2B Integrator to use TLS 1.0 or TLS 1.1.
- In all cases, requests to use "SSLV3" in Sterling B2B Integrator will use instead TLS 1.0, TLS1.1, or TLS1.2.
- TLS 1.2 is used as the default protocol in secure communications. This change applies to any system that is upgraded to V5.2.6.
- If your GPM, or WebSphere MQ or OFTP adapters are configured to use older, non-supported cipher suites (non-TLS 1.2), they will continue to work. However, if you edit them, only TLS 1.2 will be available to select.

JDK 7 is the only supported JDK version for V5.2.6

There are several impacts due to this change:
- If you are not already using JDK 7, you must upgrade your JDK before attempting to upgrade Sterling B2B Integrator to V5.2.6. If you currently have V5.2.4.1 or higher installed, there is a **upgradeJDK** script available to assist you. See *bin Directory Files* for more information.
- Only ciphers that are supported by JDK 7 can be used in Sterling B2B Integrator V5.2.6. You can update your cipher suites in `security.properties`.
- Previously defined ciphers in `customer_overrides.properties` are not changed upon upgrade to V5.2.6.
- **DefaultCipherSuite** contains a list of JDK 7 ciphers in V5.2.6 that can be used when others are not available.

Upgrade impacts for V5.2.5:

Upgrading to Sterling B2B Integrator V5.2.5 has unique impacts.

JDK 7 does not support the TLS_RSA_WITH_3DES_EDE_CBC_MD5 cipher

If you are using JDK 7 with Sterling B2B Integrator V5.2.5, and you want to use a cipher to secure the Sterling B2B Integrator dashboard, you must set one of the following values in the **dashboardCipherSuite** parameter in the `security.properties_platform_asi_ext.in` property file or in `customer_overrides`:
- *JDK* (includes all strong ciphers except the one not supported by JDK 7)
- *Weak*

Do not use *Strong* or *All* with JDK 7 or Sterling B2B Integrator will not start.

Reconciliation of HIPAA Level 5 code lists

When you upgrade to Sterling B2B Integrator 5.2.5, customized HIPAA Level 5 code lists from the previous version are preserved in the system where they were entered. However, they are not the default code lists after the upgrade. After the upgrade, you must manually make any customized code lists the default code lists.

For example, you customized the ICD9 or HCPCSCPT code list in the previous version of Sterling B2B Integrator. After the upgrade to 5.2.5, you must replace the default ICD9 or HCPCSCPT code list with the customized ICD9 or HCPCSCPT code list.

Properties file change to prevent timeout during start (5.1.0.4 to 5.2.5 upgrade)

Before you start Sterling B2B Integrator after you upgrade the application from version 5.1.0.4 to 5.2.5, you must change the values of the following properties in the `centralops.properties` file to 600. This action prevents the start command from timing out before Sterling B2B Integrator starts. The `centralops.properties` file is in the `properties` subdirectory of the installation directory.

- **`OpsServer.commandTimeout`**
- **`PassPhrase.urlTimeout`**

jGroups upgrade in V5.2.5 prevents Sterling B2B Integrator from starting for some customers

jGroups is upgraded with V5.2.5. Some of the properties defined in jgroups_cluster.properties have changed. If you modified these files or added custom changes for them to customer_overrides.properties, the upgrade changes are not applied and Sterling B2B Integrator will not start.

This issue is fixed in V5.2.5, Interim Fix 1, where all necessary properties files are changed for you. You can also disable this fix if desired. See APAR IT06654 for more information.

Note: The original and modified properties are output to the noapp.log file. This allows you to see how your properties were modified. Search the log using the value "Initializing jgroups_cluster.property_string" to see the new and changed values for the two affected startup properties. The jgroups_cluster.lock.protocolStack property is also modified with this fix, but is only written to the log when it is used, not at startup.

If you want to manually fix your installation without applying V5.2.5, Interim Fix 1, complete the following steps:

1. Delete the following options (if they exist) from customer_overrides.properties for the jgroups.cluster property file. These occur in the jgroups_cluster.property_sting, jgroups_cluster.distributed_property_string, and jgroups_cluster.lock.protocolStack files:
   - gc_lag
   - up_thread
   - down_thread
   - join_retry_timeout
   - max_xmit_size
   - shun
2. Remove the protocol parameter **`VIEW_SYNC`** and all of its attributes.
3. In the jgroups_cluster.property_string, replace 'start_port' with 'bind_port'.
4. In the jgroups_cluster.distributed_property_string and jgroups_cluster.lock.protocolStack properties, add the following items:
   - In distribution_property_string the attribute **`thread_pool_rejection_policty=run`** should be added to the protocol 'TCP'. For example,

     `TCP(bind_port=22261`**`;thread_pool_rejection_policy=run`**`)`
   - In lock.protocolStack: the protocol and attribute **`CENTAL_LOCK(num_backups=2)`** should be added to the end of the property. For example,

```
lock.protocolStack=UDP(bind_addr=&HOST_ADDR;;bind_port=
&MULTICAST_NODE_PORT3;;mcast_addr=239.255.166.17;<other
protocol parameters here>pbcast.GMS(join_timeout=5000;print_local_
addr=true):CENTRAL_LOCK(num_backups=2)
```

Upgrade Impacts for V5.2.0: Before you begin an upgrade, you should review the following information.

Features and Services Not Supported as of V5.2.0

The following features and services are no longer supported:
- Channels portlet
- Federated Systems
- Community Management (AFT Communities are still available)
- Sterling Community Management (SCM) Integration
- Archive Commandline Service
- Sync Engine Data Clean Manager Service
- Sync Engine Task Manager Service

If you need more information, please contact your IBM sales representative.

Port Allocation Changes

If you are upgrading to V5.2, and configured the CLA2 or the SWIFTNet HTTP Server Adapter, the remote port numbers have changed. The port numbers are as follows:

Table 2. Remote Port Numbers

Adapter Name	Version 5.2.0 Base Port	Version 5.2.1 Base Port	Version 5.2.2 Base Port	Version 5.2.3 Base Port
CLA2	+51	+52	+53	+54
SWIFTNet HTTP Server	+52	+53	+54	+55

Note: You should check adapter configurations and the sandbox.cfg file for ports greater than 51 which may have changed.

After upgrading to 5.2.x, you need to change any references to the old remote port numbers. For example, if you have any business processes that use the CLA2 adapter, you will need to update the remote ports in the business process.

Database Table Sizes

While upgrading if you encounter any database table size issues, you may have to manually adjust the database tables and restart the upgrade process. An upgrade using the production database in a test environment can be used to help you determine what tables need to be manually adjusted.

Resource Tags

If you are using resource tags in your current version, you should check all of your existing resource tags before you start the upgrade process. The resource tags you should check are:

- Adapter Policies
- Agreements
- Sterling Connect:Direct Netmaps
- Proxy Servers
- Security Tokens
- SSH Resources
- SWIFTNet Copy Service Profiles
- SWIFTNet Service Profiles

You can check the resource tags by running the following SQL query from the SQL Manager page (**Operations > Support Tools**):

```
SELECT * FROM TAG_RESOURCE_ASSOC WHERE TYPE=41 OR TYPE=42 OR TYPE=43 OR TYPE=44 OR
TYPE=45 OR TYPE=52 OR TYPE=53
```

The TAG_NAME column in the SQL results will contain the names of any resource tags that need to be edited or deleted.

If any of the resource tags contain tagged resources using the types listed, remove those resources from the resource tags or delete the resource tags that contain these resource types.

Silent Installation Parameters

The following parameters are new or have an updated definition:

What has changed	parameter	Definition
Parameter definition has changed	LICENSE_FILE_PATH	(Required) Full path to Core_License.xml.
New parameter	LICENSE_FILE_# (where # is a number between 1 and 99)	(Required) This is required for each license you install. You must add an entry for each license file to the silent install file. The LICENSE_FILE numbering (#) does not need to be sequential. For example: LICENSE_FILE_1= SI_SFG_License.xml LICENSE_FILE_2= Fin_Serv_License.xml LICENSE_FILE_3= SI_SFG_FIPS_License.xml LICENSE_FILE_4= AS2_License_.xml LICENSE_FILE_5= EBICS_License_.xml

Channels and Community Management Tabs (Optional)

The Dashboard PSML files are not updated during an upgrade. The PSML file impacts any custom tabs you may have configured, such as Channels or Operator. The Channels and Community Management tabs appear in your browser but are no longer operational.

To remove the Channels and Community Management tabs:

Warning: The psmlRestore command gets the 5200 psml file which resets ALL of the custom tabs from the previous release.

1. Navigate to the installation directory.
2. Navigate to the bin directory.
3. Enter this command: `./psmlRestore.sh admin`

Custom BI Fact Models Need to be Upgraded

Scripts named recreateBITablePKs.cmd.in (Windows) and recreateBITablePKs.sh.in (UNIX) are now provided which allow you to upgrade any custom BI fact models tied to a separate BI repository.

BI fact models need to be upgraded to continue to work with the Entity Framework, which replaced Hibernate usage in the BI framework in version 5.2.0.

Backups Are Not Generated During Install, Upgrade, or When Applying a Fix Pack or Interim Fix: Before you begin an upgrade, review the following backup information.

Some of the standard resources installed during install or upgrade use the import mechanism available to customers to load the standard resources into the database. The standard import mechanism by default creates a backup of the table containing the resource prior to importing to provide the ability to restore to the previous state if later it was decided that the import should not have been performed. This table backup was also being performed by default during the basic installation processes. And, since the import mechanism was sometimes used multiple times during the installation processes, some of the tables were backed up several times. Depending on the size of the table, this could add a very large amount of time to the installation process. Since it is recommended that a backup is completed prior to beginning any of these installation processes, the default behavior has changed to not perform the backup by default. If you would like backups to be performed, then `SKIPIMPORTBACKUP=false` should be added to the **sandbox.cfg** file.

Capitalization Insensitivity for Header Value:
About this task

Before you begin an upgrade, review the following AS3 information.

For AS3, when searching for a header value in a multipart/report, you do not need to consider whether the header value contains any capitalization. The search has been enhanced to be capitalization insensitive.

For example, the following searches will result in a match:
- Multipart/Report
- Multipart/report

- multipart/Report
- multipart/report

The search would not find the following as a match:
- MulTiPart/RePorT

CA Certificates Impacts: Before you upgrade, review the following information on CA certificates.

Users may add multiple copies of the same certificates to the database. Having multiple copies of the same certificate in the database is not, in principle, a problem for the system except for the minor amount of wasted storage. Each copy has a different object ID in the database and is a separate database object.

The specific changes in this release is the ability to easily populate the product database with the set of authority root certificates distributed with the JVM.

Perimeter Server Installation:
About this task

Before you begin an upgrade, review the following Perimeter Server installation information.

Silent install is the default installation mode. If you want to complete the Perimeter Server installation using an interactive mode, you need to use the following command:

```
java -jar ps_xxxx.jar -interactive
```

where ps_xxx.jar is the perimeter server jar file name for the version of Sterling B2B Integrator you are upgrading to.

Retry Logic Added to WebSphereMQ Suite Adapter PUT Service:
About this task

Before you begin an upgrade, review the following WebSphereMQ Suite Adapter PUT Service information.

Retry logic has been added to the WebSphereMQ Suite. To accommodate this new functionality, you need to configure two new parameters for the PUT service:
- wsmq_send_retryCount
- wsmq_send_retrySleepInterval

To configure the new parameters:

Procedure
1. Log into Sterling B2B Integrator.
2. From the **Admin Console Home**, you need to start the Graphical Process Model (GPM).
3. Log into the GPM. You will need a **User ID** and **Password**.
4. In the GPM, select **View > Stencil > Services**.
5. Select **File > New**.
6. Drag the **WebSphereMQ Suite Put Message Service** from the **All Services** pane into the center pane.

7. Double click the **WebSphereMQ Suite Put Message Service**.

8. Select the configuration from the **Config** dropdown.

9. Enter the number of retries in to the **wsmq_send_retryCount** value.

10. Enter the sleep interval in seconds in to the **wsmq_send_retrySleepInterval** value.

11. Save the changes to the service configuration.

12. Exit from the GPM.

Services and Adapters - Show Advance State Button: Before you begin an upgrade, review the following Show Advance State button information.

The Show Advanced State check box has been removed from the Services Configuration search screen. Instead, the default has been changed to always show the advanced state without needing to check a checkbox on the search screen to display it.

Some Certificate Fields Are Optional:
About this task

Before you begin an upgrade, review the following certificate field information.

When generating certificate keys, the following fields may have been missing in the release you are upgrading from, but the entries are now optional:

- alt.name.dns
- alt.name.IP

Support for Multiple AS2 Organizations: Before you begin an upgrade, review the following AS2 schema information.

Sterling B2B Integrator now supports multiple sponsoring organizations and multiple partners for AS2. During upgrade, the single organization will be flagged as the default organization.

Once you have upgraded to this version, a prefix designation is used to differentiate between an AS2 organization (AS2_ORG_) and an AS2 partner (AS2_PART_). Each of these will require the full configuration of a trading partner to allow for a partner to trade with multiple organizations as well as an organization that trades with multiple partners.

The AS2_TRADEPART_INFO and AS2_EMAIL_INFO tables have been modified and the AS2_PROFILE table is newly introduced. Updates to these tables will occur during the SI in-place upgrade process in the following manner:

- Identify the default organization and populates the AS2_PROFILE table with organization information. A default organization is an AS2 organization profile named "profile_ORGANIZATION" present in the system before upgrade.
- Identify partner records and populates the AS2_PROFILE table with partner information.
- Populate the new columns of table AS2_TRADEPART_INFO with the default organization information.
- Populate the new PROFILE_ID column in the AS2_EMAIL_INFO table with the profile id of the AS2 organization profile present in the system.

Web Services: Before you begin an upgrade, review the following Web Services information.

Many of the Web Services configuration settings that were generated from the WebServices Provider Configuration UI have moved from the property files into database tables. This change was made to allow a single location of these settings in cluster environments and to ensure that these settings would not be reset during a fix pack installation.

After you have completed your upgrade, you should run the convertWSSoaProperties script found in the installation bin folder. This script reads the settings from the property file and places them into the proper database tables. You can then review the results in the WebServices Provider Configuration UI.

Windows 2008 Does Not Start with Response File Install:
About this task

Before you begin an upgrade using IBM Installation Manager and the response file method, review the following information.

If you used the response file install method for your upgrade, you must manually run the InstallWindowsService.cmd file to register the service.

MySQL Upgrade Impacts: The MySQL database is no longer bundled with Sterling B2B Integrator software. Therefore, you will need to install and configure an external version of the MySQL database prior to upgrading to the new version of Sterling B2B Integrator.

Upgrade MySQL Checklist (External MySQL): This checklist assumes you are upgrading from a previous version of Sterling Gentran Integration Suite or Sterling B2B Integrator directly to Sterling B2B Integrator 5.1 and higher and you are knowledgeable on the MySQL database.

If you need additional MySQL database information, see the documentation provided by the vendor at http://dev.mysql.com/doc/refman/5.0/en/.

If you are moving from a version of MySQL earlier than MySQL 5.0, you will need to export the data from the earlier version to the MySQL 5.0 version using the following procedure. Your existing Sterling Gentran Integration Suite instance will no longer function if you upgrade your existing database without making a copy. After this procedure, you will have two databases:
- A database that you will use in your upgraded version of Sterling B2B Integrator (Sterling B2B Integrator 5.1 and higher).
- A database that you can use in your old version of Sterling B2B Integrator.

Task	Which database	MySQL Upgrade Checklist	Your Notes
1	New external database	Install an external MySQL database. Refer to MySQL documentation for information about installing the database. Be sure to install the correct version and patches. See System Requirements for supported version information.	
2	New external database	Update the MySQL Parameters.	

Task	Which database	MySQL Upgrade Checklist	Your Notes
3	New external database	Create the database. For example, you can run the following command to create the database: `CREATE DATABASE database_name` Refer to MySQL documentation for information about creating the database.	
4	New external database	Create a user account and grant permissions.	
5	New external database	Install the JDBC Driver for MySQL.	
6	Previous database	Rename the SCHEMAS table to XMLSCHEMAS to avoid reserved word collision: • Only required when moving from MySQL version earlier than 5.0 • Use the following command: `Alter table SCHEMAS rename to XMLSCHEMAS`	
7	Previous database	Perform a MySQL database export. As part of the export, you will have a backup copy of the database.	
8	Previous database	If you renamed the SCHEMAS table in task 6, you need to rename the SCHEMAS table, so that your older version of Sterling B2B Integrator will be operational. Use the following command: `Alter table XMLSCHEMAS rename to SCHEMAS`	
9	New external database	Import the exported data for MYSQL into the new external database.	

Update the MySQL Parameters: Sterling B2B Integrator requires the following parameter settings in your MySQL database.

The parameter values recommended are minimum values. You can increase the values based on your requirements or if the database server is used by more than one instance of Sterling B2B Integrator.

It is recommended to configure a data file for auto extension (innodb_data_file_path = ibdata1:400M:autoextend).

Parameter	Value
max_connections	500
max_allowed_packet	100M
default-table-type	INNODB
wait_timeout	31536000
max_write_lock_count	500000
transaction-isolation	READ-COMMITTED
character-set-server	utf8
binlog_format	mixed

Parameter	Value
table_open_cache	512
key_buffer_size	384M
sort_buffer	512K
connect_timeout	15
innodb_data_file_path	ibdata1:400M:autoextend
innodb_data_home_dir	/*install_dir*/mysql/var/
innodb_log_group_home_dir	/*install_dir*/mysql/var/
innodb_flush_log_at_trx_commit	1
innodb_mirrored_log_groups	1
innodb_log_files_in_group	3
innodb_file_io_threads	4
innodb_lock_wait_timeout	600
innodb_log_file_size	5M
innodb_log_buffer_size	8M
innodb_buffer_pool_size	128M
innodb_additional_mem_pool_size	32M

Review the innodb_buffer_pool_size and the innodf_additional_mem_pool_size in the /*install_dir*/install/mysql/data my.cnf. If the values from the previous Sterling B2B Integrator tuning.properties are larger than what is in your new my.ini file, you need to adjust them accordingly.

Create User Account and Grant MySQL Database User Privileges:
About this task

You must grant all privileges on the MySQL database to the Sterling B2B Integrator administrative user. The following example creates and grants all privileges to the user in the MySQL database:

```
GRANT ALL PRIVILEGES ON database_name.* TO user@localhost IDENTIFIED BY 'password'
WITH GRANT OPTION
```

Where:
- database_name - refers to the name of the database created.
- user - refers to the database user account that will be used by Sterling B2B Integrator.
- password - refers to the password associated with the database user account.

Once you have granted all the privileges, you will need to FLUSH the privileges to complete the setup. For example, run this command from the SQL prompt:

```
FLUSH PRIVILEGES;
```

Install the JDBC Drivers for MySQL:
About this task

Sterling B2B Integrator requires appropriate JDBC driver for MySQL database. These drivers are platform independent and architecture independent drivers. See *System Requirements* for supported version information.

After obtaining the correct JDBC driver, record the absolute path to its location on your system. You must supply this absolute path when installing Sterling B2B Integrator.

Perform a MySQL Database Export:
About this task

The full backup can be performed using the mysqldump utility. The details on the usage of this MySQL utility can be found in the MySQL reference documentation. Since there are many options that are provided with this utility, the following are the minimum recommendations:

- Specifying the db_name on the mysqlcommand will prevent the subsequent import from creating a new database. You should specify the db_name of the Sterling B2B Integrator database.
- --extended-insert: Use multiple-row INSERT syntax that include several VALUES lists. This results in a smaller dump file and speeds up inserts when the file is reloaded.
- --quick: This option is useful for dumping large tables. It forces mysqldump to retrieve rows for a table from the server a row at a time rather than retrieving the entire row set and buffering it in memory before writing it out.
- --disable-keys: This makes the dump file faster because the indexes are created after all rows are inserted.

To export the database:

Procedure

1. Perform a backup of the database. For example, enter:
   ```
   myysqldump –u <internal_mysql_username> -p<password> <db_name>
   --host=<internal_mysql_host> --port=<internal_mysql_port> > <dump_file_name>
   ```
2. Make a copy the resultant dump file (.dmp) file from the file system on the source server file system to the file system on the MySQL destination server.

   If the MySQL database was created as part of a Sterling B2B Integrator installation, you can determine the port number by reviewing the MYSQL_PORT entry in the sandbox.cfg that is in the Sterling B2B Integrator install directory.

Import the Data to the New Version of MySQL Database:
About this task

Before you begin:
- Make sure the new version of the MySQL database is not in use.
- Know the name of the new database.

To import the exported data:

Procedure

Enter:
```
mysql -u <external_mysql_username> -p<password> <db_name>
--host=<external_mysql_host> --port=<external_mysql_port> < <dump_file_name>
```

Where database_name is the name of the new database created in task 3 of the checklist.

Upgrade Planning

Proper planning will help ensure a trouble-free upgrade.

Before you begin an upgrade you should:
- Read and become familiar with this document so that you have a clear understanding of what the upgrade requires.
- Review upgrade scenarios to determine which scenario you want to use.
- Review and record system configuration information.
- Review and record performance and tuning information.

Upgrade Planning Checklist: To assist you with your upgrade planning, review the following planning checklist:

#	Upgrade Planning Checklist	Your Notes
1	Read through this entire document so that you have a clear understanding of what the upgrade requires.	
2	Download and review the following information from the Sterling B2B Integrator documentation library. • *System Requirements* - With each release, IBM introduces leading edge technology to improve and enhance its software. Review the *System Requirements* to confirm that your system and databases meet the requirements for this release. • *Release Notes* - Review the release notes to obtain information about issues and resolutions which have been identified for this release. • *What's New in this Release* - Review this guide to find out about new features and functionality provided in this release. • *Installation and Upgrade Information* - Lists the installation and upgrade documents available for this version of Sterling B2B Integrator.	
3	**CAUTION:** **Before upgrading to the latest product version, contact your sales representative to verify that it includes all of your current functionality. Depending on the timing, even though it's in a higher version that the one you have installed, a particular mod release or fix pack might not include all the functionality in your current version or fix pack.**	
4	Collect information on third-party libraries used for adapter configurations that were added to your current release. You will need to add each of these libraries to the upgraded system.	
5	Locate any configuration file changes for JDBC adapter or Lightweight JDBC adapter in your current release. You will need to copy these changes to the upgraded system.	
6	Record your performance tuning configuration. You will need to restore these settings after the system has been upgraded.	

#	Upgrade Planning Checklist	Your Notes
7	Review and note the adapters, business processes, and other configurations in your current release. This information will help you identify the need for updating transport messages, third-party adapters, or configurations to adapters, such as File System or Command Line adapters.	
8	Determine if you have edited any of the property files (.properties or .properties.in). The upgrade process overwrites these property files, unless these changes were made using the customer_overrides.properties file. Your previous property file edits might not be applicable this version of the software.	
9	Determine if you edited any of the following cdinterop files: • cdinterop-proxy-records.properties • cdinterop-spoe-auth.properties • cdinterop-spoe-policy.properties • cdinterop-user-records.properties You must back them up before upgrading. The cdinterop files do not have initialization (*.in) files. After the upgrade, use the backup version of the files in your upgraded installation.	
10	Determine if you have LDAP (Lightweight Directory Access Protocol) configuration information in the security.properties file. This information will automatically be moved to the authentication_policy.properties file.	
11	Determine whether Sterling B2B Integrator is using an application server (JBoss™, WebLogic® or WebSphere®). Sterling B2B Integrator does not require an application server for installation or at runtime. Sterling B2B Integrator supports integration with JBoss and WebLogic during the installation. You can also integrate with WebSphere, JBoss, or WebLogic by using the Sterling B2B Integrator EJB Adapter. This does not represent a WebLogic server for deploying the Application Console.	
12	If you use a File System as your document storage method, determine and record the path to the File System. You will need the File System path structure so that after the upgrade, you can copy/mount the documents to the new installation directory. The directory structure (path to the File System) must be the same in the current and in the upgraded system.	
13	Review the EDI Sequence Check Queue to ensure that no interchanges are in the queue. The EDI Sequence Check Queue is used for X12 and EDIFACT sequence and duplicate checking.	

#	Upgrade Planning Checklist	Your Notes
14	Determine if you have any JVM Containers configured. If yes, you will have to reconfigure the JVM containers after you have upgraded the software.	

Prepare Your System for the Upgrade

To help ensure a trouble-free upgrade, be sure to prepare your system before beginning the upgrade.

Before you begin the upgrade :
- Complete all Pre-Upgrade Checklists.
- Verify that your system meets all system requirements.
- Obtain the upgrade media.
- Create a process output log (optional).
- (Microsoft SQL Server only) Configure the snapshot feature (optional).
- (DB2 only) Upgrade DB2 to version 10.1 or 10.5, if needed.

Pre-Upgrade System Checklist:

Use the Pre-Upgrade System Checklist to help ensure that your system is ready for upgrading and reduce the chance of errors or other problems during upgrade.

Before you begin an upgrade:

#	Pre-Upgrade System Checklist	Your Notes
1	Use the system requirements to verify that your system hardware and software meet the requirements specified for this release. Verify you have the correct: - Patches required by Java™ for the operation system - Version of the JDK - JDK Patches - Absolute path to JDK and patches - Database must match the version listed in the requirements If any of the above requirements are not met, the installation will fail and print/log a report of all items that were non-compliant. Ensure that you have the correct license file and JCE file. **Important:** Do not remove the existing license file or JCE file from your system. The files specified by the `LICENSE_FILE_PATH` and `JCE_DIST_FILE` parameters in the sandbox.cfg file must be present during the upgrade, or the upgrade will fail.	
2	For systems with multiple IP addresses, verify that the IP address on which Sterling B2B Integrator resides is accessible by any client computer that is running a browser interface. If you do not verify the IP addresses, your system may not operate properly after installing Sterling B2B Integrator.	
3	If you are using a non-English environment, confirm that you are using the appropriate character set.	
4	Verify the file system has adequate free disk space.	

#	Pre-Upgrade System Checklist	Your Notes
5	Obtain the upgrade media. It is a best practice to check the Product Updates and Downloads site to ensure you have the latest version of the media.	
6	Backup your Sterling B2B Integrator installation directory and the database. If there are problems with your upgraded system, the only way to ensure that you can roll-back to your previous version is to back up Sterling B2B Integrator and the database.	
7	Archive your data. Archived data can only be restored from the same version of Sterling B2B Integrator from which it was archived. If you need to restore archived data that was archived prior to performing the upgrade, then you must have a running instance of Sterling B2B Integrator that matches the version from which the archive was taken.	
8	Purge any unneeded data.	
9	Export any business objects that can not be upgraded. Including business processes, service configurations, trading partners, and maps. The exported business object can be imported into the upgraded system if you need them.	
10	Create a process output log.	
11	Disable the virus protection software on the server. If the virus protection software is enabled, the upgrade will fail.	

Pre-Upgrade Database Checklist (Windows): Before you begin an installation, you need to:

#	Pre-Upgrade Database Checklist	Your Notes
1	If required, copy the Microsoft SQL Server 2000 or 2005 Database to a supported SQL Server Database version. This is an optional procedure, and it is the customer's responsibility to perform it. (IBM Customer Support can not help with this procedure.)	
2	If you are using Oracle 8i with Sterling B2B Integrator 4.0, upgrade to Oracle 9i before upgrading to this version of Sterling B2B Integrator.	

#	Pre-Upgrade Database Checklist	Your Notes
3	If you plan to import an Oracle 9 or Oracle 10 database, while upgrading to this version of Sterling B2B Integrator, you must import the database without the indexes. For example, if you are using the Oracle import (imp) tool, you should use the INDEXES=N option. If you attempt upgrading to this version of Sterling B2B Integrator with indexes turned on, the upgrade will fail. If you had created any custom indexes in Oracle database, add them after performing the upgrade as they are not imported.	
4	If you are using MySQL, a new MySQL database will be created in this version of Sterling B2B Integrator and information will be copied from the MySQL database in your previous version of Sterling B2B Integrator to the new database. The MySQL database in your previous version of Sterling B2B Integrator will still work. When you copy your database, if you encounter Data Overflow or Invalid Time Format errors while copying the WORKFLOW_CONTEXT table, run this query: UPDATE WORKFLOW_CONTEXT SET ENTERQ = NULL, EXITQ = NULL where ENTERQ IS NOT NULL OR EXITQ IS NOT NULL	

Pre-Upgrade Operating System Verification Checklist:

Before you begin the upgrade, you need to verify your operating system configuration.

For the Operating System	Operating System Configuration Checklist	Your Notes

HP-UX Operating System	Verify these settings:
	• Verify kernel parameters and establish the following minimum settings by running the `kctune` command:
	  – kctune max_thread_proc 1024
	  – kctune maxdsiz 2147483648
	  – kctune maxdsiz_64bit 8589934592
	  – kctune maxssiz 369098752
	  – kctune maxssiz_64bit 536870912
	• Run ulimit utility, verify, and establish the following minimum settings:
	  – ulimit -d = 2097152 (in kilobytes) or higher
	  – ulimit -s = 360448 (in kilobytes) or higher	

For the Operating System	Operating System Configuration Checklist	Your Notes

AIX Operating System	You must specify the name of the installation directory name. The installation process creates the directory and beneath it, a directory called "install".
	
	To ensure that /install_dir/install has the necessary permissions, AIX users must run the following command on the parent directory of /install_dir/install before installation:
	
	`chmod -R a-s <absolute path>/install_dir_parent`
	
	where install_dir_parent is the directory in which /install_dir/install will be created.
	
	For example, to specify
	
	`AIX_1/applications/test1/my_install` as your installation directory, you could run the command from the AIX_1/applications directory (directly above the test1 directory):
	
	`chmod -R a-s test1`
	
	or from another location on the file system:
	
	`chmod -R a-s /AIX_1/applications/test1`
	
	This ensures that when the my_install directory is created during installation, it inherits the correct permissions from test1.	

Solaris Operating System	Set the following entries in the /etc/security/limits file:
	
	`    nofiles = 4096`
	`    set rlim_fd_max=4096 (limit is 65535) - hard limit`
	`    set rlim_fd_cur=4096 - soft limit`
	
	For **nofiles**, the value shown is an example. The possible values are unlimited, so the number for **nofiles** can be much larger. Revise the value as appropriate for your business needs.
	• To make the setting effective as the hard limit, reboot the server or run the following command:
	`  kill -1 inetd`
	• To make the setting effective as the soft limit, use the parent shell configuration (for example, .profile). Then, reboot the server.	

Linux Operating System	You need to disable SELinux by enter the following: `/etc/sysconfig/selinux: SELINUX=disabled` Ensure that /etc/hosts has short-names first for all entries. For example, 127.0.0.1localhostlocalhost.localdomain If the base locale is English, verify: • that the LANG variable is en_US • LANG variable is exported	

For the Operating System	Operating System Configuration Checklist	Your Notes

RedHat Enterprise Linux Operating System	Make the following system changes:
	
	• If the base locale for the system is English, edit the /etc/sysconfig/i18n file by changing the SUPPORTED variable from en_US.utf8 to en_US. You can also allow multiple support using the following format: en_US.utf8:en_US
	
	• Save and close the /etc/sysconfig/i18n file. Edit the /etc/security/limits.conf file by adding the following lines:
	   – * hard nofile 8196
	   – * soft nofile 4096
	   – * hard memlock 3000000
	   – * soft memlock 3000000
	   – * hard nproc 16000
	   – * soft nproc 16000
	   – * hard stack 512000
	   – * soft stack 512000
	
	This updates the system ulimits.
	
	For **nofile**, the values shown are examples. The possible values are unlimited, so the numbers for **hard nofile** and **soft nofile** can be much larger. Revise these values as appropriate for your business needs.
	
	• Save and close the /etc/security/limits.conf file.
	• Reboot the system.
	
	IBM Installation Manager in UI mode may fail to start on an RHEL 6.1 or higher x86_64 (64-bit) OS because Installation Manager is a 32-bit application and is dependent on some of the 32-bit libraries.
	
	For information on installing the required 32-bit OS libraries, refer to the IBM Support Website (https://www-304.ibm.com/support/docview.wss?uid=swg21459143)
	
	CAUTION:
	Due to a known issue with the IBM JDK on RHEL 6.1 or higher, a performance degradation might be seen in comparison to previous RHEL releases. To avoid this issue, disable the CFS on RHEL 6.1 or higher.
	
	To disable CFS:
	• **Log in as root**
	• **Edit /etc/sysctl.conf and add "kernel.sched_compat_yield = 1"**
	• **Reboot the system**
	
	For more information go to the IBM SDK and Runtime Environment Java Technology Edition Version 6 Information Center and search for *known limitations on linux***.**	

For the Operating System	Operating System Configuration Checklist	Your Notes

SUSE Linux Operating System	Make the following system changes:
	
	• If the base locale for the system is English, edit the `/etc/sysconfig/i18n` file by changing the SUPPORTED variable from en_US.utf8 to en_US. You can also allow multiple support using the following format: en_US.utf8:en_US
	
	• Save and close the `/etc/sysconfig/i18n` file. Edit the `/etc/security/limits.conf` file by adding the following lines:
	  – `* hard nofile 8196`
	  – `* soft nofile 4096`
	  – `* hard memlock 3000000`
	  – `* soft memlock 3000000`
	  – `* hard nproc 16000`
	  – `* soft nproc 16000`
	  – `* hard stack 512000`
	  – `* soft stack 512000`
	This updates the system ulimits.
	
	For **nofile**, the values shown are examples. The possible values are unlimited, so the numbers for **hard nofile** and **soft nofile** can be much larger. Revise these values as appropriate for your business needs.
	
	• Save and close the `/etc/security/limits.conf` file.
	
	• Reboot the system.	

Verification of the system requirements:

Before you begin the installation, verify that your system meets the hardware and software requirements that are specified for this release.

The hardware requirements that are listed in the *System Requirements* are the minimum requirements. Your system requirements might exceed these requirements if you are running other applications on the same machine as Sterling B2B Integrator.

The installation strictly enforces the following system requirements:
• Operating system version must match requirement exactly.
• The minimum patch level for the operating system is enforced, but you can apply higher patch levels.
• JDK version must match requirement exactly.
• The disk space is a minimum for the installation. The system must be separately sized to handle whatever load is going to be put on the system.
• Database version must match exactly.
• JDBC driver version supports exact matches and wildcard matches.

If any of these requirements are not met, the installation fails. If the installation fails, review the installation log for a list of non-compliant items.

Upgrading your JDK (Windows and UNIX):

Sometimes you need to upgrade your JDK version to support a new version of
Sterling B2B Integrator.

About this task

If you have V5.2.4.1 or higher installed, you can use the **upgradeJDK** script to
upgrade your version of the JDK. See *bin Directory Files* for more information.

If you have V5.2.4.0 or lower installed, follow the steps below to upgrade your
JDK.

Procedure
1. Download the new JCE file. For example, the `UnrestrictedPolicy.zip` policy
   file for the IBM JDK.
2. Back up the existing JDK in *<Install Dir>*`/jdk`. Change the folder name to
   `jdk_back`)
3. Copy the new IBM JDK (1.7.0) folder to the installation Directory. Directory
   Name should be `jdk`)
4. Copy all the jars present in *<Install Dir >*`jdk_back\jre\lib\ext` to *<install
   Dir>*`jdk\jre\lib\ext` directory.
5. If your installation of V5.2.4 or lower was built using the Oracle (SUN) JDK,
   continue to the next step. Otherwise skip to step 6.
   a. Edit the `sandbox.cfg` property file.
   b. Set `JCE_DIST_FILE=`*<New Path of Supported JCE File>*. For example,
      `JCE_DIST_FILE=D\:\\IBM\\unrestrictedpolicyfiles.zip`.
   c. Back up the `local_policy.jar` and `US_export_policy.jar` files present in
      <Install Dir>`jdk\jre\lib\security`.
   d. Unzip the new JCE file. For example, `Unrestrictedpolicyfiles.zip` file.
      Copy `local_policy.jar` and `US_export_policy.jar` to *<Install
      Dir>*`jdk\jre\lib\security`.
6. Run `updateJavaSecurity.cmd` *<path_to_new_jdk><Install Dir>*`/jdk`.
7. Verify that security providers have been updated in *<Install
   Dir>*`\jdk\jre\lib\security\java.security`.
8. Follow the Upgrade Guide instructions for your upgrade scenario.

Obtain Upgrade Media:
About this task

Before you upgrade, ensure that you have the latest version of the upgrade media
from the Passport Advantage online site or have downloaded the fix pack from Fix
Central..

For the latest version and for online support, go to: http://www.ibm.com/
software/howtobuy/passportadvantage/pao_customers.htm

Note: For V5.2.6, the fix pack download used for upgrading from V5.2.x to V5.2.6
is very large. It includes the new functionality for Global Mailbox. You must
download the full fix pack file to upgrade to V5.2.6 by installing a fix pack even if
you do not plan to install Global Mailbox.

Create Process Output Log:

About this task

A log of process activity during the upgrade will help if troubleshooting is required. Output is automatically logged to the upgrade log files (PreInstallSi.log and InstallSi.log). Use this procedure to generate a separate output log for each process you want to log.

To create a process output log:

Procedure

1. From any directory, run the script command to record the processes, ensuring that you have created and specified the name of the file in which to save the process output.

   For example, to start recording output to a file named processoutput.log, type script processoutput.log at the command line. The processoutput.log file will be created in the directory where you ran the script command.

2. After the upgrade is complete, enter exit at the command line to stop recording.

3. You can now retrieve the file containing the process output.

   The following example shows a session after starting the script command, specifying the output to be saved to the file named listing.log, and typing exit to stop the script command from running:

```
[2]%script listing.log
    Script started, file is listing.log
    [3]%ls
    Custard.Recipe FavoriteRecipes Curry.Recipe
    VindalooCurry.Recipe Jelly.Recipe
    [4]%exit
     Script done, file is listing.log
```

Configuring the snapshot feature for Microsoft SQL Server:

The snapshot feature in Microsoft SQL Server allows you to view a read-only copy of the database even when it is locked. Configuring the snapshot feature can also reduce deadlocks. To enable the snap shot feature, enter the following command:
ALTER DATABASE db_name SET READ_COMMITTED_SNAPSHOT ON;

Upgrading DB2 to version 10.1 or 10.5:

To upgrade from DB2 9.5 or 9.7 to 10.1 or 10.5, you must make configuration changes.

Procedure

1. Complete the steps in the following table that pertain to your version of Sterling B2B Integrator before you proceed to step 2.

   Important: Back up all files before you change any settings.

If you are upgrading from ...	Do the following steps:
Sterling B2B Integrator 5.1.x	Upgrade Sterling B2B Integrator to V5.2.6 and point to your DB2 9.5 or 9.7 database
Sterling B2B Integrator 5.2.x	Upgrade your 5.2.x installation to V5.2.6

2. Copy your DB2 9.5 or 9.7 database content to DB2 10.1 or 10.5.

3. Take a backup of the database driver located at `/install_dir/dbjar/jdbc/DB2/` and then replace it with the DB2 10.1 or 10.5 version.

4. Update the following `sandbox.cfg` file fields with your environment-specific parameters:

```
DB_PASS=
DB_SCHEMA_OWNER=
DB_DRIVERS_VERSION=
YANTRA_DB_PORT=
DB_DATA=
DB_HOST=
YANTRA_DB_USER=
DB_PORT=
YANTRA_DB_PASS=
YANTRA_DB_DATA=
YANTRA_DB_HOST=
DB_DRIVERS=
DB_USER=

DB2_PORT=
DB2_USER=
DB2_PASS=
DB2_DATA=
DB2_HOST=
```

5. Edit the following in the `activemq.xml` file:

```
activemq.xml: <value>jdbc:db2//DB_HOST:DB_PORT/DB_DATA</value>
```

6. Run the `setupfiles` script.

7. Run the `deployer` script.

8. Start Sterling B2B Integrator.

Information Gathering Checklist

Information Gathering Checklist for Upgrade (Windows): Before you begin the upgrade, you should review the information in the Information Gathering Checklist. The checklist contains all of the information that you will need to have while running the upgrade scripts. Supporting information and details are included at the end of this chapter.

The checklist contains:
- Brief descriptions for tasks (detailed procedures are provided after the checklist)
- Information you need to gather to prior the starting the upgrade

You may want to make a copy of the following checklist and use it to record the information you collect.

#	Information Gathering Checklist for Upgrade (Windows)	Your Notes
1	Review your IBM contract to determine what software you have licensed. You need to know this License Information so that you can select the correct components/features to install.	
2	Determine which upgrade method you are going to use: • IBM Installation Manager (Graphical User Interface) • IBM Installation Manager (Text Based) • Silent Installation	

#	Information Gathering Checklist for Upgrade (Windows)	Your Notes
3	Determine if you are going to run the pre-upgrade checks during the upgrade.	
4	Decide which type of security certificates you will use: • The default self-signed SSL (Secure Sockets Layer) certificate that is automatically installed. • A Certificate Authority-related certificate that you install before installing the software.	
5	If you are using an Oracle, SQL Server (2005 or 2008), or DB2 database, decide if you are going to manually or automatically apply Database Definition Language (DDL) Statements (schema) to the database.	
6	If you are using an Oracle 11.1 database, you must set it up for native compilation by allocating space and by setting the plsql_native_library_dir parameter.	
7	Determine if you are going to use FIPS (Federal Information Processing Standards) mode.	
8	Record the Hostname on which you plan to install the software.	
9	Record the Directory Name where you plan to install the software.	
10	Record the Login to host machine.	
11	Record the Password to the host machine.	
12	Record the path to the JDBC drivers.	
13	Record the path to the installation wizard and file name.	
14	Record the path to JDK.	
15	Record the path to JCE file.	
16	Record the Host IP address.	
17	Record the Initial Port Number.	
18	Record the System passphase.	
19	Record the Administrative e-mail address to which system alert messages are sent.	
20	Record the SMTP Server IP address used for sending alert messages.	
21	Record the Database vendor name.	
22	Record the Database user name.	
23	Record the Database password.	
24	Record the Database (catalog) name.	
25	Record the Database host name.	
26	For Oracle, Microsoft SQL Server, MySQL, or DB2, record the path and file name for the JDBC Driver.	

Supporting Information:

Pre-Upgrade Checks: Pre-upgrade check reviews Oracle, SQL Server, and DB2 database environments prior to starting the upgrade. This is an optional installation feature which looks for common upgrade errors. The pre-upgrade checks ensure:
- SI_VERSION table exists
- Database character set is correct for Oracle and DB2
- Schedule start times are not later than the end times
- Passphrase entered matches the existing passphrase in the database
- Database implementation for Oracle Long Raw and BLOB
- User has permission to perform the upgrade
- Collation settings are validated for MS SQL
- OBJECT_NAME in table SCI_ENTITY is no longer than 100 characters
- Default schema you identified during upgrade matches the existing database

If any of these items are not validated, the upgrade fails. You are provided with an error message and must correct the situations and then restart the upgrade.

License information:

A separate license is required for each Sterling B2B Integrator feature that you purchased. During installation, you must choose the license files according to what you purchased. Product licenses do not require an activation key.

IBM assumes customers will only install and use the products they purchased. IBM reserves the right to inspect installs for compliance at any time.

After the installation finishes, if you determine that you need to modify licenses files, see "License modifications" on page 58.

Product Licenses for Sterling B2B Integrator

Sterling B2B Integrator Standard and Enterprise Edition includes:
- MESA Studio
- eInvoicing
- Report Services
- all services and adapters not listed below

Sterling B2B Integrator Standard and Enterprise Financial Edition includes everything listed above plus:
- CHIPS
- SWIFTNet
- NACHA ACH CTX adapter
- FEDWIRE
- Fin Serv XML standard
- FIPS Mode
- Image Cash Letter service
- EBICS

Security certificates:

You can choose between different security certificates before you install Sterling B2B Integrator.

Before you begin the installation, you must decide which of the following security certificates to use:
- The default self-signed SSL (Secure Sockets Layer) certificate that is automatically generated by the installation.
- A Certificate Authority-related certificate that you generate before you install the software.

If you install with the default SSL certificate, but you later want to switch to a CA-related certificate, you can change the certificate with the **sslCert** property in the noapp.properties_platform_ifcresources_ext.in file.

Port Numbers in a Windows Environment: During installation or an upgrade, you are prompted to specify the initial port number for Sterling B2B Integrator.

To specify an initial port number, follow these guidelines:
- Sterling B2B Integrator requires a range of 200 consecutive open ports between 1025 and 65535. The port range starts with the initial port number and ends with the number that equals the initial port number plus 200. For example, if you specify 10100, then you need to make sure that 10100 through 10199 are not used by any other applications on your system.

  Note: Because of RMI, on occasion, a port number outside the range may be assigned.
- The initial port number represents the beginning port number in the range.
- Make sure that port numbers in the port range are not used by any other applications on your system.

During the upgrade, about 50 default ports are pre-assigned for different services. For example, if you do not want xxx32 (10132) to be a default port, you could assign that port to xxx97 or another number within the port range.

After your installation or upgrade, refer to the *install_dir*\install\properties\ sandbox.cfg file for all of the port assignments.

Database Definition Language (DDL) Statements: When you install Sterling B2B Integrator, you can manually apply Database Definition Language (DDL) statements to your database tables instead of requiring the installation process to do it directly.

This feature increases database security by reducing the database permissions of the Sterling B2B Integrator database user. The rights to database objects can be reserved for a secure user like a customer database administrator (DBA). A business can require that only a DBA with the proper permissions can make database changes.

Upgrading DB2 to version 10.1 or 10.5:

To upgrade from DB2 9.5 or 9.7 to 10.1 or 10.5, you must make configuration changes.

Procedure

1. Complete the steps in the following table that pertain to your version of Sterling B2B Integrator before you proceed to step 2.

   Important: Back up all files before you change any settings.

If you are upgrading from ...	Do the following steps:
Sterling B2B Integrator 5.1.x	Upgrade Sterling B2B Integrator to V5.2.6 and point to your DB2 9.5 or 9.7 database
Sterling B2B Integrator 5.2.x	Upgrade your 5.2.x installation to V5.2.6

2. Copy your DB2 9.5 or 9.7 database content to DB2 10.1 or 10.5.
3. Take a backup of the database driver located at `/install_dir/dbjar/jdbc/DB2/` and then replace it with the DB2 10.1 or 10.5 version.
4. Update the following `sandbox.cfg` file fields with your environment-specific parameters:

   ```
   DB_PASS=
   DB_SCHEMA_OWNER=
   DB_DRIVERS_VERSION=
   YANTRA_DB_PORT=
   DB_DATA=
   DB_HOST=
   YANTRA_DB_USER=
   DB_PORT=
   YANTRA_DB_PASS=
   YANTRA_DB_DATA=
   YANTRA_DB_HOST=
   DB_DRIVERS=
   DB_USER=

   DB2_PORT=
   DB2_USER=
   DB2_PASS=
   DB2_DATA=
   DB2_HOST=
   ```
5. Edit the following in the `activemq.xml` file:

   ```
   activemq.xml: <value>jdbc:db2//DB_HOST:DB_PORT/DB_DATA</value>
   ```
6. Run the `setupfiles` script.
7. Run the `deployer` script.
8. Start Sterling B2B Integrator.

Upgrade the Software

General Windows Upgrade Information:

CAUTION:
Sterling B2B Integrator should be installed behind a company firewall for security purposes. See the Perimeter Server and Security topics in the Sterling B2B Integrator documentation library for more information on secure deployment options.

General Upgrade Guidelines

Review the following are some general guidelines:

• The directory path to SI_<*build_number*>.jar cannot include any spaces.

- Do not create the new installation directory manually before the start of the upgrade. If you create the installation directory before you begin, the upgrade will fail. The directory name provided during the upgrade process is used to create the new installation directory.
- The server on which you are installing must have adequate free disk space.
- When creating a name, such as an account name, permissions name, profile name, or database name, do not use any valid alphanumeric characters and -, :, $, &, or _. Do not use spaces or apostrophes.
- *install_dir* refers to the installation directory where the new software will be installed. Do not use any pre-existing directory name or an old version of the Sterling B2B Integrator installation directory. If you do, you could inadvertently overwrite the existing installation.
- *parent_install* is the directory one level above the *install_dir* directory.
- Ensure that the *parent_install* directory has the proper read/write permissions.
- If you are using FTP to copy the files, verify that your session is set to binary mode.
- Sterling B2B Integrator does not support IPv6 installation on Windows. Before applying an IPv6 address, see the *IPv6 Capabilities* section in the *System Requirements* guide.
- To install more than one instance of Sterling B2B Integrator on the same Windows server, you must install the second instance in a different directory.
- If you are installing Sterling B2B Integrator on VMware, provide the IP address of the virtual machine, not the IP address of the VMware host. For example, if 10.251.124.160 is the IP address of the VMware host and 10.251.124.156 is the IP address of the Windows 2003 server it is hosting, you should use 10.251.124.156 as the correct IP address to install Sterling B2B Integrator.
- The installation creates subsequent ports based on the initial port number. For all of the port assignments, see the *install_dir*\install\properties\sandbox.cfg file.
- You need to know what version of the Windows Server you are using.
- If you are running the upgrade on an active installation of Sterling B2B Integrator, you will need to run the soft stop command to gracefully stop traffic. For more information on performing a soft stop, see the Soft Stop documentation in the System Administration Guide on the Sterling B2B Integrator 5.2 Knowledge Center.

General IBM Installation Manager information:

IBM Installation Manager V1.8.2 is required to install Sterling B2B Integrator on all supported platforms.

Installation Manager is a Java based multiplatform installation application and provides a consistent approach across various platforms. It does not rely on platform-specific installation technology or mechanism.

Installation Manager uses the local Sterling B2B Integrator offering repositories to install or update Sterling B2B Integrator and its add-on features. It determines the packages that must be installed and displays them including the products, fix packs, and interim fixes. It checks that all prerequisites and interdependencies are met before installing the selected product package and feature sets.

Important: The **Uninstall** option only unregisters Sterling B2B Integrator from Installation Manager. The uninstall procedure as described in the related sections must be performed to completely uninstall Sterling B2B Integrator.

Installation Manager must be installed on each computer on which Sterling B2B Integrator is being installed. If you already have Installation Manager installed on your computer for use with other IBM applications, it can be used with installing Sterling B2B Integrator as long as it's the correct version. If you do not have Installation Manager installed, it is provided as part of the Sterling B2B Integrator installation media.

Supported bit-versions

A 64-bit version of IBM Installation Manager V 1.8.2 is provided with the Sterling B2B Integrator installation package. However, you can also install with a 32-bit version of Installation Manager.

Before you start the installation, consider the following options:
- If you are a new customer, use the version of Installation Manager that is provided with the Sterling B2B Integrator installation package and install Sterling B2B Integrator.
- If you have an earlier version of Installation Manager, you can update it to V1.8.2 using the Installation Manager that is provided with the installation package, then install Sterling B2B Integrator .
- If you are a current customer who did not use Installation Manager earlier, install the version of Installation Manager that is provided with the installation package, then upgrade your Sterling B2B Integrator installation.
- If you have a 32-bit Installation Manager installed, you must download the 32-bit Installation Manager V1.8.2 from Fix Central or IBM Passport Advantage, upgrade it, then proceed with the installation of Sterling B2B Integrator. Ensure you have the required libraries that support screen presentation of the text.

Checking for updates

To check for Installation Manager updates, select **Search for Installation Manager updates** on the **File > Preferences > Updates** page. When the check box is selected, Installation Manager searches for updates when any one of the following pages are opened from the Installation Manager start page:
- Install Packages
- Modify Packages
- Update Packages

Installation Manager also searches for updates when you click the Check for Other Versions, Fixes, and Extensions button on the Install Packages page.

Starting Installation Manager

You should start the Installation Manager (and also install Sterling B2B Integrator) as a non-administrator user.

How you start Installation Manager depends on whether you are using the Installation Manager agent that is provided with Sterling B2B Integrator or if you have an Installation Manager instance that is installed on your system. It also depends on whether you have 32-bit or 64-bit Installation Manager.

Open a command prompt and do one of the following tasks to start the Installation Manager in GUI mode:

- Go to the `IM_<operating_system>` directory and type **./userinst** or **userinst.exe** (Windows) for the following scenario:
  - If you do not have Installation Manager installed and are using the Installation Manager agent that is provided with the Sterling B2B Integrator media.
  - If you have a 64-bit Installation Manager installed.
  - If you have Installation Manager installed on a platform that has only one download available for Installation Manager. For example, AIX, Solaris, HP, zLinux.
- Go to `<installation directory>/Installation Manager/eclipse` (for Windows system, replace / with \) and type **./IBMIM** or **IBMIM.exe** if you have 32-bit Installation Manager installed on a Linux or Windows system.

For information on starting Installation Manager in command mode for silent installation, see the Installing or updating with a response file.

For information on starting Installation Manager in command mode to record a response file, see Recording a response file.

Additional heap memory parameters

The heap memory parameters specify the amount of memory Installation Manager can use during the installation process. The heap memory pool sizes that are used by Installation Manager are hardcoded defaults. If these defaults are not sufficient for your environment, you can specify different values by adding parameters to the Installation Manager`config.ini` file.

Important: These additional parameters are required only if you are experiencing `Out Of Memory` errors during the installation process.

The following parameters can be added:
- `memoryMin=user.sb.INSTALL_<OS>_INIT_HEAP.<amount_of_memory>`
- `memoryMax=user.sb.INSTALL_<OS>_MAX_HEAP.<amount_of_memory>`

Where `<OS>` is your operating system and `<amount_of_memory>` is the specified amount of memory.

Operating System	Parameter	Example Entry
Sun-Solaris	Initial Heap Size **INSTALL_SUN_INIT_HEAP**	`memoryMin=user.sb.INSTALL_SUN_INIT_HEAP.3072m`
	Maximum Heap Size **INSTALL_SUN_MAX_HEAP**	`memoryMax=user.sb.INSTALL_SUN_MAX_HEAP.3072m`
Linux	Initial Heap Size **INSTALL_LINUX_INIT_HEAP**	`memoryMin=user.sb.INSTALL_LINUX_INIT_HEAP.3072m`
	Maximum Heap Size **INSTALL_LINUX_MAX_HEAP**	`memoryMax=user.sb.INSTALL_LINUX_MAX_HEAP.3072m`

Operating System	Parameter	Example Entry
AIX	Initial Heap Size **INSTALL_AIX_INIT_HEAP**	`memoryMin=user.sb.INSTALL_AIX_INIT_HEAP.3072m`
	Maximum Heap Size **INSTALL_AIX_MAX_HEAP**	`memoryMax=user.sb.INSTALL_AIX_MAX_HEAP.3072m`
HP-UX	Initial Heap Size **INSTALL_HPUX_INIT_HEAP**	`memoryMin=user.sb.INSTALL_HPUX_INIT_HEAP.3072m`
	Maximum Heap Size **INSTALL_HPUX_MAX_HEAP**	`memoryMax=user.sb.INSTALL_HPUX_MAX_HEAP.3072m`
Windows	Initial Heap Size **INSTALL_WIN_INIT_HEAP**	`memoryMin=user.sb.INSTALL_WIN_INIT_HEAP.3072m`
	Maximum Heap Size **INSTALL_WIN_MAX_HEAP**	`memoryMax=user.sb.INSTALL_WIN_MAX_HEAP.3072m`

Installing or updating with a response file (V5.2.6 or later):

You can install or update (apply fix pack or interim fix) Sterling B2B Integrator with silent mode by using the sample response files or converting your existing response file to the required format.

Upgrading in a Windows non-cluster environment with the IBM Installation Manager in GUI mode:

You can upgrade Sterling B2B Integrator in a Windows non-cluster environment with the IBM Installation Manager in a graphical user interface (GUI) mode.

Before you begin
- Ensure that your system is ready for the upgrade. See "Prepare Your System for the Upgrade" on page 332.

  Attention: Failure to properly prepare your system can cause the upgrade to fail.
- Complete the "Information Gathering Checklist for Upgrade (Windows)" on page 409.
- You must have administrative privileges and a login on the host machine to do an upgrade.
- If you are using the Standards Processing Engine (SPE) application with Sterling B2B Integrator, you must upgrade SPE before you upgrade Sterling B2B Integrator.
- If you are using the EBICS Banking Server application with Sterling B2B Integrator, the data encryption for storage within the installation location is not supported.
- Set the ulimit and language as follows:
  - ulimit -n 4096
  - ulimit -u 16000
  - export LANG=en_US

About this task

This upgrade changes the administrative password to the default password. After the upgrade, change the password back to the administrative password to minimize security risks. This is the Admin password for logging into the user interface (/dashboard or /ws).

Important: Following is a list of changes related to installing or upgrading to Sterling B2B Integrator V5.2.6:

- You can upgrade using the user interface or silent installation mode (response files). Console mode upgrade is not supported.
- Sterling B2B Integrator JAR file is included in the repository. Therefore it is not required to manually select the JAR file when upgrading.
- You must use Installation Manager V1.8.2 to upgrade Sterling B2B Integrator. `InstallService` is disabled, and cannot be used. You can use `InstallService` only for a specific scenario related to Sterling File Gateway. For more information, see step 13.

Procedure

1. Close all open Windows programs and any command prompt windows.
2. From the installation media, copy the compressed upgrade package to a location on your desktop.
3. Decompress the upgrade package.
4. Open the `InstallationManager` folder in the directory structure that is created when the installation package is decompressed. Several `IM_OperatingSystem.zip` files are displayed.
5. Decompress the `IM_Win.zip` file. This action creates a new `IM_Win` folder.

   Important: Installation Manager V1.8.2 is required to upgrade to Sterling B2B Integrator V5.2.6. If Installation Manager was not used to install your current Sterling B2B Integrator instance, the installation process installs the Installation Manager when you start the upgrade to Sterling B2B Integrator V5.2.6. After successful installation, restart the Installation Manager, and proceed with upgrading to Sterling B2B Integrator V5.2.6.

6. Decompress the `Common_Repo.zip` from the installation package. The action creates two new folders `b2birepo` and `gmrepo`. The `IM_Win`, `b2birepo`, and `gmrepo` folders must be at the same level in a directory.

   Important: `gmrepo` contains the repository file required to install Global Mailbox. For information about Global Mailbox, see Global Mailbox overview.

7. Do one of the following tasks to start the Installation Manager:
   a. Go to the `IM_Win` directory and double-click **userinst.exe** for the following scenarios:
      - If you do not have the Installation Manager installed and are using the Installation Manager agent provided with V5.2.6.
      - If you have a 64-bit Installation Manager installed.
   b. Go to `<installation directory>\Installation Manager\eclipse` and double-click **IBMIM.exe**, if you have 32-bit Installation Manager installed on your Windows system.

   Important: It is suggested to record a response file. The response file can be used to install Sterling B2B Integrator after applying database schema

manually or install second and subsequent nodes in a cluster. For more information, see Installing or updating with a response file.

8. On the Installation Manager home page, click **Install**.

   Important: If `IM_<operating_system>` and `b2birepo` directories are not in the same directory or if you already have Installation Manager installed, then you get a message saying that there no packages to install or Installation Manager could not connect to the repositories. You must add the Sterling B2B Integrator repository files to the Installation Manager repository. For more information about adding repository files, see Repository preferences.

9. On the Install Packages screen, select **IBM Sterling B2B Integrator**. This action selects the versions also. Click **Next**.

10. Review the license agreement and select the option **I accept the terms in the license agreements** to continue.

    If you do not accept the agreement, the upgrade process is canceled.

11. Select a location for the Shared Resources directory and a location for the Installation Manager to reside:

    a. Specify a **Shared Resources Directory**.

    b. (Optional if previously installed) Specify an **Installation Manager Directory**.

       Note: The Shared Resources directory cannot be a sub-directory of the Installation Manager installation.

       The specified Shared Resources and Installation Manager directories must be empty.

12. Choose **Create a new package group** and specify the path to Sterling B2B Integrator installation directory.

13. Select the required features to be installed. The available options are:

    - **IBM Sterling B2B Integrator**
    - **IBM Sterling File Gateway**

       Important: If your current installation includes Sterling File Gateway, then Sterling File Gateway is also updated to V 2.2.6 when upgrading to Sterling B2B Integrator V5.2.6. If Sterling File Gateway was not installed, it is not installed when upgrading to Sterling B2B Integrator V5.2.6, when you select the **IBM Sterling File Gateway** option. In this case, to install Sterling File Gateway when upgrading, you must do one of the following tasks:

       – When upgrading Sterling B2B Integrator, if you are installing Sterling B2B Integrator to a fresh directory, and pointing to the previous database, then you can install Sterling File Gateway V2.2.6.

       – Use `InstallService` to install Sterling File Gateway. For information about installing Sterling File Gateway by using `InstallService`, see Installing Sterling File Gateway (V2.2.6 or later).

    - **FIPS Module**
    - **AS2 Edition Module**
    - **Financial Services Module**
    - **EBICS Banking Server Module**
    - **B2B Advanced Communications Integration Module**

Important: When upgrading to Sterling B2B Integrator V5.2.6, select **B2B Advanced Communications Integration Module** to install Sterling B2B Integrator bridge. Sterling B2B Integrator bridge is required for communication between Sterling B2B Integrator and B2B Advanced Communications. If you are installing Global Mailbox and Sterling B2B Integrator, then **B2B Advanced Communications Integration Module** (Sterling B2B Integrator bridge) is installed by default, because Global Mailbox uses the storage module of B2B Advanced Communications. However, you must configure the adapter containers and adapters for Sterling B2B Integrator bridge after upgrading.

Important:

IBM Sterling B2B Integrator is selected by default. Select only the licenses and features that were defined by your IBM contract. If you are unsure which to select, the installation can proceed without a selection and complete successfully. Startup and operation of the software, however, requires one of the licenses to be selected. See "License modifications" on page 58 to apply licenses after the installation.

Features that are not part of your current Sterling B2B Integrator installation are disabled and you cannot select them when upgrading or applying a fix pack. To include them in your Sterling B2B Integrator setup, you must first upgrade to the current version, and then install them separately. If the fix pack or upgrade JAR includes updates to features that are part of your current Sterling B2B Integrator installation, the features are upgraded regardless of whether you select the them or not.

Important: You must manually install the EBICS client. For more information about installing the EBICS Client manually, see the *EBICS Client User Guide.*

14. Enter the full path to the **JDK directory**.
15. Specify the configuration for the features to install and click **Next**.
    - **FIPS Compliance Mode (Must enable FIPS Module)**
    - **NIST 800-131a Compliance Mode**
        - **off** (default value)
        - **strict**
    - **SPE Integration Module (Requires pre-install of SPE, WTX optional)**

      If you select the SPE option, you are prompted for the following information:
        - SPE installation directory
        - (Optional) WebSphere Transformation Extender (WTX) installation directory
        - SPE UI port

      For more information, see the documentation for the integration of Sterling B2B Integrator and SPE.
16. Enter the full path to your **JCE file**.
17. Enter your **Installation panel properties** information:
    a. Enter the explicit IP address for the server or use the default value of localhost.
    b. Enter the Initial Port number or use the default value of 8080.
18. Enter your **System Passphrase** information:

    a. Enter a passphrase.

    b. Confirm the passphrase.

19. Enter you **E-Mail Information**:

    a. Enter the E-mail address to which you want system alert messages sent.

    b. Enter the SMTP mail server (IP address or host name) that you want to use for system alert messages and other administrative notices.

20. Specify if you want to **Enable FIPS** (Federal Information Processing Standards) mode, select the check box. The default is FIPS mode is disabled.

21. Select the database vendor you want to use:

- Oracle
- Microsoft SQL Server
- DB2
- MySQL

22. Select all options that apply to this upgrade:

Choices:	Action
This installation is for a cluster node 2 or higher (Not applicable for MySQL)	Do not select this option.
Apply database schema automatically? (Not applicable for MySQL)	If yes, no action required. The default is to automatically apply the DDL statements. If you want to manually create the database schema, then clear the **Apply database schema automatically** check box and continue with the remaining upgrade steps. **Important:** Once the upgrade starts, it runs for a short time and stops without error. When the upgrade stops, you must perform additional actions as given in Step 28 of this procedure.

23. Enter the **Database Connection Information**.

- Database user name.
- Database password (and confirmation).
- Database catalog name.
- Database host name.
- Database port.
- For Oracle, Microsoft SQL Server, and MySQL - Absolute path and file name for one JDBC driver file.
- For DB2 - Absolute paths and file names for two JDBC driver files. Use the Type-4 JDBC driver. This type of driver converts JDBC calls into the network protocol used directly by DB2, allowing a direct call from the system to the DB2 server.

24. Click **Add** to browse to the file location for the appropriate JDBC driver.

25. Click **Test** next to the database driver path.

    Note: The Installation Manager must successfully validate the connection to the database before you can continue with the upgrade. If there is a validation failure you can view the system log to determine more information about the failure. Perform the following:

a. Identify the location of the user's application directory. Select **Start -> Run** and enter %APPDATA%.

b. Navigate to the user's application directory: *local_path*\IBM\Installation Manager\logs

c. Open the **index.xml** file in a browser.

d. Identify the log file based upon the timestamp of when you started your upgrade.

e. Click on the install file to view a listing of errors that occurred during that upgrade.

26. Determine what **Other options** apply to this installation. Select the applicable options:

- **Verbose install**

- **This installation is an upgrade from a prior version** - Select this option.

   Note: After you select the upgrade option, an additional option is displayed.

- **Would you like to run upgrade pre-check?** - To run the pre-check, click **Test**.

27. Specify the **Performance configuration** that applies to this upgrade. Select the applicable options:

- **Number of Processor Cores** - Accept default value or enter appropriate value.

- **Physical Memory (MB) allocated to Sterling B2B Integrator** - Accept default value or enter appropriate value.

28. Review the installation package summary information. Click **Install** to continue.

   Attention: If you did not select the option to **Apply database schema automatically**, the upgrade stops and you must perform these additional steps to complete the installation with manual DDL statements:

   a. Navigate to your install directory.

   b. Locate the InstallSI.log file and open it with a file editor.

   c. Search the file for these error messages:

   - `<SI_Install>/repository/scripts/EFrame_IndexAdds.sql must be applied to the database.`

   - `<SI_Install>//repository/scripts/EFrame_Sequence.sql must be applied to the database.`

   - `<SI_Install>//repository/scripts/EFrame_TableChanges.sql must be applied to the database. Exiting installation..."`

   Important: If you do not find the above error messages in the log file, the installation failed because of another reason and you must resolve that error and attempt the installation again. If you did find these messages, continue with the remaining steps.

   d. Edit each .sql script and make changes appropriate for your database. This may include changing the SQL delimiter or adding tablespace options.

   e. Log in to your database as the DB schema user.

   f. Execute the SQL files manually in this order:

   Important: When you are executing the scripts, it is important to execute the SQL scripts in the specified order.

- EFrame_IndexDrops.sql
- EFrame_TableChanges.sql
- EFrame_IndexAdds.sql
- EFrame_TextIndexAdds.sql
- EFrame_Sequence.sql
- EFrame_TextIndexModify.sql
- EFrame_TextIndexUpdates.sql
- EFrame_TextIndexUpgrade.sql
- EFrame_Static.sql

Important: ActiveMQ uses dynamically generated table names based on the name of the install node. Table generation is not included in the above scripts, but is performed automatically during the initial start of Sterling B2B Integrator or when a new cluster node is added. Table generation may fail if security restrictions have reduced the Sterling B2B Integrator database user permissions. To avoid this issue, ensure that the DBADM role permissions are enabled during the initial startup. If further issues arise, contact IBM Support for guidance.

g. Exit from the database.

h. Navigate to the parent directory of *install_dir*.

i. Unisntall the Sterling B2B Integrator offering to clear out the Installation Manager metadata about the installation, and the delete (or rename as a backup) the Sterling B2B Integrator installation directory.

j. Restart the installation wizard and provide the same installation options that you provided before you cleared the **Apply database schema automatically** check box. If you have recorded a response file (as suggested in step 8), you can use the response file to install Sterling B2B Integrator.

The **Installation Progress** screen indicates which component of the installation is currently in process.

A status bar below the **Repository Information** heading displays the progress of component installation. When the installation completes, a large green circle with a checkmark displays with the message `The packages are installed`. A link is provided to view the installation log file.

The installation completes automatically. When the installation is finished, the system displays a dialog box with the message `The install completed successfully.`

Installation information is in the InstallSI.log file.

29. Click **Finish**. The Installation Manager closes and you are returned to your desktop.

    Check the `InstallSI.log` to verify all the components have installed properly.

    You must perform the *Configure the Sterling B2B Integrator Desktop Icon for Windows Server 2008* procedure if you use Windows Server 2008.

30. Start Sterling B2B Integrator.

31. Navigate to *install_dir*\install\bin and enter: `InstallWindowsService.cmd.`

32. Enter: `StartWindowsService.cmd.`

    It might take several minutes for the Sterling B2B Integrator components to initialize and start up.

    When startup is finished, a message like the following is displayed:

    Open your Web browser to http://host:port/admin/?module=platform

Where host is the IP address and port is where Sterling B2B Integrator resides on your system.

33. Determine whether you need to apply a fix pack or interim fix to the installation. For information about fix pack or interim fix installation, see "Applying a Fix Pack (V5.2.6 or later)" on page 625 and "Applying an interim fix (V5.2.6 or later)" on page 635.

Configure the Sterling B2B Integrator Desktop Icon for Windows Server 2008: About this task

User Access Control (UAC) is a security component in Windows Server 2008. If you enable the UAC, it affects the installation process and the daily processing for Sterling B2B Integrator. If you disable the UAC, which requires a reboot, the installation process and daily processing for Sterling B2B Integrator remains the same as in previously supported Windows version.

If you installed or upgraded Sterling B2B Integrator on a Windows Server 2008 and you created a desktop icon for Sterling B2B Integrator, you must complete this task in order for the desktop icon to work.

Procedure

1. Right-click on the Sterling B2B Integrator **desktop icon**.
2. Click **Properties**.
3. In the Shortcut tab, click **Advanced**.
4. Select the check box for **Run as Administrator**.
5. Click **OK** to apply the changes to Advanced Properties.
6. Click **OK**.

Validate the Upgrade

Validate the Upgrade Checklist (Windows): As part of the upgrade, you need to run the following tests to ensure that the software upgrade was successful. Complete the following tasks:

Number	Validate Upgrade Tasks	Completed
1	Start Sterling B2B Integrator.	
3	Access Sterling B2B Integrator.	
4	Validate the Installation.	
5	Stop Sterling B2B Integrator.	

Starting Sterling B2B Integrator in a Windows non-cluster environment:

After you install the software, you can start Sterling B2B Integrator.

Before you begin

If you are starting Sterling B2B Integrator after you upgrade the application from V5.1, change the values of the following properties in the centralops.properties file to 600. This action prevents the **StartWindowsService.cmd** command from timing out before Sterling B2B Integrator starts. The centralops.properties file is in the *install_dir*\install\properties directory.

- **OpsServer.commandTimeout**

- **PassPhrase.urlTimeout**

Procedure

1. Open the *install_dir*\install\bin directory.
2. Enter StartWindowsService.cmd. The final start processes run, concluding with the following messages:

   Open your Web browser to http://*host:port*/dashboard

   where *host:port* is the IP address and port number on your system.
3. Record the URL address so that you can access Sterling B2B Integrator.

Accessing Sterling B2B Integrator:

You can access Sterling B2B Integrator through a web browser.

Procedure

1. Open a browser window and enter the address that is displayed at the end of the start.
2. On the login page, enter the default user ID and password. The default login is at an administrative level. One of your first tasks as an administrator is to change the administrative password and to register other users with other levels of permission.

Validating the installation with a sample business process:

You can validate the installation by testing a sample business process.

Procedure

1. From the **Administration Menu**, click **Business Process** > **Manager**.
2. In the **Process Name** field, type Validation_Sample_BPML and click **Go!**
3. Click **execution manager**.
4. Click **execute**.
5. Click **Go!** The Status: Success message is displayed on the upper left side of the page.

Stop Sterling B2B Integrator (Windows):
About this task

To stop Sterling B2B Integrator in a Windows environment:

Procedure

1. From the Administration Menu, select **Operations > System > Troubleshooter**.
2. Click **Stop the System** and wait for shutdown to complete.

Stop Sterling B2B Integrator (Hardstop Windows):
About this task

To stop Sterling B2B Integrator in a Windows environment:

Procedure

1. Navigate to *install_dir*\install\bin.

2. Enter `StopWindowsService.cmd`. Your should receive a message that services have been stopped. Services include Noapps, Opsserver, WebDav, and Database-related service.

Post Upgrade Configuration

Post upgrade configuration checklist:

After the upgrade software finishes running, you must perform some post upgrade procedures.

Review all of the procedures in the checklist. Some procedures might not be required.

Task number	Task	Your notes
1	Upon installation, several default user accounts are automatically created to get you started. For security purposes, the system administrator should update all default user account passwords immediately after installation is completed. See "Changing default user account passwords" on page 40.	
2	"Determine If You Need to Apply a Fix Pack (Windows)" on page 357	
3	"Change the Administrative Password" on page 429	
4	"Disable Services" on page 366	
5	"Download of the Sterling B2B Integrator tools" on page 43	
6	"Change the Network Interface Bindings (Windows)" on page 366	
7	"Enable Business Processes" on page 367	
8	"Property files configuration in a Windows environment" on page 44	
9	"Add cdinterop Files" on page 367	
10	"Updating the sandbox.cfg file with a new JCE file" on page 368	
11	"Review the EDI Sequence Check Queue" on page 368	
12	"Configure Document File Systems" on page 369	
13	"Add Third-Party Libraries" on page 368	
14	"Configure Services and Adapters" on page 369	
15	"Configure JDBC Adapter and Lightweight JDBC Adapter" on page 369	
16	"Configure File System Adapter and Command Line2 Adapters" on page 370	
17	"Configure Odette FTP Adapter" on page 370	
18	"Add Advanced File Transfer Tab" on page 373	
19	"Restore Performance Tuning Configuration" on page 373	
20	"Reconfigure Archive Settings" on page 373	
21	"Correct Missing Manager IDs" on page 374	
22	"Configure JVM Containers" on page 378	

Changing default user account passwords:

When you install Sterling B2B Integrator, several default user accounts are automatically created to get you started. One of the first actions you must take after installation is to update these accounts with unique passwords, because the default ones can be known by all Sterling B2B Integrator customers.

About this task

Default user account passwords are preset at installation. For security purposes, the system administrator should update all default user account passwords immediately after installation is completed.

Default user accounts are listed below in the same order as they appear in the UI under **Accounts > User Accounts > List All**. You can use this table to track the user accounts you want to update.

User Account Name	Update password
MBX_daemon	
admin (*)	
aft_user (*)	
anon	
as2_user	
commandlineuser	
dash_oper (*)	
dash_part (*)	
dash_prtspon (*)	
dash_sponsor (*)	
fg_architect	
fg_operator	
fg_provisioner	
fg_sysadmin (*)	
gmbx_user	
ja_turbine	
jane	
jane_doe	
joe_employee	
joe_manager	
joe_supplier	
john	
sd_buyer	
sd_supplier	
turbine	
ws_buyer	
ws_director	

User Account Name	Update password
ws_employee	
ws_finance	
ws_hr	
ws_manager	
ws_purchaser	
ws_supplier	

(*) denotes a super user

To change the password for a user account, perform the following tasks.

Procedure

1. Log into Sterling B2B Integrator using ID = `admin` and password = `password`.
2. Go to **Accounts > User Accounts**. Under the List section click **Go!** All default user account names are listed.
3. Click **Edit** next to the user account name you want to update the password for.
4. In the New Password and Confirm New Password fields, enter a new, secure password for this User ID.

   Note: Passwords must be at least six characters long.
5. Click **Save** and **Finish**.

What to do next

Repeat steps 3 - 5 for all user account names you want to update.

Determine If You Need to Apply a Fix Pack (Windows):

Fix Packs contain cumulative fixes for a specific version of Sterling B2B Integrator.

About this task

Fix packs are available on the IBM Fix Central web site. Because each fix pack contains the fixes from previous fix packs, you only need to install the most recent fix pack.

Note: During installation, the dbVerify utility compares the list of standard indexes with those present in the database and drops the custom indexes. You should recreate the custom indexes after the installation is complete.

Fix packs are named using the following naming convention:

si_<i><release number></i>_<i><build number></i>.jar

Before you install the fix pack, review the following items:
- Preserve your custom changes to system resources.
- The installation may use one or more property override files. These files will be named *propertyFile_patch*.properties. Do not alter these files.
- Property changes made directly in *.properties or *.properties.in files may be overwritten during the installation. Properties overridden using the customer_overrides.properties file are not affected. IBM recommends that you

maintain property file changes using (when possible) the customer_overrides.properties file. For more information about this file, refer to the property file documentation.

- If you edited any of the cdinterop files, you must back them up before applying the fix pack. The cdinterop files do not have initialization (*.in) files. After applying the fix pack, use the backup version of the files in your installation. These files include the following files: cdinterop-proxy-records.properties; cdinterop-spoe-auth.properties; cdinterop-spoe-policy.properties; and cdinterop-user-records.properties.
- Information about the installation is automatically logged to *install_dir*\install\logs\InstallService.log.
- If you need to rollback a fix pack, see the *Fix Pack Change Report*.

Change the Administrative Password: This upgrade changes the administrative password to the default password. After the upgrade, change the password to minimize security risks. This is the Admin password for logging into the UI.

Disable Services:
About this task

The upgrade process enables services that might have been disabled before the upgrade. If you want to disable these services again, you must disable them in after the upgrade process.

Download of the Sterling B2B Integrator tools:

After you install Sterling B2B Integrator, you can install tools like the Map Editor and the Graphical Process Modeler (GPM).

Sterling B2B Integrator includes tools that run on a desktop or personal computer. After you install Sterling B2B Integrator, you can install the following tools:
- Map Editor and associated standards

  Note: The Map Editor requires a 32-bit JDK. This JDK is not provided with the product download or media. For more information, see *System Requirements*.
- Graphical Process Modeler (GPM)
- Web Template Designer
- (If licensed) MESA Developer Studio plug-ins, including MESA Developer Studio Software Development Kit (SDK) and MESA Developer Studio Skin Editor
- (If licensed) Reporting Services, which require MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports

Attention: Conflicting IP addresses can cause problems when you download a desktop tool.

Change the Network Interface Bindings (Windows):
About this task

To increase the security of the Administrator Console user interface, Sterling B2B Integrator binds only to specific network interfaces. After installing, if the URL returns the error message **Page cannot be displayed**, you can adjust property settings to correct the problem.

To update the property settings:

Procedure

1. On the server where Sterling B2B Integrator resides, edit the noapp.properties_platform_ifcresources_ext.in file.
2. Locate the admin_host parameter.

   Where *hostname1* is the name of primary network interface, the one given highest priority by Sterling B2B Integrator.

   Where *localhost* is the name of the network interface on the server where Sterling B2B Integrator resides.

   ```
   admin_host.1 = hostname1
   admin_host.2 = localhost
   ```

3. If no interface is being displayed, edit hostname1 so that it correctly identifies the primary network interface that accesses Sterling B2B Integrator.
4. If an additional network interface needs to access Sterling B2B Integrator, add an additional admin_host entry. For example:

   * `admin_host.1 = hostname1`
   * `admin_host.2 = localhost`
   * `admin_host.3 = hostname2`

5. Stop Sterling B2B Integrator.
6. Navigate to *install_dir*\install\bin.
7. Enter setupfiles.cmd.
8. Restart Sterling B2B Integrator.

Enable Business Processes:
About this task

During the upgrade process, your customized business processes are preserved, but they may not be the default business process. Review the business processes and enable the customized versions.

Property files configuration in a Windows environment: Property files contain properties that control the operation of Sterling B2B Integrator. For example, the REINIT_DB property in the sandbox.cfg file controls whether or not a database is initialized when you install Sterling B2B Integrator.

By modifying the values of these properties, you can customize the Sterling B2B Integrator to suit your business and technical needs. Most property files are in the *install_dir*\install\properties directory.

After installing Sterling B2B Integrator, most property files and scripts do not need any further configuration for basic operation. However, if you want to customize any specific operations, for example setting a different logging level - you will need to edit (or in some cases, create) certain property or .xml files.

Before changing any property files, refer to the *Working with Property Files* documentation for general information about how to work with Property Files.

Areas where you might need to make specific property files changes after an installation include:

* LDAP user authentication
* Prevention of cross-site script vulnerabilities

- Logging configuration
- Process-specific property file settings

Add cdinterop Files:
About this task

During the upgrade, the cdinteropt files were replaced. Copy the customized version into the upgrade.

Updating the sandbox.cfg file with a new JCE file:

If you upgrade from Sterling B2B Integrator release 5.2.4.2 and you change the JDK from Sun to IBM, you must manually update the Java Cryptography Extension (JCE) policy file information in the `sandbox.cfg` file.

Procedure
1. Open the *install_dir*\install\properties directory.
2. Open the `sandbox.cfg` file.
3. Change the **JCE_DIST_FILE** property to the path to the JCE file that you specified during the upgrade.
4. Save and close the `sandbox.cfg` file.
5. Open the *install_dir*\install\bin directory.
6. Enter the `setupfile.cmd` command to update your installation with the new **JCE_DIST_FILE** property value.

Review the EDI Sequence Check Queue:
About this task

The EDI Sequence Check Queue is used for X12 and EDIFACT sequence and duplicate checking. You can check the contents of the queue through the UI (**Trading Partner > Document Envelopes > EDI Sequence Check Queue**). Any interchanges that are in the queue will not be able to be processed after upgrade because the EDI compliance report serialized format has changed.

The EDI Post Processor displays the following error:

```
The compliance report for interchange <interchange document ID> could not be
deserialized because the format has changed. The entry for this interchange
should be manually removed from the EDI Sequence Check Queue through the UI,
and the inbound deenvelope workflow should be rerun (WF ID <wfid>).
```

If you receive this error, you should follow the instructions in the error message to correct the situation.

Configure Document File Systems:
About this task

If you use a File System as your document storage method, determine and record the path to the File System.

You will need the File System path structure so that after the upgrade, you can copy/mount the documents to the new installation directory. The directory structure (path to the File System) must be the same in the current and in the upgraded system.

Add Third-Party Libraries:

About this task

If you added third-party libraries to configure adapters for the previous release, you need to add each of the libraries again after you complete the upgrade. See the documentation for each third party adapter you use.

Configure Services and Adapters:
About this task

You may need to reconfigure services and adapters after an upgrade. During an upgrade, packages for services and adapters are reprocessed to update the service configurations.

After an upgrade, the configurations of default adapters and services are re-set to their default configurations. This includes directory paths, which are restored to their default paths. You need to reconfigure those adapters and services, which include, but are not limited to:
- All default FTP adapters
- All default SFTP adapters
- Connect:Enterprise UNIX Server Adapter
- OdetteFTP Adapter
- SAP Suite Adapter
- SWIFTNet Client Service
- SWIFTNet Server Adapter

If you modified the standard configuration for a service or adapter, you may need to reconfigure or reactivate the service or adapter following an upgrade. You may also need to reconfigure adapters that used directories or scripts in the installation directory of your previous release.

Examples of services and adapters that commonly need to be reconfigured following an upgrade include:
- FTP adapter
- System services such as the Alert service and the BP Fault Log adapter

The following adapters need special consideration following an upgrade:
- JDBC Adapter and Lightweight JDBC Adapter
- File System Adapter and Command Line2 Adapters
- Odette FTP Adapter

Configure JDBC Adapter and Lightweight JDBC Adapter:
About this task

Storage locations of the database pool properties that allow the JDBC adapter and the Lightweight JDBC adapter to communicate with your external database have been streamlined. The poolManager.properties file has been eliminated and some of its pool properties are now included in the jdbc.properties file, along with some new properties. You will need to manually update your existing jdbc_customer.properties.in file to add some new database pool properties. If you do not have a jdbc_customer.properties.in file, create one since customer.properties are not affected by product updates.

Configure File System Adapter and Command Line2 Adapters:

About this task

You must configure your File System and Command Line2 adapters before you remove the previous release directory. Reconfigure any File System and Command Line2 adapters that were configured to use directories or scripts in the installation directory for the previous release. Ensure that you create new directories and save scripts outside of the current installation directory and edit each configuration to use the appropriate directories and scripts.

Consider the following:
- If you are using the Command Line2 adapter and have located the CLA2Client.jar file anywhere other than the default location, you must replace it with the new version. For information about the default location and how to start the Command Line2 adapter, see the *Command Line2 adapter*.
- If you are upgrading to this version of Sterling B2B Integrator from a version lower than 4.0.1 and are using the Command Line2 adapter, you must update the version of the CLA2Client.jar file with the CLA2Client.jar located in the */install_dir*/install/client/cmdline2 UNIX directory or in the *install_dir*\install\client\cmdline2 for Windows. If you installed the CLA2Client.jar file anywhere other than the default location, you must replace each copy of the file with the new version. If you only installed it in the default location, the update occurs automatically during the upgrade process.
- If you are upgrading to this version of Sterling B2B Integrator from a version prior to 4.0 and are using the Command Line adapter, you must update the version of the CLAClient.jar file with the CLA2Client.jar located in the */install_dir*/install/client/cmdline2 UNIX directory or in the *install_dir*\install\client\cmdline2 for Windows. If you installed the CLAClient.jar file anywhere other than the default location, you must replace each copy of the file with the new version. If you only installed it in the default location, the update occurs automatically during the upgrade process.

The CLA instances are now pointing to the CLA2 Service definition. After importing old service instances of CLA onto Sterling B2B Integrator, you need to reconfigure the imported CLA services to re-set the Remote Name and Remote Port service configuration parameters. For more information, refer to the documentation for the Command Line Adapter and Command Line2 Adapter.

Configure Odette FTP Adapter:
About this task

If you use the Odette FTP Adapter and are using the Partner Profile XML file version 2.00 used in Sterling Gentran Integration Suite 4.3, you must modify it to match the new Partner Profile version 3.00. To modify the XML file, refer to the following table:

Section	Name of Structure or Field	Action	Comment
Partner Profiles	<GeneralParameters> <PartnerProfileVersion>3.00 </PartnerProfileVersion> </GeneralParameters>	Use correct version label of the Partner Profile.	New Version label: 3.00
Physical Partner	Description	Add field and description content	Mandatory in OFTP Partner database

Section	Name of Structure or Field	Action	Comment
Physical Partner	SubMailbox	Add field, if used.	Optional
Physical Partner	\<AuthenticationCertificate type ="..."> \<Subject>string\</Subject> \<Issuer>string\</Issuer> \<Serial> Bignumber_string \</Subject> \</AuthenticationCertificate>	Add Structure, if used.	OFTP 2.0: Mandatory for security only. Structure may be repeated.
Physical Partner	\<AuthenticationCertificate type ="Private Key"> \<Subject>string\</Subject> \<Issuer>string\</Issuer> \<Serial>Bignumber_string \</Subject> \</AuthenticationCertificate>	Add Stucture, if used.	OFTP 2.0: Mandatory for security only.
Physical Partner/ CAPI	DWindowSize	Delete field	
Physical Partner/ IP	IPFilter		Uses IPv4 or IPv6 addresses.
Physical Partner IP	SSL	Add field, if used.	OFTP 2.0: Mandatory for security only.
Physical Partner IP	CipherStrength	Add field, if used.	OFTP 2.0: Mandatory for security only.
Physical Partner IP	\<SSLCertificate type ="..."> \<Subject>string\</Subject> \<Issuer>string\</Issuer> \<Serial> Bignumber_string \</Subject> \</SSLCertificate>	Add structure, if used.	OFTP 2.0: Mandatory for security, only. Structure may be repeated.
Physical Partner Contract	Description	Add field and description content.	Mandatory in OFTP Partner database.
Physical Partner Contract	MultipleLoginSessions		Now used.
Physical Partner Contract	DuplicateFilePeriod	Rename DuplicateFileProcessingTestings To DuplicateFilePeriod	
Physical Partner Contract	SessionLogLevel	Add fields.	Optional

Section	Name of Structure or Field	Action	Comment
Physical Partner Contract	GroupNameList	Add fields, if used.	Optional
Physical Partner Contract	SecureAuthentication	Add fields.	OFTP 2.0: Mandatory
Physical Partner Contract	\<TimeScheduleTable\> ... \<TimeScheduleTable\>	Delete structure and create schedules in the Scheduler.	Initiator Business Process and Business Process user fields are still used.
Physical Partner Contract	OdetteFTPAPILevel	Rename OdetteAPILevel to OdetteFTPAPILevel	
Logical Partner	Description	Add field and description content.	Mandatory in OFTP Partner database.
Logical Partner	\<FileServiceCertificate type ="..."\> \<Subject\>string\</Subject\> \<Issuer\>string\</Issuer\> \<Serial\>string\</Subject\> \</FileServiceCertificate\>	Add structure, if used.	OFTP 2.0: Mandatory for security, only. Structure may be repeated.
Logical Partner Contract	Description	Add field and description content.	Mandatory in OFTP Partner database.
Logical Partner Contract	FileTransmissionRetries	Rename FileTransmitRetries to FileTransmissionRetries	
Logical Partner Contract	SignedEERPRequest	Add field, if used.	
Logical Partner Contract	EERP/NERPSignatureCheck	Add field, if used.	
Logical Partner Contract	File Signing	Add field, if used.	
Logical Partner Contract	File Encryption	Add field, if used.	
Logical Partner Contract	CipherSuite	Add field, if used.	
Logical Partner Contract	File Compression	Add field, if used.	
Logical Partner Contract	CharEncoding	Add field, if used.	
Logical Partner Contract	Receive VitualFilenamePattern	Add field, if used.	
Logical Partner Contract	EERPTimeout	Rename WaitForEERP to EERPTimeout	
Logical Partner Contract	FileScheduleTimeout	Add field, if used.	
Logical Partner Contract	InboundBusinessProcess	Add field, if used.	Optional
Logical Partner Contract	InboundBusinessProcessUser	Add field, if used.	Optional, if no Inbound business process is specified.

After changing the Partner Profile for version 3.00, import the Partner Profile into the new Odette FTP Partner Profile database. For additional information, see Odette FTP Partner Profile.

Add Advanced File Transfer Tab:
About this task

The Advanced File Transfer tab will not be enabled by default after an upgrade. If you have a license for Advanced File Transfer, perform the following steps to add the Advanced File Transfer tab:

Procedure
1. Log in as **Admin**.
2. Click **Manage Layout**.
3. Click **Add Pane**.
4. Enter the following name: `Advanced File Transfer`
5. Click **Apply**.
6. Click the **customize** icon for the new **Advanced File Transfer** tab.
7. Click **Add Portlet**.
8. Select the Add box for **Advanced File Transfer Management**.
9. Click **Apply**.
10. Select **Clear Borders and Title** from the Decoration menu.
11. Click **Save and Apply**.

Restore Performance Tuning Configuration:
About this task

Before you begin this procedure, you need to add the Advanced File Transfer Tab.

To restore the performance tuning configuration:

Procedure
1. From the **Administration Menu**, select **Operations** > **System** > **Performance** > **Tuning**.
2. Next to **Edit Performance Configuration**, click **Go!**
3. Click **Edit settings**.

Reconfigure Archive Settings:
About this task

The upgrade does not automatically reconfigure the archive configuration. You must reconfigure the Backup Directory setting in Archive Manager after an upgrade.

To reconfigure your Archive settings, use the following procedure:

Procedure
1. From the **Administration Menu**, select **Operations** > **Archive Manager**.
2. Next to **Configure Archive Settings**, click **Go!**
3. If a message displays about the UI Lock, click **OK** to continue.

4. Click **Next**.
5. Update the Backup Directory field with the correct path information:
6. Click **Save**.
7. Confirm the settings and click **Finish**.

Correct Missing Manager IDs:
About this task

If you created a Manager ID with no corresponding User ID in your previous version, the Manager ID may be missing after upgrading. If this occurs, create a user in the system with a User ID that matches the missing Manager ID.

Configure JVM Containers:
About this task

After you have upgraded the system, you will need to reconfigure the JVM containers.

Before you reconfigure the JVM containers, you need to know the container numbers from the previous installation.

For example, if you configured the container using the command, setupContainer.sh (or cmd) 1, then the container number is 1.

Use one of the following tasks to reconfigure your containers:
- *Set Up Adapter Container - iSeries*
- *Set Up Adapter Container - UNIX/Linux*
- *Set Up Adapter Container - Windows*

System Maintenance

From time to time, you may need to perform system maintenance activities. These activities might include any or all of the following:
- Performing a checksum
- Modifying the license files

DB Checksum Tool:

A checksum is a simple redundancy check used to detect errors in data. The DB Checksum tool generates the difference in resource checksum between the default resource and the latest system resource from the database.

In Sterling B2B Integrator, a verification process compares the checksum between the existing default resource and the resource that was added after applying a fix pack or upgrading. The DB Checksum tool, a resource difference tool generates a granular report of the changes in the system that was not permitted to be set as defaults.

Perform a Checksum (Windows):
About this task

To run the DB Checksum tool in the Windows environment:

Procedure
1. Navigate to *install_dir*\bin.

2. Enter `db_checksum_tool.cmd [-d] [-i [1 | 2 | 3 | 4 | 5]] [-r [wfd | map | schema | sii | template]] [-o <output file>] [-g]`

Where:

-d is the mode to dump the difference of resource checksum between the default resource and latest system resource.

-i is the resource type integer (optional).

1 is WFD.

2 is MAP.

3 is SCHEMA.

4 is SII.

5 is TEMPLATE.

-r is the resource name (optional). For example, wfd, map, schema, sii, or template.

-o is the file name to output all the messages (optional).

-g is the file name that lists all the ignored resources (optional).

-h is the help screen.

The DB Checksum tool performs the relevant checksum operation based on the command options and generates the output message.

License modifications:

After the installation finishes, you can modify the software licenses that you loaded with the **AddLicenseSet** command.

The **AddLicenseSet** command is in the `bin` directory of your UNIX or Windows installation. After the initial installation, the license files are in the following directories:

- UNIX - /*install_dir*/install/properties/licensefiles
- Windows - *install_dir*\install\properties\licensefiles
- iSeries - /*install_dir*/properties/licensefiles

You can add licenses or review the license list from the UI. On the Administration Menu, click **System** > **B2B Console** > **Operations** > **System** > **Licenses**.

AddLicenseSet Command Parameters

Use the **AddLicenseSet** command to modify a single license file or the entire license file directory.

To use the **AddLicenseSet** command, you must do the following:

- Open the `bin` directory
- Include the absolute path to the license file directory or to a license file

The **AddLicenseSet** command has the following parameters:

AddLicenseSet Parameter	Description
`-reload`	Use this parameter to reload the license files. This parameter deletes all of the license files from the database before the new files are loaded. The old license files are saved to the following locations: • UNIX - /*install_dir*/install/logs/security/ old_licenses • Windows - *install_dir*\install\logs\security\ old_licenses • iSeries - /*install_dir*/logs/security/old_licenses
`-upgrade`	Use this parameter during an upgrade only. This parameter deletes all of the old license files from the database and installs the new license files. The old license files are saved to the following locations: • UNIX - /*install_dir*/install/logs/security/upgrade • Windows -*install_dir*\install\logs\security\upgrade • iSeries -/*install_dir*/logs/security/old_licenses

The **AddLicenseSet** command will check if Sterling B2B Integrator is running. If it is running, the command will call the Ops server to refresh the license from the database. If you have any problems with your licenses after running the **AddLicenseSet** command, stop and restart Sterling B2B Integrator.

License Modification: Examples:

There are several different ways you can use the **AddLicenseSet** command to modify your licenses.

UNIX Examples

From the *install_dir*/bin directory:

Scenario	Command usage (UNIX example)
Reload a single license file	`./AddLicenseSet.sh /install_dir/install/properties/ licensefiles/SI_SFG_License.xml -reload`
Reload all of the license files in the directory	`./AddLicenseSet.sh /install_dir/install/properties/ licensefiles/ -reload`
Upgrade a single license file	`./AddLicenseSet.sh /install_dir/install/properties/ licensefiles/SI_SFG_License.xml -upgrade`
Upgrade all of the license files in the directory	`./AddLicenseSet.sh /install_dir/install/properties/ licensefiles/ -upgrade`

Windows Examples

From the *install_dir*\bin directory:

Scenario	Command usage (Windows example)
Reload a single license file	`AddLicenseSet.cmd\install_dir\install\properties\ licensefiles\SI_SFG_License.xml -reload`

Scenario	Command usage (Windows example)
Reload all of the license files in the directory	`AddLicenseSet.cmd\`*`install_dir`*`\install\properties\` `licensefiles\ -reload`
Upgrade a single license file	`AddLicenseSet.cmd\`*`install_dir`*`\install\properties\` `licensefiles\SI_SFG_License.xml -upgrade`
Upgrade all of the license files in the directory	`AddLicenseSet.cmd\`*`install_dir`*`\install\properties\` `licensefiles\ -upgrade`

Uninstall Sterling B2B Integrator from a Windows Non-Cluster Environment
Before you begin

If you have installed Sterling B2B Integrator software using IIM, then perform these steps to unregister Sterling B2B Integrator packages from the IIM registry:
- Launch IIM.
- Click **Uninstall** and select the required Sterling B2B Integrator package (Media, FixPack, or Interim Fix).
- Confirm and click **Uninstall**.

About this task

To uninstall Sterling B2B Integrator from a Windows environment:

Procedure
1. Stop Sterling B2B Integrator and wait for shutdown to complete. Navigate to the `install_dir\install\bin` directory and enter `StopWindowsService.cmd` If you begin removing files before all business processes and the system is stopped, you may be unable to remove the software successfully.
2. Back up the file system and database.

   This step is optional. However, by backing up the file system and database, you are ensured that Sterling B2B Integrator is completely recoverable.
3. Remove the installation directory by entering the following command in the parent directory of your installation directory: `rd /s /q \`*`install_dir`*`\install`
4. If you use an Oracle, Microsoft SQL Server, or DB2 database, these remain intact even after you remove Sterling B2B Integrator from the server. If you no longer want to reference the data, contact your database administrator about removing unwanted tables and recovering the database space where Sterling B2B Integrator used to reside.
5. Manually remove the JDK:
   a. Navigate into the _uninst subdirectory of your JDK installation directory
   b. Enter `uninstall.cmd`
6. After you remove Sterling B2B Integrator from the server, you can remove Eclipse, and any tools that were downloaded to the desktop, including the following:
   - Map Editor and associated standards

     Refer to the *Map Editor Guide* for information about removing the Map Editor.
   - Graphical Process Modeler

     Refer to the *Graphical Process Modeler Guide* for information about removing the Graphical Process Modeler.

- Web Template Designer

  Refer to the *Web Extensions Guide* for information about removing the Web Template Designer.
- (If licensed) MESA Developer Studio plug-ins, including:
  - MESA Developer Studio Software Development Kit (SDK)
  - MESA Developer Studio Skin Editor

  Refer to the *MESA Developer Studio* guide for information about removing MESA Developer Studio.
- (If licensed) Reporting Services, which requires MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports.

  Refer to the *MESA Developer Studio* guide for information about removing Reporting Services.

User Documentation

The user documentation is available from an online documentation site on the web.

Providing the documentation in an online environment allows for frequent updates of content that is based on user feedback and usability.

If you need a printed copy of the documentation, you can print topics of information through your Internet browser, or you can download documents in PDF format, after you add it to a collection on IBM Knowledge Center.

To access the documentation site from within Sterling B2B Integrator or one of its tools, select the help ⑦ icon. The system must reside on a computer that supports Internet access and an Internet browser.

Improving your access to online documentation:

You can improve your access to online documentation by using several methods.

About this task

After you access the IBM Knowledge Center, you can perform the following tasks:
- Enter a word or phrase and search the entire library for information.
- Move through a hierarchy of contents pages to identify the topic you want to read or print.
- Print topics by using your browser's Print function.
- Add documents to your collection and download them in PDF format.

Troubleshooting Tips for Windows Environment

Situation	Message or Symptom	Explanation/Resolution
Installing	You encounter errors or problems during installation.	**Explanation** The installation creates several log files that you can use to diagnose problems like the failure of an installation. **Resolution** Examine the log files generated during installation: • ant.install.log (in the *install_dir* directory) • *install_dir*\PreInstallSI.log
Installing	When you entered an absolute path during installation, a message indicated that the command was not found.	**Explanation** You entered an incorrect path. Check the information entered. **Resolution** Enter the correct path.
Installing	IM is installed successfully, but SI Fails to install.	Go to Start Open IM select Help and then Export logs to a file for analysis.

Installing a desktop tool or resource	Cannot download any of the following:
	• Map Editor and associated standards
	• Graphical Process Modeler
	• Web Template Designer
	• (If licensed) MESA Developer Studio plug-ins, including:
	  – MESA Developer Studio Software Development Kit (SDK)
	  – MESA Developer Studio Skin Editor
	• (If licensed) Reporting Services, which requires MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports.
		Explanation
		
		When you install Sterling B2B Integrator, system files are created that contain an internal IP address. If you install Sterling B2B Integrator behind a firewall, and your firewall is configured to accept an external IP address from a client computer, you may not be able to download the desktop tools and resources. The firewall will reject the internal IP address from a client residing outside of the firewall.
		
		Resolution
		
		Modify the system files that contain the invalid IP address. Follow these steps:
		1. Navigate to *install_dir*\install\bin.
		2. Stop Sterling B2B Integrator.
		3. Enter the following command followed by the external IP address:
		   `patchJNLP.cmd external_IP_address`
		4. Restart Sterling B2B Integrator.

Cluster Installation or Upgrade	When configuring TCPS the following warning can be found in the activemqbroker.log: sun.security.provider.certpath. SunCertPathBuilderException: unable to find valid certification path to requested target	**Resolution** Add the system certificate to the trust store using the KeyTool command.

Situation	Message or Symptom	Explanation/Resolution
Cluster Installation or Upgrade	When configuring TCPS the following warning can be found in the activemqbroker.log: Do not mention any SSL cipher in the ActiveMQconfig. xml. oracle.net.ns.NetException: Invalid cipher suites specified.	**Resolution** Do not mention any SSL cipher in the ActiveMQconfig.xml.
e-Invoice Upgrade: Oracle Add Constraint Error	When you upgrade Sterling e-Invoicing and are using an Oracle database, if the upgrade fails with the error message `name is already used by an existing object`, this occurs because the default behavior for the `drop constraint` command changed in Oracle 10.	**Explanation** The index that is used to support the constraint is now only removed if the index was generated by the `create constraint` command. The indexes for Sterling e-Invoicing are always generated from constraints during an install. If you receive this error during a Sterling e-Invoicing upgrade, it is because of how the database was restored, the version of Oracle you are using, and because the Oracle `imp` command exported the indexes and constraints separately. There is no way to determine when the imp command will not add a create index command to the export file if it was generated by a constraint – but if it does add the command, the database restore process loses the association of the constraint and its underlying index. The database script that runs during a Sterling e-Invoicing upgrade executes two steps: 1. First, it drops the unique constraint so the next step can redefine it using additional columns. However, the drop constraint command does not remove the underlying index if the association with its index was lost. 2. The next command that redefines this constraint requires a different index definition, but in this scenario the name of the index the constraint wants to use already exists, which causes the `name is already used by an existing object` error. **Resolution** If you receive this error message, the solution for this problem is to drop the index and rerun the Sterling e-Invoicing upgrade. The drop index command you should use is: `drop index UNQ_EINV_CANON`

Situation	Message or Symptom	Explanation/Resolution
Apply a fix pack or Upgrade	The `\`*`install_dir`*`\install\installed_data` directory is created (if clustered, on each node) during an upgrade or applying a fix pack. This directory can become very large and take up needed space on the file system.	**Explanation** The information in this directory is used during upgrade or applying a fix pack, but is not required afterward. The deployment/cleanup tasks for the upgrade or fix pack do not remove this directory. **Resolution** The directory can be manually removed to increase the available space for the file system: 1. Navigate to `\`*`install_dir`*`\install` 2. Enter `rd /S installed_data` 3. If prompted to confirm deletion, enter `Y` for yes.

UNIX/Linux Cluster Environment Upgrade (V5.2.6 or later)

You can upgrade the Sterling B2B Integrator software in a cluster (multiple node) UNIX/Linux environment.

These instructions include pre-upgrade and post-upgrade processes.

Clustering is not supported for Sterling B2B Integrator systems that use the MySQL database.

You should also review the following documents:
- System Requirements
- Release Notes
- What's New
- Installation and Upgrade Information

It is important to remember that upgrading involves a full installation of Sterling B2B Integrator. You need to prepare for an upgrade the same way that you would prepare for an installation. It is also recommended that you thoroughly test this process in a test or development environment prior to implementing in a production environment.

This upgrade does not overwrite your current Sterling B2B Integrator directory structure on disk. Instead, it creates a new installation of Sterling B2B Integrator that will point to and upgrade the database of your current installation of Sterling B2B Integrator. This means your original instance will no longer be operational after performing the upgrade. After the upgrade, you will be starting your Sterling B2B Integrator instance only from the newly created directory structure.

For new installations, use the Sterling B2B Integrator *UNIX/Linux Cluster Installation Guide*.

Upgrade Overview

Assumptions for this guide:

The procedures in this guide are accurate as of the publication date and are specific to this version of the document.

Intended audience:

This document can be used by different members of your organization.

This document is intended for use by:
- System administrators
- Installation engineers
- Database administrators.

Upgrade Scenarios (Clustered):   Upgrading to Sterling B2B Integrator can follow several paths. Keep these scenarios in mind as you plan for your upgrade:

Upgrade Scenario	High-Level Upgrade Steps
You have V5.2.x installed and want to upgrade by applying V5.2.6 as a fix pack.	The upgrade steps are as follows: 1. Ensure that your JDK version is supported. See the system requirements. Upgrade your JDK if needed. See "Upgrading your JDK (Windows and UNIX)" on page 3. 2. Ensure that your operating system and database versions are supported. 3. See "Applying a Fix Pack (V5.2.6 or later)" on page 625or "Applying Sterling B2B Integrator V5.2.6 Fix Pack using a script" on page 630

Upgrade Scenario	High-Level Upgrade Steps

You have 5.1.x installed and want to upgrade to V5.2.6.	The upgrade steps are as follows:
	
	1. Ensure that your JDK version is supported. See the system requirements. Upgrade your JDK if needed. See upgrading your JDK.
	
	2. Ensure that your operating system version is supported. Upgrade your operating system if required.
	
	3. Ensure your database version is supported. Upgrade you database if required:
	
	   a. Export the configuration data.
	
	   b. Back up the database.
	
	   c. With help from a database administrator (DBA), copy the database to the new version.
	
	   d. Back up the newly created database.
	
	4. Upgrade to Sterling B2B Integrator V5.2.6 using the full installation media and this Upgrade Guide.
	
	5. Point to your supported database version. If the upgrade stops and leaves the newly created database in an incomplete state, you can re-start the upgrade using the backup of the database.

Upgrade Impacts

This documentation provides information on how system behavior has changed based on upgrading your instance. You should review this information before you begin your upgrade. Depending on which version you are upgrading to, you will need to review one or more topics listed. The upgrade impacts listed for each subsequent version are specific to that version. There is not a cumulative list.

Upgrade impacts for V5.2.6.2:

Upgrading to Sterling B2B Integrator V5.2.6.2 has unique impacts.

DB2 requires additional tablespace

When upgrading to V5.2.6.2 or later you must ensure that all tablespaces used by Sterling B2B Integrator tables have a minimum page size of 8K. Otherwise installation will fail.

Upgrade impacts for V5.2.6:

Upgrading to Sterling B2B Integrator 5.2.6 has unique impacts.

Support for SSLV3 has been removed - TLS 1.2 is the new default

Due to security concerns, Sterling B2B Integrator no longer supports the use of SSLV3. You should be aware of the following changes as you upgrade your system to this version:

- Several properties have been updated to use TLS 1.2 as the default. If your mail server cannot use TLS 1.2, you can change your SMTP and B2B Mail Client adapters to use TLS 1.0 or 1.1 instead.
- If any of your 3rd party programs do not support the use of TLS 1.2, you can change Sterling B2B Integrator to use TLS 1.0 or TLS 1.1.
- In all cases, requests to use "SSLV3" in Sterling B2B Integrator will use instead TLS 1.0, TLS1.1, or TLS1.2.
- TLS 1.2 is used as the default protocol in secure communications. This change applies to any system that is upgraded to V5.2.6.
- If your GPM, or WebSphere MQ or OFTP adapters are configured to use older, non-supported cipher suites (non-TLS 1.2), they will continue to work. However, if you edit them, only TLS 1.2 will be available to select.

JDK 7 is the only supported JDK version for V5.2.6

There are several impacts due to this change:
- If you are not already using JDK 7, you must upgrade your JDK before attempting to upgrade Sterling B2B Integrator to V5.2.6. If you currently have V5.2.4.1 or higher installed, there is a **upgradeJDK** script available to assist you. See *bin Directory Files* for more information.
- Only ciphers that are supported by JDK 7 can be used in Sterling B2B Integrator V5.2.6. You can update your cipher suites in `security.properties`.
- Previously defined ciphers in `customer_overrides.properties` are not changed upon upgrade to V5.2.6.
- **DefaultCipherSuite** contains a list of JDK 7 ciphers in V5.2.6 that can be used when others are not available.

Upgrade impacts for V5.2.5:

Upgrading to Sterling B2B Integrator 5.2.5 has unique impacts.

JDK 7 does not support the TLS_RSA_WITH_3DES_EDE_CBC_MD5 cipher

If you are using JDK 7 with Sterling B2B Integrator V5.2.5, and you want to use a cipher to secure the Sterling B2B Integrator dashboard, you must set one of the following values in the **dashboardCipherSuite** parameter in the `security.properties_platform_asi_ext.in` property file or in `customer_overrides`:
- *JDK* (includes all strong ciphers except the one not supported by JDK 7)
- *Weak*

Do not use *Strong* or *All* with JDK 7 or Sterling B2B Integrator will not start.

Reconciliation of HIPAA Level 5 code lists

When you upgrade to Sterling B2B Integrator 5.2.5, customized HIPAA Level 5 code lists from the previous version are preserved in the system where they were entered, but they are not the default code lists after the upgrade. After the upgrade, you must manually make any customized code lists the default code lists.

For example, you customized the ICD9 or HCPCSCPT code list in the previous version of Sterling B2B Integrator. After the upgrade to version 5.2.5, you must replace the default ICD9 or HCPCSCPT code list with the customized ICD9 or HCPCSCPT code list.

Properties file change to prevent timeout during start (5.1.0.4 to 5.2.5 upgrade)

Before you start Sterling B2B Integrator after you upgrade the application from version 5.1.0.4 to 5.2.5, you must change the values of the following properties in the `centralops.properties` file to 600. This action prevents the start command from timing out before Sterling B2B Integrator starts. The `centralops.properties` file is in the `properties` subdirectory of the installation directory.

- `OpsServer.commandTimeout`
- `PassPhrase.urlTimeout`

jGroups upgrade in V5.2.5 prevents Sterling B2B Integrator from starting for some customers

jGroups is upgraded with V5.2.5. Some of the properties defined in jgroups_cluster.properties have changed. If you modified these files or added custom changes for them to customer_overrides.properties, the upgrade changes are not applied and Sterling B2B Integrator will not start.

This issue is fixed in V5.2.5, Interim Fix 1, where all necessary properties files are changed for you. You can also disable this fix if desired. See APAR IT06654 for more information.

Note: The original and modified properties are output to the noapp.log file. This allows you to see how your properties were modified. Search the log using the value "Initializing jgroups_cluster.property_string" to see the new and changed values for the two affected startup properties. The jgroups_cluster.lock.protocolStack property is also modified with this fix, but is only written to the log when it is used, not at startup.

If you want to manually fix your installation without applying V5.2.5, Interim Fix 1, complete the following steps:

1. Delete the following options (if they exist) from customer_overrides.properties for the jgroups.cluster property file. These occur in the jgroups_cluster.property_sting, jgroups_cluster.distributed_property_string, and jgroups_cluster.lock.protocolStack files:
   - gc_lag
   - up_thread
   - down_thread
   - join_retry_timeout
   - max_xmit_size
   - shun
2. Remove the protocol parameter **VIEW_SYNC** and all of its attributes.
3. In the jgroups_cluster.property_string, replace 'start_port' with 'bind_port'.
4. In the jgroups_cluster.distributed_property_string and jgroups_cluster.lock.protocolStack properties, add the following items:
   - In distribution_property_string the attribute **thread_pool_rejection_policty=run** should be added to the protocol 'TCP'. For example,

     `TCP(bind_port=22261`**;thread_pool_rejection_policy=run**`)`
   - In lock.protocolStack: the protocol and attribute **CENTAL_LOCK(num_backups=2)** should be added to the end of the property. For example,

```
lock.protocolStack=UDP(bind_addr=&HOST_ADDR;;bind_port=
&MULTICAST_NODE_PORT3;;mcast_addr=239.255.166.17;<other

protocol parameters here>pbcast.GMS(join_timeout=5000;print_local_

addr=true):CENTRAL_LOCK(num_backups=2)
```

Upgrade Impacts for V5.2.0: Before you begin an upgrade, you should review the following information.

Features and Services Not Supported as of V5.2.0

The following features and services are no longer supported:
- Channels portlet
- Federated Systems
- Community Management (AFT Communities are still available)
- Sterling Community Management (SCM) Integration
- Archive Commandline Service
- Sync Engine Data Clean Manager Service
- Sync Engine Task Manager Service

If you need more information, please contact your IBM sales representative.

Port Allocation Changes

If you are upgrading to V5.2, and configured the CLA2 or the SWIFTNet HTTP Server Adapter, the remote port numbers have changed. The port numbers are as follows:

Table 3. Remote Port Numbers

Adapter Name	Version 5.2.0 Base Port	Version 5.2.1 Base Port	Version 5.2.2 Base Port	Version 5.2.3 Base Port
CLA2	+51	+52	+53	+54
SWIFTNet HTTP Server	+52	+53	+54	+55

Note: You should check adapter configurations and the sandbox.cfg file for ports greater than 51 which may have changed.

After upgrading to 5.2.x, you need to change any references to the old remote port numbers. For example, if you have any business processes that use the CLA2 adapter, you will need to update the remote ports in the business process.

Database Table Sizes

While upgrading if you encounter any database table size issues, you may have to manually adjust the database tables and restart the upgrade process. An upgrade using the production database in a test environment can be used to help you determine what tables need to be manually adjusted.

Resource Tags

If you are using resource tags in your current version, you should check all of your existing resource tags before you start the upgrade process. The resource tags you should check are:

- Adapter Policies
- Agreements
- Sterling Connect:Direct Netmaps
- Proxy Servers
- Security Tokens
- SSH Resources
- SWIFTNet Copy Service Profiles
- SWIFTNet Service Profiles

You can check the resource tags by running the following SQL query from the SQL Manager page (**Operations > Support Tools)**:

```
SELECT * FROM TAG_RESOURCE_ASSOC WHERE TYPE=41 OR TYPE=42 OR TYPE=43 OR TYPE=44 OR
TYPE=45 OR TYPE=52 OR TYPE=53
```

The TAG_NAME column in the SQL results will contain the names of any resource tags that need to be edited or deleted.

If any of the resource tags contain tagged resources using the types listed, remove those resources from the resource tags or delete the resource tags that contain these resource types.

Silent Installation Parameters

The following parameters are new or have an updated definition:

What has changed	parameter	Definition
Parameter definition has changed	LICENSE_FILE_PATH	(Required) Full path to Core_License.xml.
New parameter	LICENSE_FILE_# (where # is a number between 1 and 99)	(Required) This is required for each license you install. You must add an entry for each license file to the silent install file. The LICENSE_FILE numbering (#) does not need to be sequential.

For example:

LICENSE_FILE_1= SI_SFG_License.xml

LICENSE_FILE_2= Fin_Serv_License.xml

LICENSE_FILE_3= SI_SFG_FIPS_License.xml

LICENSE_FILE_4= AS2_License_.xml

LICENSE_FILE_5= EBICS_License_.xml |

Channels and Community Management Tabs (Optional)

The Dashboard PSML files are not updated during an upgrade. The PSML file impacts any custom tabs you may have configured, such as Channels or Operator. The Channels and Community Management tabs appear in your browser but are no longer operational.

To remove the Channels and Community Management tabs:

Warning: The psmlRestore command gets the 5200 psml file which resets ALL of the custom tabs from the previous release.

1. Navigate to the installation directory.
2. Navigate to the bin directory.
3. Enter this command: `./psmlRestore.sh admin`

Custom BI Fact Models Need to be Upgraded

Scripts named recreateBITablePKs.cmd.in (Windows) and recreateBITablePKs.sh.in (UNIX) are now provided which allow you to upgrade any custom BI fact models tied to a separate BI repository.

BI fact models need to be upgraded to continue to work with the Entity Framework, which replaced Hibernate usage in the BI framework in version 5.2.0.

Backups Are Not Generated During Install, Upgrade, or When Applying a Fix Pack or Interim Fix: Before you begin an upgrade, review the following backup information.

Some of the standard resources installed during install or upgrade use the import mechanism available to customers to load the standard resources into the database. The standard import mechanism by default creates a backup of the table containing the resource prior to importing to provide the ability to restore to the previous state if later it was decided that the import should not have been performed. This table backup was also being performed by default during the basic installation processes. And, since the import mechanism was sometimes used multiple times during the installation processes, some of the tables were backed up several times. Depending on the size of the table, this could add a very large amount of time to the installation process. Since it is recommended that a backup is completed prior to beginning any of these installation processes, the default behavior has changed to not perform the backup by default. If you would like backups to be performed, then `SKIPIMPORTBACKUP=false` should be added to the **sandbox.cfg** file.

Capitalization Insensitivity for Header Value:
About this task

Before you begin an upgrade, review the following AS3 information.

For AS3, when searching for a header value in a multipart/report, you do not need to consider whether the header value contains any capitalization. The search has been enhanced to be capitalization insensitive.

For example, the following searches will result in a match:
- Multipart/Report
- Multipart/report

- multipart/Report
- multipart/report

The search would not find the following as a match:
- MulTiPart/RePorT

CA Certificates Impacts: Before you upgrade, review the following information on CA certificates.

Users may add multiple copies of the same certificates to the database. Having multiple copies of the same certificate in the database is not, in principle, a problem for the system except for the minor amount of wasted storage. Each copy has a different object ID in the database and is a separate database object.

The specific changes in this release is the ability to easily populate the product database with the set of authority root certificates distributed with the JVM.

Perimeter Server Installation:
About this task

Before you begin an upgrade, review the following Perimeter Server installation information.

Silent install is the default installation mode. If you want to complete the Perimeter Server installation using an interactive mode, you need to use the following command:

```
java -jar ps_xxxx.jar -interactive
```

where ps_xxx.jar is the perimeter server jar file name for the version of Sterling B2B Integrator you are upgrading to.

Retry Logic Added to WebSphereMQ Suite Adapter PUT Service:
About this task

Before you begin an upgrade, review the following WebSphereMQ Suite Adapter PUT Service information.

Retry logic has been added to the WebSphereMQ Suite. To accommodate this new functionality, you need to configure two new parameters for the PUT service:
- wsmq_send_retryCount
- wsmq_send_retrySleepInterval

To configure the new parameters:

Procedure
1. Log into Sterling B2B Integrator.
2. From the **Admin Console Home**, you need to start the Graphical Process Model (GPM).
3. Log into the GPM. You will need a **User ID** and **Password**.
4. In the GPM, select **View > Stencil > Services**.
5. Select **File > New**.
6. Drag the **WebSphereMQ Suite Put Message Service** from the **All Services** pane into the center pane.

7. Double click the **WebSphereMQ Suite Put Message Service**.

8. Select the configuration from the **Config** dropdown.

9. Enter the number of retries in to the **wsmq_send_retryCount** value.

10. Enter the sleep interval in seconds in to the **wsmq_send_retrySleepInterval** value.

11. Save the changes to the service configuration.

12. Exit from the GPM.

Services and Adapters - Show Advance State Button: Before you begin an upgrade, review the following Show Advance State button information.

The Show Advanced State check box has been removed from the Services Configuration search screen. Instead, the default has been changed to always show the advanced state without needing to check a checkbox on the search screen to display it.

Some Certificate Fields Are Optional:
About this task

Before you begin an upgrade, review the following certificate field information.

When generating certificate keys, the following fields may have been missing in the release you are upgrading from, but the entries are now optional:
- alt.name.dns
- alt.name.IP

Support for Multiple AS2 Organizations: Before you begin an upgrade, review the following AS2 schema information.

Sterling B2B Integrator now supports multiple sponsoring organizations and multiple partners for AS2. During upgrade, the single organization will be flagged as the default organization.

Once you have upgraded to this version, a prefix designation is used to differentiate between an AS2 organization (AS2_ORG_) and an AS2 partner (AS2_PART_). Each of these will require the full configuration of a trading partner to allow for a partner to trade with multiple organizations as well as an organization that trades with multiple partners.

The AS2_TRADEPART_INFO and AS2_EMAIL_INFO tables have been modified and the AS2_PROFILE table is newly introduced. Updates to these tables will occur during the SI in-place upgrade process in the following manner:
- Identify the default organization and populates the AS2_PROFILE table with organization information. A default organization is an AS2 organization profile named "profile_ORGANIZATION" present in the system before upgrade.
- Identify partner records and populates the AS2_PROFILE table with partner information.
- Populate the new columns of table AS2_TRADEPART_INFO with the default organization information.
- Populate the new PROFILE_ID column in the AS2_EMAIL_INFO table with the profile id of the AS2 organization profile present in the system.

Web Services: Before you begin an upgrade, review the following Web Services information.

Many of the Web Services configuration settings that were generated from the WebServices Provider Configuration UI have moved from the property files into database tables. This change was made to allow a single location of these settings in cluster environments and to ensure that these settings would not be reset during a fix pack installation.

After you have completed your upgrade, you should run the convertWSSoaProperties script found in the installation bin folder. This script reads the settings from the property file and places them into the proper database tables. You can then review the results in the WebServices Provider Configuration UI.

Upgrade Planning

Proper planning will help ensure a trouble-free upgrade.

Before you begin an upgrade you should:
- Read and become familiar with this document so that you have a clear understanding of what the upgrade requires.
- Review upgrade scenarios to determine which scenario you want to use.
- Review and record system configuration information.
- Review and record performance and tuning information.

Upgrade Planning Checklist: To assist you with your upgrade planning, review the following planning checklist:

#	Upgrade Planning Checklist	Your Notes
1	Read through this entire document so that you have a clear understanding of what the upgrade requires.	
2	Download and review the following information from the Sterling B2B Integrator documentation library. • *System Requirements* - With each release, IBM introduces leading edge technology to improve and enhance its software. Review the *System Requirements* to confirm that your system and databases meet the requirements for this release. • *Release Notes* - Review the release notes to obtain information about issues and resolutions which have been identified for this release. • *What's New in this Release* - Review this guide to find out about new features and functionality provided in this release. • *Installation and Upgrade Information* - Lists the installation and upgrade documents available for this version of Sterling B2B Integrator.	
3	**CAUTION:** **Before upgrading to the latest product version, contact your sales representative to verify that it includes all of your current functionality. Depending on the timing, even though it's in a higher version that the one you have installed, a particular mod release or fix pack might not include all the functionality in your current version or fix pack.**	

#	Upgrade Planning Checklist	Your Notes
4	Collect information on third-party libraries used for adapter configurations that were added to your current release. You will need to add each of these libraries to the upgraded system.	
5	Locate any configuration file changes for JDBC adapter or Lightweight JDBC adapter in your current release. You will need to copy these changes to the upgraded system.	
6	Record your performance tuning configuration. You will need to restore these settings after the system has been upgraded.	
7	Review and note the adapters, business processes, and other configurations in your current release. This information will help you identify the need for updating transport messages, third-party adapters, or configurations to adapters, such as File System or Command Line adapters.	
8	Determine if you have edited any of the property files (.properties or .properties.in). The upgrade process overwrites these property files, unless these changes were made using the customer_overrides.properties file. Your previous property file edits might not be applicable this version of the software.	
9	Determine if you edited any of the following cdinterop files: • cdinterop-proxy-records.properties • cdinterop-spoe-auth.properties • cdinterop-spoe-policy.properties • cdinterop-user-records.properties You must back them up before upgrading. The cdinterop files do not have initialization (*.in) files. After the upgrade, use the backup version of the files in your upgraded installation.	
10	Determine if you have LDAP (Lightweight Directory Access Protocol) configuration information in the security.properties file. This information will automatically be moved to the authentication_policy.properties file.	

#	Upgrade Planning Checklist	Your Notes
11	Determine whether Sterling B2B Integrator is using an application server (JBoss™, WebLogic® or WebSphere®). Sterling B2B Integrator does not require an application server for installation or at runtime. Sterling B2B Integrator supports integration with JBoss and WebLogic during the installation. You can also integrate with WebSphere, JBoss, or WebLogic by using the Sterling B2B Integrator EJB Adapter. This does not represent a WebLogic server for deploying the Application Console.	
12	If you use a File System as your document storage method, determine and record the path to the File System. You will need the File System path structure so that after the upgrade, you can copy/mount the documents to the new installation directory. The directory structure (path to the File System) must be the same in the current and in the upgraded system.	
13	Review the EDI Sequence Check Queue to ensure that no interchanges are in the queue. The EDI Sequence Check Queue is used for X12 and EDIFACT sequence and duplicate checking.	
14	Determine if you have any JVM Containers configured. If yes, you will have to reconfigure the JVM containers after you have upgraded the software.	

Prepare Your System for the Upgrade

To help ensure a trouble-free upgrade, be sure to prepare your system before beginning the upgrade.

Before you begin the upgrade :
- Complete all Pre-Upgrade Checklists.
- Verify that your system meets all system requirements.
- Obtain the upgrade media.
- Create a process output log (optional).
- (Microsoft SQL Server only) Configure the snapshot feature (optional).
- (DB2 only) Upgrade DB2 to version 10.1 or 10.5, if needed.

Pre-Upgrade System Checklist:

Use the Pre-Upgrade System Checklist to help ensure that your system is ready for upgrading and reduce the chance of errors or other problems during upgrade.

Before you begin an upgrade:

#	Pre-Upgrade System Checklist	Your Notes
1	Use the system requirements to verify that your system hardware and software meet the requirements specified for this release. Verify you have the correct: • Patches required by Java™ for the operation system • Version of the JDK • JDK Patches • Absolute path to JDK and patches • Database must match the version listed in the requirements If any of the above requirements are not met, the installation will fail and print/log a report of all items that were non-compliant. Ensure that you have the correct license file and JCE file. **Important:** Do not remove the existing license file or JCE file from your system. The files specified by the **LICENSE_FILE_PATH** and **JCE_DIST_FILE** parameters in the sandbox.cfg file must be present during the upgrade, or the upgrade will fail.	
2	For systems with multiple IP addresses, verify that the IP address on which Sterling B2B Integrator resides is accessible by any client computer that is running a browser interface. If you do not verify the IP addresses, your system may not operate properly after installing Sterling B2B Integrator.	
3	If you are using a non-English environment, confirm that you are using the appropriate character set.	
4	Verify the file system has adequate free disk space.	
5	Obtain the upgrade media. It is a best practice to check the Product Updates and Downloads site to ensure you have the latest version of the media.	
6	Backup your Sterling B2B Integrator installation directory and the database. If there are problems with your upgraded system, the only way to ensure that you can roll-back to your previous version is to back up Sterling B2B Integrator and the database.	
7	Archive your data. Archived data can only be restored from the same version of Sterling B2B Integrator from which it was archived. If you need to restore archived data that was archived prior to performing the upgrade, then you must have a running instance of Sterling B2B Integrator that matches the version from which the archive was taken.	
8	Purge any unneeded data.	
9	Export any business objects that can not be upgraded. Including business processes, service configurations, trading partners, and maps. The exported business object can be imported into the upgraded system if you need them.	
10	Create a process output log.	

#	Pre-Upgrade System Checklist	Your Notes
11	Disable the virus protection software on the server. If the virus protection software is enabled, the upgrade will fail.	

Pre-Upgrade Database Checklist (Cluster Environment): Before you begin an installation, you need to:

#	Pre-Upgrade Database Checklist (Cluster Environment)	Your Notes
1	If required, copy your Microsoft SQL Server Database to a supported version. This is an optional procedure, and it is the customer's responsibility to perform it. (IBM Customer Support can not help with this procedure.)	
2	If required, update your Oracle database to a supported version. If you plan to import an Oracle database, while upgrading to this version of Sterling B2B Integrator, you must import the database without the indexes. For example, if you are using the Oracle import (imp) tool, you should use the INDEXES=N option. If you attempt upgrading to this version of Sterling B2B Integrator with indexes turned on, the upgrade will fail. If you had created any custom indexes in Oracle database, add them after performing the upgrade as they are not imported.	
3	If you are using MySQL, a new MySQL database will be created in this version of Sterling B2B Integrator and information will be copied from the MySQL database in your previous version of Sterling B2B Integrator to the new database. The MySQL database in your previous version of Sterling B2B Integrator will still work. When you copy your database, if you encounter Data Overflow or Invalid Time Format errors while copying the WORKFLOW_CONTEXT table, run this query: `UPDATE WORKFLOW_CONTEXT SET ENTERQ = NULL, EXITQ = NULL where ENTERQ IS NOT NULL OR EXITQ IS NOT NULL`	

Pre-Upgrade Operating System Verification Checklist:

Before you begin the upgrade, you need to verify your operating system configuration.

For the Operating System	Operating System Configuration Checklist	Your Notes

HP-UX Operating System	Verify these settings:
	
	• Verify kernel parameters and establish the following minimum settings by running the **kctune** command:
	  – kctune max_thread_proc 1024
	  – kctune maxdsiz 2147483648
	  – kctune maxdsiz_64bit 8589934592
	  – kctune maxssiz 369098752
	  – kctune maxssiz_64bit 536870912
	• Run ulimit utility, verify, and establish the following minimum settings:
	  – ulimit -d = 2097152 (in kilobytes) or higher
	  – ulimit -s = 360448 (in kilobytes) or higher	

AIX Operating System	You must specify the name of the installation directory name. The installation process creates the directory and beneath it, a directory called "install". To ensure that */install_dir/*install has the necessary permissions, AIX users must run the following command on the parent directory of */install_dir/*install before installation: chmod -R a-s <absolute path>/*install_dir_parent* where *install_dir_parent* is the directory in which */install_dir/*install will be created. For example, to specify AIX_1/applications/test1/*my_install* as your installation directory, you could run the command from the AIX_1/applications directory (directly above the test1 directory): chmod -R a-s test1 or from another location on the file system: chmod -R a-s /AIX_1/applications/test1 This ensures that when the *my_install* directory is created during installation, it inherits the correct permissions from test1.	

For the Operating System	Operating System Configuration Checklist	Your Notes

Solaris Operating System	Set the following entries in the `/etc/security/limits` file:
	
	  `nofiles = 4096`
	
	  `set rlim_fd_max=4096 (limit is 65535)` - hard limit
	
	  `set rlim_fd_cur=4096` - soft limit
	
	For **nofiles**, the value shown is an example. The possible values are unlimited, so the number for **nofiles** can be much larger. Revise the value as appropriate for your business needs.
	• To make the setting effective as the hard limit, reboot the server or run the following command:
	  `kill -1 inetd`
	• To make the setting effective as the soft limit, use the parent shell configuration (for example, .profile). Then, reboot the server.	

Linux Operating System	You need to disable SELinux by enter the following: `/etc/sysconfig/selinux: SELINUX=disabled` Ensure that /etc/hosts has short-names first for all entries. For example, 127.0.0.1localhostlocalhost.localdomain If the base locale is English, verify: • that the LANG variable is `en_US` • LANG variable is exported	

For the Operating System	Operating System Configuration Checklist	Your Notes

RedHat Enterprise Linux Operating System	Make the following system changes:
	
	• If the base locale for the system is English, edit the /etc/sysconfig/i18n file by changing the SUPPORTED variable from en_US.utf8 to en_US. You can also allow multiple support using the following format: en_US.utf8:en_US
	
	• Save and close the /etc/sysconfig/i18n file. Edit the /etc/security/limits.conf file by adding the following lines:
	  – * hard nofile 8196
	  – * soft nofile 4096
	  – * hard memlock 3000000
	  – * soft memlock 3000000
	  – * hard nproc 16000
	  – * soft nproc 16000
	  – * hard stack 512000
	  – * soft stack 512000
	
	  This updates the system ulimits.
	
	  For **nofile**, the values shown are examples. The possible values are unlimited, so the numbers for **hard nofile** and **soft nofile** can be much larger. Revise these values as appropriate for your business needs.
	
	• Save and close the /etc/security/limits.conf file.
	• Reboot the system.
	
	IBM Installation Manager in UI mode may fail to start on an RHEL 6.1 or higher x86_64 (64-bit) OS because Installation Manager is a 32-bit application and is dependent on some of the 32-bit libraries.
	
	For information on installing the required 32-bit OS libraries, refer to the IBM Support Website (https://www-304.ibm.com/support/ docview.wss?uid=swg21459143)
	
	CAUTION:
	Due to a known issue with the IBM JDK on RHEL 6.1 or higher, a performance degradation might be seen in comparison to previous RHEL releases. To avoid this issue, disable the CFS on RHEL 6.1 or higher.
	
	To disable CFS:
	• **Log in as root**
	• **Edit /etc/sysctl.conf and add "kernel.sched_compat_yield = 1"**
	• **Reboot the system**
	
	For more information go to the IBM SDK and Runtime Environment Java Technology Edition Version 6 Information Center and search for *known limitations on linux*.	

For the Operating System	Operating System Configuration Checklist	Your Notes

SUSE Linux Operating System	Make the following system changes:
	
	• If the base locale for the system is English, edit the /etc/sysconfig/i18n file by changing the SUPPORTED variable from en_US.utf8 to en_US. You can also allow multiple support using the following format: en_US.utf8:en_US
	
	• Save and close the /etc/sysconfig/i18n file. Edit the /etc/security/limits.conf file by adding the following lines:
	  – * hard nofile 8196
	  – * soft nofile 4096
	  – * hard memlock 3000000
	  – * soft memlock 3000000
	  – * hard nproc 16000
	  – * soft nproc 16000
	  – * hard stack 512000
	  – * soft stack 512000
	This updates the system ulimits.
	
	For **nofile**, the values shown are examples. The possible values are unlimited, so the numbers for **hard nofile** and **soft nofile** can be much larger. Revise these values as appropriate for your business needs.
	
	• Save and close the /etc/security/limits.conf file.
	
	• Reboot the system.	

Verification of the system requirements:

Before you begin the installation, verify that your system meets the hardware and software requirements that are specified for this release.

The hardware requirements that are listed in the *System Requirements* are the minimum requirements. Your system requirements might exceed these requirements if you are running other applications on the same machine as Sterling B2B Integrator.

The installation strictly enforces the following system requirements:
• Operating system version must match requirement exactly.
• The minimum patch level for the operating system is enforced, but you can apply higher patch levels.
• JDK version must match requirement exactly.
• The disk space is a minimum for the installation. The system must be separately sized to handle whatever load is going to be put on the system.
• Database version must match exactly.
• JDBC driver version supports exact matches and wildcard matches.

If any of these requirements are not met, the installation fails. If the installation fails, review the installation log for a list of non-compliant items.

Upgrading your JDK (Windows and UNIX):

Sometimes you need to upgrade your JDK version to support a new version of
Sterling B2B Integrator.

About this task

If you have V5.2.4.1 or higher installed, you can use the **upgradeJDK** script to
upgrade your version of the JDK. See *bin Directory Files* for more information.

If you have V5.2.4.0 or lower installed, follow the steps below to upgrade your
JDK.

Procedure
1. Download the new JCE file. For example, the `UnrestrictedPolicy.zip` policy
   file for the IBM JDK.
2. Back up the existing JDK in *<Install Dir>*/jdk. Change the folder name to
   `jdk_back`)
3. Copy the new IBM JDK (1.7.0) folder to the installation Directory. Directory
   Name should be `jdk`)
4. Copy all the jars present in *<Install Dir >*jdk_back\jre\lib\ext to *<install
   Dir>*jdk\jre\lib\ext directory.
5. If your installation of V5.2.4 or lower was built using the Oracle (SUN) JDK,
   continue to the next step. Otherwise skip to step 6.
   a. Edit the `sandbox.cfg` property file.
   b. Set JCE_DIST_FILE=*<New Path of Supported JCE File>*. For example,
      `JCE_DIST_FILE=D\:\\IBM\\unrestrictedpolicyfiles.zip`.
   c. Back up the `local_policy.jar` and `US_export_policy.jar` files present in
      *<Install Dir>*jdk\jre\lib\security.
   d. Unzip the new JCE file. For example, `Unrestrictedpolicyfiles.zip` file.
      Copy `local_policy.jar` and `US_export_policy.jar` to *<Install
      Dir>*jdk\jre\lib\security.
6. Run updateJavaSecurity.cmd *<path_to_new_jdk><Install Dir>*/jdk.
7. Verify that security providers have been updated in *<Install
   Dir>*\jdk\jre\lib\security\java.security.
8. Follow the Upgrade Guide instructions for your upgrade scenario.

Obtain Upgrade Media:
About this task

Before you upgrade, ensure that you have the latest version of the upgrade media
from the Passport Advantage online site or have downloaded the fix pack from Fix
Central..

For the latest version and for online support, go to: http://www.ibm.com/
software/howtobuy/passportadvantage/pao_customers.htm

Note: For V5.2.6, the fix pack download used for upgrading from V5.2.x to V5.2.6
is very large. It includes the new functionality for Global Mailbox. You must
download the full fix pack file to upgrade to V5.2.6 by installing a fix pack even if
you do not plan to install Global Mailbox.

Create Process Output Log:

About this task

A log of process activity during the upgrade will help if troubleshooting is required. Output is automatically logged to the upgrade log files (PreInstallSi.log and InstallSi.log). Use this procedure to generate a separate output log for each process you want to log.

To create a process output log:

Procedure

1. From any directory, run the script command to record the processes, ensuring that you have created and specified the name of the file in which to save the process output.

   For example, to start recording output to a file named processoutput.log, type script processoutput.log at the command line. The processoutput.log file will be created in the directory where you ran the script command.

2. After the upgrade is complete, enter exit at the command line to stop recording.

3. You can now retrieve the file containing the process output.

   The following example shows a session after starting the script command, specifying the output to be saved to the file named listing.log, and typing exit to stop the script command from running:

```
[2]%script listing.log
    Script started, file is listing.log
    [3]%ls
    Custard.Recipe FavoriteRecipes Curry.Recipe
    VindalooCurry.Recipe Jelly.Recipe
    [4]%exit
     Script done, file is listing.log
```

Configuring the snapshot feature for Microsoft SQL Server:

The snapshot feature in Microsoft SQL Server allows you to view a read-only copy of the database even when it is locked. Configuring the snapshot feature can also reduce deadlocks. To enable the snap shot feature, enter the following command:
ALTER DATABASE db_name SET READ_COMMITTED_SNAPSHOT ON;

Upgrading DB2 to version 10.1 or 10.5:

To upgrade from DB2 9.5 or 9.7 to 10.1 or 10.5, you must make configuration changes.

Procedure

1. Complete the steps in the following table that pertain to your version of Sterling B2B Integrator before you proceed to step 2.

   Important: Back up all files before you change any settings.

If you are upgrading from ...	Do the following steps:
Sterling B2B Integrator 5.1.x	Upgrade Sterling B2B Integrator to V5.2.6 and point to your DB2 9.5 or 9.7 database
Sterling B2B Integrator 5.2.x	Upgrade your 5.2.x installation to V5.2.6

2. Copy your DB2 9.5 or 9.7 database content to DB2 10.1 or 10.5.

3. Take a backup of the database driver located at `/install_dir/dbjar/jdbc/DB2/` and then replace it with the DB2 10.1 or 10.5 version.
4. Update the following `sandbox.cfg` file fields with your environment-specific parameters:

```
DB_PASS=
DB_SCHEMA_OWNER=
DB_DRIVERS_VERSION=
YANTRA_DB_PORT=
DB_DATA=
DB_HOST=
YANTRA_DB_USER=
DB_PORT=
YANTRA_DB_PASS=
YANTRA_DB_DATA=
YANTRA_DB_HOST=
DB_DRIVERS=
DB_USER=

DB2_PORT=
DB2_USER=
DB2_PASS=
DB2_DATA=
DB2_HOST=
```

5. Edit the following in the `activemq.xml` file:

   `activemq.xml: <value>jdbc:db2//DB_HOST:DB_PORT/DB_DATA</value>`

6. Run the `setupfiles` script.
7. Run the `deployer` script.
8. Start Sterling B2B Integrator.

Information Gathering Checklist

Information Gathering Checklist for Upgrades (UNIX/Linux Cluster): Before you begin the upgrade, you should review the information in the Information Gathering Checklist. The checklist contains all of the information that you will need to have while running the upgrade scripts. Supporting information and details are included at the end of this chapter.

The checklist contains:

- Brief descriptions for tasks (detailed procedures are provided after the checklist)
- Information you need to gather to prior the starting the upgrade

You may want to make a copy of the following checklist and use it to record the information you collect.

The cluster environment does not support the following items:

- MySQL database
- AS2 Edition

#	Information Gathering Checklist for Cluster Upgrades	Your Notes
1	Review your IBM contract to determine what software you have licensed.You need to know this License Information so that you can select the correct components/features to install.	

#	Information Gathering Checklist for Cluster Upgrades	Your Notes
2	Determine which upgrade method you are going to use: • IBM Installation Manager (Graphical User Interface) • Silent Installation	
3	Determine if you are going to run the pre-upgrade checks during the upgrade.	
4	Determine if you are going to use multicast ports.	
5	Decide which type of security certificates you will use: • The default self-signed SSL (Secure Sockets Layer) certificate that is automatically installed. • A Certificate Authority-related certificate that you install before installing the software.	
6	If you are using an Oracle, SQL Server, or DB2 database, decide if you are going to manually or automatically apply Database Definition Language (DDL) Statements (schema) to the database.	
7	If you are using an Oracle 11.1 database, you must set it up for native compilation by allocating space and by setting the plsql_native_library_dir parameter.	
8	Record the Hostname on which you plan to install the software.	
9	Determine if you are going to use FIPS (Federal Information Processing Standards) mode.	
10	Record the Directory Name where you plan to install the software.	
11	Record the Login to host machine.	
12	Record the Password to the host machine.	
13	Record the path to the JDBC drivers.	
14	Record the path to the installation wizard and file name.	
15	Record the path to JDK.	
16	Record the path to JCE file.	
17	Record the Host IP address.	
18	Record the Initial Port Number.	
19	Record the System passphase.	
20	Record the Administrative e-mail address to which system alert messages are sent.	
21	Record the SMTP Server IP address used for sending alert messages.	
22	Record the Database vendor name.	
23	Record the Database user name.	
24	Record the Database password.	
25	Record the Database (catalog) name.	

#	Information Gathering Checklist for Cluster Upgrades	Your Notes
26	Record the Database host name.	
27	For Oracle, Microsoft SQL Server, or DB2, record the Path and file name for the JDBC Driver.	

Supporting Information:

Pre-Upgrade Check for Clusters: Pre-upgrade check reviews Oracle, SQL Server, and DB2 database environments prior to starting the upgrade. This is an optional installation feature which looks for are common upgrade errors. You only need to run the pre-check for node 1.

The pre-upgrade checks ensure:
* SI_VERSION table exists
* Database character set is correct for Oracle and DB2
* Schedule start times are not later than the end times
* Passphrase entered matches the existing passphrase in the database
* Database implementation for Oracle Long Raw and BLOB
* User has permission to perform the upgrade
* Collation settings are validated for MS SQL
* OBJECT_NAME is table SCI_ENTITY is no longer than 100 characters
* Default schema you identified during upgrade matches the existing database

If any of these items are not validated, the upgrade fails. You are provided with an error message and must correct the situations and then restart the upgrade.

License information:

A separate license is required for each Sterling B2B Integrator feature that you purchased. During installation, you must choose the license files according to what you purchased. Product licenses do not require an activation key.

IBM assumes customers will only install and use the products they purchased. IBM reserves the right to inspect installs for compliance at any time.

After the installation finishes, if you determine that you need to modify licenses files, see "License modifications" on page 58.

Product Licenses for Sterling B2B Integrator

Sterling B2B Integrator Standard and Enterprise Edition includes:
* MESA Studio
* eInvoicing
* Report Services
* all services and adapters not listed below

Sterling B2B Integrator Standard and Enterprise Financial Edition includes everything listed above plus:
* CHIPS
* SWIFTNet

- NACHA ACH CTX adapter
- FEDWIRE
- Fin Serv XML standard
- FIPS Mode
- Image Cash Letter service
- EBICS

Multicast ports in node to node communications:

Cluster nodes are configured to communicate with each other using JGroups, an open source toolkit that provides flexibility for protocol configuration.

JGroups provides rich open management features, along with multiple protocol support. JGroups supports multicast (UDP) and TCP-based communication protocols.

When JGroups is configured to use multicast (UDP), all cluster nodes communicate with each other on a specific IP address and port. The configuration of multicast ports is based on the installation base port. All clusters that are on the same subnet that is configured on the same base port send multicasting messages on the same multicast IP address and port.

To avoid this situation, each cluster on the same subnet needs to be configured on different base ports. Install your clusters on different port ranges or on different network segments with multicast forwarding restricted, so that they do not interfere with each other. The default multicast address is 239.255.166.17. This address is configurable, with a port range of 10 ports, starting with the multicast base port for the instance.

All nodes that are participating in the same cluster must be installed on the same multicast base port (the **multicastBasePort** property in the noapp.properties_platform_ifcresources_ext.in file). This value is usually computed from the system base (non-multicast) port, but can be configured separately in the noapp.properties_platform_ifcresources_ext.in file, to allow different nodes in a cluster to be installed at different (non-multicast) port ranges. Also, all the nodes in the cluster must be installed in the same subnet.

For node to node communications, the properties are defined in the jgroups_cluster.properties file. The following attributes are used to define communications:

- **property_string** - default value is UDP.
- **distribution_property_string** - default value is TCP. This attribute must never be set to UDP.

If you want to change the communication for cluster multicast from the UDP protocol to TCP, you need to change the value of the **property_string** property in the jgroups_cluster.properties.in file (after you back up the file). Then, run the **setupfiles** command. You can change this value right after the installation or after you start running the cluster. If you change the file after you start the cluster, you need to stop all nodes of the cluster, change the value on each node, and then restart your cluster.

To change the communication for cluster multicast from the UDP protocol to TCP, use the following value for the **property_string** property in the jgroups_cluster.properties.in file:

```
property_string=TCP(start_port=any_available_port_number):
TCPPING (initial_hosts=this_instance_host_ip[start_port_number],
theothernode_instance_host_ip[theothernode_start_port_number];port_range=2;
timeout=5000;num_initial_members=3;up_thread=true;down_thread=true):
VERIFY_SUSPECT(timeout=1500):pbcast.NAKACK(down_thread=true;up_thread=true;
gc_lag=100;retransmit_timeout=3000):pbcast.GMS(join_timeout=5000;
join_retry_timeout=2000;shun=false;print_local_addr=true;
down_thread=true;up_thread=true)
```

For more information about UDP, TCP, and JGroups communications, see the *Sterling B2B Integrator Clustering* documentation.

Security certificates:

You can choose between different security certificates before you install Sterling B2B Integrator.

Before you begin the installation, you must decide which of the following security certificates to use:
- The default self-signed SSL (Secure Sockets Layer) certificate that is automatically generated by the installation.
- A Certificate Authority-related certificate that you generate before you install the software.

If you install with the default SSL certificate, but you later want to switch to a CA-related certificate, you can change the certificate with the **sslCert** property in the noapp.properties_platform_ifcresources_ext.in file.

UNIX accounts:

In a UNIX or Linux environment, create one UNIX administrative account on the host server for all of the installations.

For example, if you want to create a test environment and a production environment, create one UNIX account on the host server. For more information about creating UNIX accounts, see your operating system documentation.

Port numbers:

During installation, you are prompted to specify the initial port number.

Use the following guidelines for port numbers:
- A range of 200 consecutive open ports (1025 - 65535) is required for this installation.

  Important: Because of RMI, on occasion, a port number outside the range can be assigned.
- The initial port number represents the beginning port number in the range.
- Make sure that port numbers in the port range are not used by any other applications on your system.

After your installation, refer to the */install_dir*/install/properties/sandbox.cfg file for all of the port assignments.

Database Definition Language (DDL) statements:

When you install Sterling B2B Integrator, you can manually apply Database Definition Language (DDL) statements to your database tables instead of requiring the installation process to do it directly.

This feature increases database security by reducing the database permissions of the Sterling B2B Integrator database user. The rights to database objects can be reserved for a secure user like a customer database administrator (DBA). A business can require that only a DBA with the proper permissions can make database changes.

Upgrading DB2 to version 10.1 or 10.5:

To upgrade from DB2 9.5 or 9.7 to 10.1 or 10.5, you must make configuration changes.

Procedure
1. Complete the steps in the following table that pertain to your version of Sterling B2B Integrator before you proceed to step 2.

   Important: Back up all files before you change any settings.

If you are upgrading from ...	Do the following steps:
Sterling B2B Integrator 5.1.x	Upgrade Sterling B2B Integrator to V5.2.6 and point to your DB2 9.5 or 9.7 database
Sterling B2B Integrator 5.2.x	Upgrade your 5.2.x installation to V5.2.6

2. Copy your DB2 9.5 or 9.7 database content to DB2 10.1 or 10.5.
3. Take a backup of the database driver located at `/install_dir/dbjar/jdbc/DB2/` and then replace it with the DB2 10.1 or 10.5 version.
4. Update the following `sandbox.cfg` file fields with your environment-specific parameters:
   ```
   DB_PASS=
   DB_SCHEMA_OWNER=
   DB_DRIVERS_VERSION=
   YANTRA_DB_PORT=
   DB_DATA=
   DB_HOST=
   YANTRA_DB_USER=
   DB_PORT=
   YANTRA_DB_PASS=
   YANTRA_DB_DATA=
   YANTRA_DB_HOST=
   DB_DRIVERS=
   DB_USER=

   DB2_PORT=
   DB2_USER=
   DB2_PASS=
   DB2_DATA=
   DB2_HOST=
   ```
5. Edit the following in the `activemq.xml` file:
   ```
   activemq.xml: <value>jdbc:db2//DB_HOST:DB_PORT/DB_DATA</value>
   ```
6. Run the `setupfiles` script.
7. Run the `deployer` script.

8. Start Sterling B2B Integrator.

Upgrade the Software

General UNIX/Linux Cluster Upgrade Information: CAUTION: Sterling B2B
Integrator should be installed behind a company firewall for security purposes. See
the *Perimeter Server* and *Security* topics in the Sterling B2B Integration
documentation library for more information on secure deployment options.

UNIX/Linux Guidelines

The following are some general guidelines:
- If you are using FTP to copy the files, verify that your session is set to binary
  mode.
- The installation directory must have adequate free disk space.
- The installation directory must not already exist because the installation process
  creates it.
- If you are using AIX with the DB2 database, the directory path cannot be longer
  than 108 bytes.
- The directory path to SI.jar cannot include any spaces.

Cluster Upgrade Information

The cluster environment does not support the following items:
- MySQL database (even though it appears as an option in the wizard)
- AS2 Edition

Upgrading Sterling B2B Integrator cluster nodes is similar to upgrading a Sterling
B2B Integrator single node, with the following restrictions on all nodes:
- All nodes must use the same database.
- All nodes must use the same passphrase.
- All nodes must use the same operating system.
- When installing nodes on different machines, the initial port numbers must be
  the same. Installing nodes on different machines helps you take more advantage
  of the reliability, availability, and scalability features of clustering, including
  failover.
- When installing nodes on the same machine, you must install nodes 2 and
  higher in different directories and use different initial port numbers. Each initial
  port number must be at least 100 higher or lower than other initial port
  numbers.
- Nodes must be installed sequentially, one at a time, starting with the first node.
- After installing all of the nodes, nodes must be started sequentially, one at a
  time, starting with the first node.
- The upgrade creates subsequent ports based on the initial port number. For all
  of the port assignments, see the */install_dir*/install/properties/sandbox.cfg file.
- Before applying an IPv6 address, see IPv6 Capabilities section in Sterling B2B
  Integrator *System Requirements*.
- If you are installing Sterling B2B Integrator on VMware, provide the IP address
  of the virtual machine, not the IP address of the VMware host. For example, if
  10.251.124.160 is the IP address of the VMware host and 10.251.124.156 is the IP
  address of the Windows 2003 server it is hosting, you should use 10.251.124.156
  as the correct IP address to install Sterling B2B Integrator.

- If you are running the upgrade on an active installation of Sterling B2B Integrator, you will need to run the soft stop command to gracefully stop traffic. For more information on performing a soft stop, see the Soft Stop documentation in the System Administration Guide on the Sterling B2B Integrator 5.2 Information Center.

General IBM Installation Manager information:

IBM Installation Manager V1.8.2 is required to install Sterling B2B Integrator on all supported platforms.

Installation Manager is a Java based multiplatform installation application and provides a consistent approach across various platforms. It does not rely on platform-specific installation technology or mechanism.

Installation Manager uses the local Sterling B2B Integrator offering repositories to install or update Sterling B2B Integrator and its add-on features. It determines the packages that must be installed and displays them including the products, fix packs, and interim fixes. It checks that all prerequisites and interdependencies are met before installing the selected product package and feature sets.

Important: The **Uninstall** option only unregisters Sterling B2B Integrator from Installation Manager. The uninstall procedure as described in the related sections must be performed to completely uninstall Sterling B2B Integrator.

Installation Manager must be installed on each computer on which Sterling B2B Integrator is being installed. If you already have Installation Manager installed on your computer for use with other IBM applications, it can be used with installing Sterling B2B Integrator as long as it's the correct version. If you do not have Installation Manager installed, it is provided as part of the Sterling B2B Integrator installation media.

Supported bit-versions

A 64-bit version of IBM Installation Manager V 1.8.2 is provided with the Sterling B2B Integrator installation package. However, you can also install with a 32-bit version of Installation Manager.

Before you start the installation, consider the following options:
- If you are a new customer, use the version of Installation Manager that is provided with the Sterling B2B Integrator installation package and install Sterling B2B Integrator.
- If you have an earlier version of Installation Manager, you can update it to V1.8.2 using the Installation Manager that is provided with the installation package, then install Sterling B2B Integrator .
- If you are a current customer who did not use Installation Manager earlier, install the version of Installation Manager that is provided with the installation package, then upgrade your Sterling B2B Integrator installation.
- If you have a 32-bit Installation Manager installed, you must download the 32-bit Installation Manager V1.8.2 from Fix Central or IBM Passport Advantage, upgrade it, then proceed with the installation of Sterling B2B Integrator. Ensure you have the required libraries that support screen presentation of the text.

Checking for updates

To check for Installation Manager updates, select **Search for Installation Manager updates** on the **File > Preferences > Updates** page. When the check box is selected, Installation Manager searches for updates when any one of the following pages are opened from the Installation Manager start page:

- Install Packages
- Modify Packages
- Update Packages

Installation Manager also searches for updates when you click the Check for Other Versions, Fixes, and Extensions button on the Install Packages page.

Starting Installation Manager

You should start the Installation Manager (and also install Sterling B2B Integrator) as a non-administrator user.

How you start Installation Manager depends on whether you are using the Installation Manager agent that is provided with Sterling B2B Integrator or if you have an Installation Manager instance that is installed on your system. It also depends on whether you have 32-bit or 64-bit Installation Manager.

Open a command prompt and do one of the following tasks to start the Installation Manager in GUI mode:

- Go to the `IM_<operating_system>` directory and type **./userinst** or **userinst.exe** (Windows) for the following scenario:
  - If you do not have Installation Manager installed and are using the Installation Manager agent that is provided with the Sterling B2B Integrator media.
  - If you have a 64-bit Installation Manager installed.
  - If you have Installation Manager installed on a platform that has only one download available for Installation Manager. For example, AIX, Solaris, HP, zLinux.
- Go to `<installation directory>/Installation Manager/eclipse` (for Windows system, replace / with \) and type **./IBMIM** or **IBMIM.exe** if you have 32-bit Installation Manager installed on a Linux or Windows system.

For information on starting Installation Manager in command mode for silent installation, see the Installing or updating with a response file.

For information on starting Installation Manager in command mode to record a response file, see Recording a response file.

Additional heap memory parameters

The heap memory parameters specify the amount of memory Installation Manager can use during the installation process. The heap memory pool sizes that are used by Installation Manager are hardcoded defaults. If these defaults are not sufficient for your environment, you can specify different values by adding parameters to the Installation Manager`config.ini` file.

Important: These additional parameters are required only if you are experiencing `Out Of Memory` errors during the installation process.

The following parameters can be added:

- memoryMin=user.sb.INSTALL_*<OS>*_INIT_HEAP.*<amount_of_memory>*
- memoryMax=user.sb.INSTALL_*<OS>*_MAX_HEAP.*<amount_of_memory>*

Where *<OS>* is your operating system and *<amount_of_memory>* is the specified amount of memory.

Operating System	Parameter	Example Entry
Sun-Solaris	Initial Heap Size **INSTALL_SUN_INIT_HEAP**	memoryMin=user.sb.INSTALL_SUN_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_SUN_MAX_HEAP**	memoryMax=user.sb.INSTALL_SUN_MAX_HEAP.3072m
Linux	Initial Heap Size **INSTALL_LINUX_INIT_HEAP**	memoryMin=user.sb.INSTALL_LINUX_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_LINUX_MAX_HEAP**	memoryMax=user.sb.INSTALL_LINUX_MAX_HEAP.3072m
AIX	Initial Heap Size **INSTALL_AIX_INIT_HEAP**	memoryMin=user.sb.INSTALL_AIX_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_AIX_MAX_HEAP**	memoryMax=user.sb.INSTALL_AIX_MAX_HEAP.3072m
HP-UX	Initial Heap Size **INSTALL_HPUX_INIT_HEAP**	memoryMin=user.sb.INSTALL_HPUX_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_HPUX_MAX_HEAP**	memoryMax=user.sb.INSTALL_HPUX_MAX_HEAP.3072m
Windows	Initial Heap Size **INSTALL_WIN_INIT_HEAP**	memoryMin=user.sb.INSTALL_WIN_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_WIN_MAX_HEAP**	memoryMax=user.sb.INSTALL_WIN_MAX_HEAP.3072m

Guidelines for IPv6 addresses:

The use of IPv6 addresses in an installation of Sterling B2B Integrator requires certain guidelines.

Before you use an IPv6 address during an installation, see the *IPv6 Capabilities* section in *System Requirements*.

Consider the following IPv6 address information when you plan the installation:

- If you use an IPv6 address, use a fully qualified address that includes square brackets around the address, and a zero (0) between colons where there are no other numbers. For example, use [fe80:0:0:0:213:72ff:fe3c:21bf] instead of fe80::213:72ff:fe3c:21bf.

- If you are installing with an IPv6 address, comment out the host name mapping to the IPv4 address and retain the mapping to the IPv6 address in the host file in the /etc/sysconfig/networking/profiles/default/hosts directory.
- You must install with a host name, not an IPv6 address, otherwise the Lightweight JDBC adapter and Graphical Process Modeler (GPM) do not work.
- If you are using an Oracle database, do not use an IPv6 address for the host name.
- If you are using an IPv6 address and are going to configure Sterling B2B Integrator as a dual stack host, after you complete the installation, you need to add the IPv6 address (as the **admin_host.3** property) to the noapp.properties_platform_ifcresources_ext .in file.

Installing or updating with a response file (V5.2.6 or later):

You can install or update (apply fix pack or interim fix) Sterling B2B Integrator with silent mode by using the sample response files or converting your existing response file to the required format.

Upgrading in a UNIX/Linux cluster environment with the IBM Installation Manager in GUI mode:

You can upgrade Sterling B2B Integrator in a UNIX/Linux cluster environment with the IBM Installation Manager in a graphical user interface (GUI) mode. Use the X Window System for this installation.

Before you begin
- Ensure that your system is ready for the upgrade. See "Prepare Your System for the Upgrade" on page 332.

  Attention: Failure to properly prepare your system can cause the upgrade to fail.
- Complete the "Information Gathering Checklist for Upgrades (UNIX/Linux Cluster)" on page 465.
- Install an X Window windowing system (for example Cygwin or Xming) for UNIX/Linux operating systems on your PC.
- Install and configure a Telnet client (for example PuTTY) for use with X Windows. The following parameters must be set:
    - X-11 forwarding must be enabled.
    - X display location must be set to localhost.
- If you are using the Standards Processing Engine (SPE) application with Sterling B2B Integrator, you must upgrade SPE before you upgrade Sterling B2B Integrator.
- If you are using the EBICS Banking Server application with Sterling B2B Integrator, the data encryption for storage within the installation location is not supported.
- Set the ulimit and language as follows:
    - ulimit -n 4096
    - ulimit -u 16000
    - export LANG=en_US

About this task

This upgrade changes the administrative password to the default password. After the upgrade, change the password back to the administrative password to minimize security risks. This is the Admin password for logging into the user interface (/dashboard or /ws).

Important: Following is a list of changes related to installing or upgrading to Sterling B2B Integrator V5.2.6:

- You can install and upgrade through the user interface or silent installation mode (response files). Console mode installation and upgrade is not supported.
- Sterling B2B Integrator JAR file is included in the repository. Therefore it is not required to manually select the JAR file when installing or upgrading.
- You must use Installation Manager V1.8.2. to install or upgrade Sterling B2B Integrator. `InstallService` is disabled, and cannot be used. You can use `InstallService`, only for a specific scenario related to Sterling File Gateway. For more information, see step 14.

Procedure

1. Start the X Windows client on your PC.

   Minimize the window once it opens.

2. Open a console window and log on to the UNIX/Linux host machine where Sterling B2B Integrator will be upgraded.

3. From the installation media, copy the compressed update package to a UNIX/Linux directory on the host where Sterling B2B Integrator will be installed.

4. Decompress the upgrade package on the host machine.

5. Open the `InstallationManager` folder in the directory structure that is created when the installation package is decompressed. Several `IM_OperatingSystem.zip` files are displayed.

6. Decompress the file for your operating system.
   - `IM_AIX.zip` (for AIX)
   - `IM_HPIA.zip` (for HP-UX Itanium)
   - `IM_Linux.zip` (for Linux)
   - `IM_LinuxPPC.zip` (for Linux)
   - `IM_Solaris.zip` (for Solaris)
   - `IM_Win.zip` (for Solaris)
   - `IM_zLinux.zip` (for Linux for System z)

   This action creates a new `IM_OperatingSystem` folder.

   Important: Installation Manager V1.8.2 is required to upgrade to Sterling B2B Integrator V5.2.6. If Installation Manager was not used to install your current Sterling B2B Integrator instance, the installation process installs the Installation Manager when you start the upgrade to Sterling B2B Integrator V5.2.6. After successful installation, restart the Installation Manager, and proceed with upgrading to Sterling B2B Integrator V5.2.6.

7. Decompress the `Common_Repo.zip` from the installation package. The action creates two new folders `b2birepo` and `gmrepo`. The `IM_OperatingSystem`, `b2birepo`, and `gmrepo` folders must be at the same level in a directory.

Important: `gmrepo` contains the repository file required to install Global Mailbox. For information about Global Mailbox, see Global Mailbox overview.

8. Open a command prompt and do one of the following tasks to start the Installation Manager:

   a. Go to the `IM_<operating_system>` directory and type **./userinst** for the following scenarios:

      - If you do not have the Installation Manager installed and are using the Installation Manager agent provided with V5.2.6.
      - If you have a 64-bit Installation Manager installed.
      - If you have the Installation Manager installed on a platform that has only one download available for Installation Manager. For example, AIX, Solaris, HP, zLinux.

   b. Go to `<installation directory>/Installation Manager/eclipse` and type **./IBMIM**, if you have 32-bit Installation Manager installed on your Linux system.

9. On the Installation Manager home page, click **Install**.

   Important: If `IM_<operating_system>` and `b2birepo` directories are not in the same directory or if you already have Installation Manager installed, then you get a message saying that there no packages to install or Installation Manager could not connect to the repositories. You must add the Sterling B2B Integrator repository files to the Installation Manager repository. For more information about adding repository files, see Repository preferences.

10. On the Install Packages screen, select **IBM Sterling B2B Integrator**. This action selects the versions also. Click **Next**.

11. Review the license agreement and select the option **I accept the terms in the license agreements** to continue.

    If you do not accept the agreement, the upgrade process is canceled.

12. Select a location for the Shared Resources directory and a location for the Installation Manager to reside:

    a. Specify a **Shared Resources Directory**.

    b. (Optional if previously installed) Specify an **Installation Manager Directory**.

       Note: The Shared Resources directory cannot be a sub-directory of the Installation Manager installation.

       The specified Shared Resources and Installation Manager directories must be empty.

13. Choose **Create a new package group** and specify the path to Sterling B2B Integrator installation directory.

14. Select the features that must be upgraded.

    The available options are:

    - **IBM Sterling B2B Integrator**
    - **IBM Sterling File Gateway**

      Important: If your current installation includes Sterling File Gateway, then Sterling File Gateway is also updated to V 2.2.6 when upgrading to Sterling B2B Integrator V5.2.6. If Sterling File Gateway is not installed, then it is not installed when upgrading to Sterling B2B Integrator V5.2.6, when you select

the **IBM Sterling File Gateway** option. In this case, to install Sterling File Gateway when upgrading, you must do one of the following tasks:

– When upgrading Sterling B2B Integrator, if you are installing Sterling B2B Integrator to a fresh directory, and pointing to the previous database, then you can install Sterling File Gateway V2.2.6.

– Use `InstallService` to install Sterling File Gateway. For information about installing Sterling File Gateway by using `InstallService`, see Installing Sterling File Gateway (V2.2.6 or later).

- **FIPS Module**
- **AS2 Edition Module**
- **Financial Services Module**
- **EBICS Banking Server Module**
- **B2B Advanced Communications Integration Module**

Important: When upgrading to Sterling B2B Integrator V5.2.6, select **B2B Advanced Communications Integration Module** to install Sterling B2B Integrator bridge. Sterling B2B Integrator bridge is required for communication between Sterling B2B Integrator and B2B Advanced Communications. If you are installing Global Mailbox and Sterling B2B Integrator, then **B2B Advanced Communications Integration Module** (Sterling B2B Integrator bridge) is installed by default, because Global Mailbox uses the storage module of B2B Advanced Communications. However, you must configure the adapter containers and adapters for Sterling B2B Integrator bridge after upgrading.

Important:

Sterling B2B Integrator is selected by default. Select only the licenses and features that were defined by your IBM contract. If you are unsure which to select, the installation can proceed without a selection and complete successfully. Startup and operation of the software, however, requires one of the licenses to be selected. See "License modifications" on page 58 to apply licenses after the installation.

Features that are not part of your current Sterling B2B Integrator installation are disabled and you cannot select them when upgrading or applying a fix pack. To include them in your Sterling B2B Integrator setup, you must first upgrade to the current version, and then install them separately. If the fix pack or upgrade JAR includes updates to features that are part of your current Sterling B2B Integrator installation, the features are upgraded regardless of whether you select the them or not.

Important: If you are upgrading to Sterling B2B Integrator from a previous V5.2.x release, you must manually install the EBICS client. For more information about installing the EBICS Client manually, see the *EBICS Client User Guide*.

15. Enter the full path to your **JDK directory**.
16. Specify the configuration for the features to upgrade and click **Next**.
    - **FIPS Compliance Mode (Must enable FIPS Module)**
    - **NIST 800-131a Compliance Mode**
      – **off** (default value)
      – **strict**

- **SPE Integration Module (Requires pre-install of SPE, WTX optional)**

    If you select the SPE option, you are prompted for the following information:

    – SPE installation directory

    – (Optional) WebSphere Transformation Extender (WTX) installation directory

    – SPE UI port

    For more information, see the documentation for the integration of Sterling B2B Integrator and SPE.

17. Enter the full path to your **JCE jar file**.
18. Enter your **Installation panel properties** information:
    a. Enter the explicit IP address for the server or use the default value of localhost.
    b. Enter the Initial Port number or use the default value of 8080.
19. Enter your **System Passphrase** information:
    a. Enter a passphrase.
    b. Confirm the passphrase.
20. Enter the **E-Mail Information**:
    a. Enter the email address to which you want system alert messages sent.
    b. Enter the SMTP mail server (IP address or host name) that you want to use for system alert messages and other administrative notices.
21. Select the database vendor you want to use:
    - Oracle
    - Microsoft SQL Server
    - DB2
    - MySQL

    Clustering is not supported for Sterling B2B Integrator systems that use the MySQL database, even though it appears as an option.
22. Select all options that apply to this upgrade:

Choices:	Action
This installation is for a cluster node 2 or higher (Not applicable for MySQL)	If you are installing node 2 or higher in the cluster setup, select the check box and specify the node number. **Important:** In a cluster setup, if you are upgrading to a new installation directory, run the **startCluster** command after installing the first node (node 1) from the `/install_dir/install/bin` directory, on the host where you installed the node. The syntax is `startCluster.sh` *nodeNumber true*. Replace *nodeNumber* with *1*. After you run the **startCluster** command for the first node, the subsequent nodes will have clustering automatically started by the installer when they are installed. However, if you are upgrading in the existing installation directory, then it is not required to run the **startCluster** command.

Choices:	Action
Apply database schema automatically?(Not applicable for MySQL)	If yes, no action required. The default is to automatically apply the DDL statements. If you want to manually create the database schema, clear the **Apply database schema automatically** check box and continue with the remaining installation steps. **Note:** Once the upgrade starts, it runs for a short time and stops without error. When the installation stops, you must perform additional actions as given in Step 30 of this procedure.

23. Enter the **Database Information**.
    - Database user name.
    - Database password (and confirmation).
    - Database catalog name.
    - Database host name.
    - Database port.
    - For Oracle, Microsoft SQL Server, and MySQL - Absolute path and file name for one JDBC driver file.
    - For DB2 - Absolute paths and file names for two JDBC driver files. Use the Type-4 JDBC driver. This type of driver converts JDBC calls into the network protocol used directly by DB2, allowing a direct call from the system to the DB2 server.
24. Click **Add** to browse to the file location for the appropriate JDBC driver.
25. Click **Test** next to the database driver path.

    Note: The Installation Manager must successfully validate the connection to the database before you can continue with the installation. If there is a validation failure you can view the system log to determine more information about the failure.
26. Determine what **Other options** apply to this upgrade. Select the applicable options:
    - **Verbose install**
    - **This installation is an upgrade from a prior version** - Select this option.

      Note: After you select the upgrade option, an additional option is displayed.
    - **Would you like to run upgrade pre-check?** - To run the pre-check, click **Test**.
27. Specify the **Performance configuration** that applies to this upgrade. Select the applicable options:
    - **Number of Processor Cores** - Accept default value or enter appropriate value.
    - **Physical Memory (MB) allocated to Sterling B2B Integrator** - Accept default value or enter appropriate value.
28. Specify if you want to generate an installation response file.
29. Review the installation package summary information. Click **Install** to continue.

Important: If you did not select the option to **Apply database schema automatically**, the upgrade stops and you must perform these additional steps to complete the installation with manual DDL statements:

a. Navigate to your install directory.

b. Locate the `InstallSI.log` file and open it with a file editor.

c. Search the file for these error messages:

- `<SI_Install>/repository/scripts/EFrame_IndexAdds.sql must be applied to the database.`
- `<SI_Install>//repository/scripts/EFrame_Sequence.sql must be applied to the database.`
- `<SI_Install>//repository/scripts/EFrame_TableChanges.sql must be applied to the database. Exiting installation..."`

Important: If you do not find the above error messages in the log file, the installation failed because of another reason and you must resolve that error and attempt the installation again. If you did find these messages, continue with the remaining steps.

d. Edit each .sql script and make changes appropriate for your database. This may include changing the SQL delimiter or adding tablespace options.

e. Log in to your database as the DB schema user.

f. Execute the SQL files manually in this order:

Note: When you are executing the scripts, it is important to execute the SQL scripts in the specified order.

- EFrame_IndexDrops.sql
- EFrame_TableChanges.sql
- EFrame_IndexAdds.sql
- EFrame_TextIndexAdds.sql
- EFrame_Sequence.sql
- EFrame_TextIndexModify.sql
- EFrame_TextIndexUpdates.sql
- EFrame_TextIndexUpgrade.sql
- EFrame_Static.sql

Important: ActiveMQ uses dynamically generated table names based on the name of the install node. Table generation is not included in the above scripts, but is performed automatically during the initial start of Sterling B2B Integrator or when a new cluster node is added. Table generation may fail if security restrictions have reduced the Sterling B2B Integrator database user permissions. To avoid this issue, ensure that the DBADM role permissions are enabled during the initial startup. If further issues arise, contact IBM customer support for guidance.

g. Exit from the database.

h. Navigate to the parent directory of *install_dir*.

i. Unisntall the Sterling B2B Integrator offering to clear out the Installation Manager metadata about the installation, and the delete (or rename as a backup) the Sterling B2B Integrator installation directory.

j. Restart the installation wizard and provide the same installation options that you provided before you cleared the **Apply database schema**

automatically check box. If you have recorded a response file (as suggested in step 9), you can use the response file to install Sterling B2B Integrator.

The **Installation Progress** screen indicates which component of the installation is currently in process.

A status bar below the **Repository Information** heading displays the progress of component installation. When the installation completes, a large green circle with a checkmark displays with the message `The packages are installed`. A link is provided to view the installation log file.

The installation completes automatically. When the installation is finished, the system displays a dialog box with the message `The install completed successfully`.

Installation information is in the InstallSI.log file.

30. Click **Finish**. The Installation Manager closes.

    Check the `InstallSI.log` to verify all the components are installed properly.

31. If you are using the AIX operating system and are using IPv6:

    - Navigate to the `/install_dir/install/properties`
    - Add the following to the `sandbox.config` file: `IPV4STACK=false`
    - Navigate to the `/install_dir/install/bin`
    - Enter **./setupfiles.sh**

32. Upgrade each subsequent node, from node 2 onwards. Navigate to your working directory. For example, `cd` *parent_install* directory.

33. You need to start the Installation Manager for each additional node, enter `./userinst`

    Follow the same steps as you did for node 1 until you get to Step 22. When prompted, select the **This installation is for a cluster node 2 or higher** check box.

34. If you are upgrading multiple nodes on the same machine or used different base ports for node 2 onward, you need to complete the following additional steps:

Step	Action	Your Notes
1	Navigate to */install_dir*/install/properties for node 1.	
2	Review the multicastBasePort property in the noapp.properties_platform_ifcresources_ext file and the mcast_port property in the jgroups_cluster.properties file. Record the value of the multicastBasePort and mcast_port.	
3	Navigate to the */install_dir*/install/properties directory of each node (from node 2 onward).	
4	Change the **multicastBasePort** property in the **noapp.properties_platform_ifcresources_ext.in** file to the value of the **multicastBasePort property** in the **noapp.properties_platform_ifcresources_ext** file in the node 1 installation.	
5	Change the **mcast_port** property in the **jgroups_cluster.properties.in** file to the value of the **mcast_port property** in the **jgroups_cluster.properties** file in the node 1 installation.	

Step	Action	Your Notes
6	Enter for each node in the cluster: `/install_dir/install/bin/setupfiles.sh`	

35. After the cluster configuration is complete, go to the `/install_dir/install/bin` directory for each node, starting with the first node, enter: `./run.sh`. When prompted, enter the passphrase that you entered earlier. The final startup processes run, concluding with the following messages: *Open your Web browser to http://host:port/dashboard* Where host:port is the IP address and port number where Sterling B2B Integrator resides on your system. Depending on system load, it may take several minutes for the user interface to be ready. Make a note of the URL address so that you can access Sterling B2B Integrator later. The system returns you to a UNIX/Linux prompt.

    To make a dynamic addition of new nodes to the cluster, install new nodes to the cluster as described above and configure the servers for the cluster.

36. Determine whether you need to apply a fix pack or interim fix to the installation. For information about fix pack or interim fix installation, see "Applying a Fix Pack (V5.2.6 or later)" on page 625 and "Applying an interim fix (V5.2.6 or later)" on page 635.

Validate the Upgrade

Validate the Cluster Upgrade Checklist: As part of the upgrade, you need to run the following tests to ensure that the software upgrade was successful. Complete the following tasks:

Number	Validate Cluster Upgrade Task	Completed
1	Configure the Nodes in the Cluster Environment.	
2	Verify the Cluster Environment Settings in Property Files.	
3	Start the Cluster Environment.	
4	Access Sterling B2B Integrator.	
5	Validate the Installation (Sample Business Process).	
6	Verify the Cluster is Running from the User Interface.	
7	Stop Sterling B2B Integrator in a Cluster Environment: • Stop a Node in a Cluster Environment (Soft Stop) • Stop a Node in the Cluster Configuration (Hard Stop) • Stop the Cluster	

Configuring the nodes in the cluster:

The first time that you configure a cluster, you need to use the **startCluster** command with `true` option (`startCluster.sh nodeNumber true`).

About this task

Initial configuration is the only time that you need to use the **startcluster** command. However, if you need to use the **startcluster** command again, use the `false` option (`startCluster.sh nodeNumber false`). The `false` option prevents any configuration changes from affecting the system, especially after the installation of a fix pack or interim fix.

Important: You must run the **startCluster** command after installing the first node (node 1) on the host where you have installed the node. After you run the **startCluster** command for the first node, the subsequent nodes are automatically clustered by the installer when they are installed.

Procedure

To configure the nodes, starting with node 1:
1. Open the */install_dir*/install/bin directory.
2. Enter `./startCluster.sh` *nodeNumber* `<true or false>`. Where *nodeNumber* is the number of the node, the `true` option performs database updates and the `false` option prevents database updates. For node 1, enter `./startCluster.sh 1 true`, and so on.
3. If you are starting node 2 or higher, enter your passphrase. For node 1, you are not prompted to enter your passphrase.
4. After the cluster starts, the following message is displayed:
   ```
   BUILD SUCCESSFUL
   Total time nn minutes nn seconds
   Done with ant script
   Running setup files
   ```
   You can proceed to the next node after the command line appears.

What to do next

After all the nodes are configured, the following message is displayed:
```
Deployment to application server successful.
```

Verifying the cluster environment settings in the properties files:

Procedure

To verify the cluster environment is correct, check these properties file settings on node 2:
1. Verify that the value `CLUSTER=true` is in the `sandbox.cfg` property file.
2. Verify that the value `CLUSTER=true` is in the `centralops.properties` property file.
3. Verify that the value `CLUSTER=true` is in the `noapp.properties` property file.
4. Verify that the value `cluster_env property=true` is in the `ui.properties` property file.

Starting Sterling B2B Integrator in a UNIX/Linux cluster environment:

After you run the upgrade software, you can start Sterling B2B Integrator.

Before you begin

If you are starting Sterling B2B Integrator after you upgraded the application from V5.1, change the values of the following properties in the `centralops.properties` file to 600. This action prevents the **run.sh** command from timing out before Sterling B2B Integrator starts. The `centralops.properties` file is in the *install_dir*/install/properties directory.

* **OpsServer.commandTimeout**
* **PassPhrase.urlTimeout**

About this task

Perform this task for each node in the cluster, starting with node 1.

Procedure
1. Open the */install_dir*/install/bin directory on a command line.
2. Enter `./run.sh`.
3. Enter your passphrase.
4. After the final start processes run, the following message is displayed:

   `Open your Web browser to http://host:port/dashboard`

   The *host:port* variable is the IP address and port number where Sterling B2B Integrator is installed on your system.

   Depending on system load, it might take several minutes for the UI to be ready.
5. Record the URL address so that you can access Sterling B2B Integrator.

What to do next

If you need to release all the locks in a cluster and both nodes are down, use the `restart` parameter for node 1. The `restart` parameter can be used on only node 1. It cannot be used on any other nodes.

For example:
* For node 1, enter the following command:

   `./run.sh restart`
* For nodes 2 and higher, enter the following command:

   `./run.sh`

Accessing Sterling B2B Integrator:

You can access Sterling B2B Integrator through a web browser.

Procedure
1. Open a browser window and enter the address that is displayed at the end of the start.
2. On the login page, enter the default user ID and password. The default login is at an administrative level. One of your first tasks as an administrator is to change the administrative password and to register other users with other levels of permission.

Validating the installation with a sample business process:

You can validate the installation by testing a sample business process.

Procedure

1. From the **Administration Menu**, click **Business Process** > **Manager**.
2. In the **Process Name** field, type `Validation_Sample_BPML` and click **Go!**
3. Click **execution manager**.
4. Click **execute**.
5. Click **Go!** The `Status: Success` message is displayed on the upper left side of the page.

Verifying from the user interface that the cluster is running:

You can use the user interface to verify that the cluster is running, including queue information and adapter status.

Procedure

1. From the **Administration Menu**, click **Operations** > **System** > **Troubleshooter**. Ensure you can view the Queue information for each node.
2. From the **Administration Menu**, click **Operations** > **System** > **Troubleshooter**. Ensure you can view the JNDI Tree for each node.
3. From the **Administration Menu**, click **Operations** > **System** > **Troubleshooter**. Ensure you can view the host, state, status, adapters, and memory usage information for each node.
4. From the **Administration Menu**, click **Operations** > **System** > **Troubleshooter**. Ensure you can view the adapter status for each node.

Stop a Node in a Cluster Environment (Soft Stop):
About this task

A soft stop halts the system after all the business processes finish running. In a cluster environment, you need to perform this task on each node, starting with node 1.

Running the soft stop command in a clustered environment suspends all of the scheduled business processes. It is recommended to run the hard stop command when stopping individual nodes of a cluster.

To soft stop in a UNIX or Linux environment:
- You can select **Operations > System > Troubleshooter** and click **Soft Stop**.
- You can perform the soft stop from the command line interface.

For more information about the softstop user interface and command line options, refer to the performance management documentation.

To run a soft stop, from the command line:

Procedure

1. Navigate to */install_dir*/install/bin.
2. Enter `./softstop.sh`.
3. Enter your passphrase.

Stopping a node in a cluster environment with a hard stop:

A hard stop halts the system immediately, including all of the business processes that are currently running.

About this task

You can stop a single node Sterling B2B Integrator in an UNIX or Linux cluster environment.

To run a hard stop on the entire cluster, you must perform this task for each node.

Procedure
1. Open the */install_dir*/install/bin directory on a command line.
2. Enter ./hardstop.sh.

Stopping the cluster:

You can use the UI to stop a cluster installation.

Procedure
1. From the **Administration Menu**, click **Operations** > **System** > **Troubleshooting**.
2. Click **Stop the System**.

Post Upgrade Configuration

Post upgrade configuration checklist:

After the upgrade software finishes running, you must perform some post upgrade procedures.

Review all of the procedures in the checklist. Some procedures might not be required.

#	Task	Your notes
1	Upon upgrade, all default user accounts are reset to their default value. For security purposes, the system administrator should update all default user account passwords immediately after upgrade is completed. See "Changing default user account passwords" on page 40.	
2	"Determine if You need to Apply a Fix Pack in UNIX/Linux Cluster Environment" on page 490	
3	"Update Custom Configurations" on page 490	
4	"Update the Database (dbupdate) with the startCluster Command" on page 374	
5	"Configure Shared File Systems as Document Storage" on page 184	
6	"Changes to Network Interface Bindings" on page 492	
7	"Disable Services" on page 366	
8	"Download of the Sterling B2B Integrator tools" on page 43	
9	"Enable Business Processes" on page 367	
10	"Property files configuration in a UNIX environment" on page 183	
11	"Add cdinterop Files" on page 367	

#	Task	Your notes
12	"Updating the sandbox.cfg file with a new JCE file" on page 494	
13	"Add Third-Party Libraries" on page 368	
14	"Configure Services and Adapters" on page 369	
15	"Configure JDBC Adapter and Lightweight JDBC Adapter" on page 369	
16	"Configure File System Adapter and Command Line2 Adapters" on page 370	
17	"Configure Odette FTP Adapter" on page 370	
18	"Restore Performance Tuning Configuration" on page 373	
19	"Add Advanced File Transfer Tab" on page 373	
20	"Reconfigure Archive Settings" on page 373	
21	"Review the EDI Sequence Check Queue" on page 368	
22	"Correct Missing Manager IDs" on page 374	
23	"Configure Document File Systems" on page 369	
24	"Manage Nodes in a Cluster" on page 45	
25	"JMS Cluster Configuration for Failover" on page 41	
26	"Configure ActiveMQ for a Cluster Environment" on page 181	
27	"Add host[port] From all the Nodes to the jgroups_cluster.property.in for Each Node" on page 44	
28	"Configure JVM Containers" on page 378	

Changing default user account passwords:

When you install Sterling B2B Integrator, several default user accounts are automatically created to get you started. One of the first actions you must take after installation is to update these accounts with unique passwords, because the default ones can be known by all Sterling B2B Integrator customers.

About this task

Default user account passwords are preset at installation. For security purposes, the system administrator should update all default user account passwords immediately after installation is completed.

Default user accounts are listed below in the same order as they appear in the UI under **Accounts > User Accounts > List All**. You can use this table to track the user accounts you want to update.

User Account Name	Update password
MBX_daemon	
admin (*)	
aft_user (*)	
anon	
as2_user	

User Account Name	Update password
commandlineuser	
dash_oper (*)	
dash_part (*)	
dash_prtspon (*)	
dash_sponsor (*)	
fg_architect	
fg_operator	
fg_provisioner	
fg_sysadmin (*)	
gmbx_user	
ja_turbine	
jane	
jane_doe	
joe_employee	
joe_manager	
joe_supplier	
john	
sd_buyer	
sd_supplier	
turbine	
ws_buyer	
ws_director	
ws_employee	
ws_finance	
ws_hr	
ws_manager	
ws_purchaser	
ws_supplier	

(*) denotes a super user

To change the password for a user account, perform the following tasks.

Procedure

1. Log into Sterling B2B Integrator using ID = `admin` and password = `password`.
2. Go to **Accounts > User Accounts**. Under the List section click **Go!** All default user account names are listed.
3. Click **Edit** next to the user account name you want to update the password for.
4. In the New Password and Confirm New Password fields, enter a new, secure password for this User ID.

   Note: Passwords must be at least six characters long.
5. Click **Save** and **Finish**.

What to do next

Repeat steps 3 - 5 for all user account names you want to update.

Determine if You need to Apply a Fix Pack in UNIX/Linux Cluster Environment:
About this task

Fix packs contain cumulative fixes for a specific version of Sterling B2B Integrator.

Fix packs are available from IBM Fix Central.

Because each fix pack contains the fixes from previous fix packs, you only need to install the most recent fix pack. Fix packs are named using the following naming convention:

si_*<release number>_<build number>*.jar

Before you install the fix pack, review the following items:
- Preserve your custom changes to system resources.
- The fix pack installation may use one or more property override files. These files will be named *propertyFile_patch*.properties. Do not alter these files.
- Property changes made directly in *.properties or *.properties.in files may be overwritten during the fix pack installation. Properties overridden using the customer_overrides.properties file are not affected. You should maintain property file changes using (when possible) the customer_overrides.properties file. For more information about this file, refer to the property file documentation.
- If you edited any of the cdinterop files, you must back them up before applying the fix pack. The cdinterop files do not have initialization (*.in) files. After applying the fix pack, use the backup version of the files in your installation. These files include the following files: cdinterop-proxy-records.properties; cdinterop-spoe-auth.properties; cdinterop-spoe-policy.properties; and cdinterop-user-records.properties.
- Information about the fix pack installation is automatically logged to */install_dir*/install/logs/InstallService.log.
- If you would need to roll back a fix pack, see the *Fix Pack Changes Report*.
- During fix pack installation, the dbVerify utility compares the list of standard indexes with those present in the database and drops the custom indexes. You should recreate the custom indexes after the fix pack installation is complete.

Update Custom Configurations:
About this task

As part of a default cluster configuration, certain values in the database for service or adapter configurations, default document storage type, etc., are updated to get the cluster working. The default settings include no shared or mounted file system available with "line of sight" from all cluster nodes, etc. Certain service or adapter configurations are forcibly deployed on node1 and default document storage type is set up to "Database" for all business processes.

After you install the cluster and evaluate the customer configurations and requirements, the above conditions might change and custom configurations will

be incorporated. To keep these custom configuration changes from being overwritten, the following cluster configuration script has an option to update the database:

`startCluster.sh nodeNumber true/false`

Where:
* `nodeNumber` is the cluster node number
* `true` to perform database update
* `false` to prevent any database updates

The first time you configure a cluster, run startCluster.sh with the database update option set to true to have all cluster-related configurations take effect.

`startCluster.sh nodeNumber true`

For cluster configurations after the first configuration, you can execute the startCluster.sh command with the database update option turned off. This prevents any configuration changes from affecting the system, especially after installing a fix pack or interim fix.

`startCluster.sh nodeNumber false`

Update the Database (dbupdate) with the startCluster Command:
About this task

The `startCluster.sh nodeNumber` command on node 1 will automatically update the database, unless you use the command `startCluster.sh 1 false`. The `startCluster.sh nodeNumber` command on all other nodes will not update the database.

When you configure Sterling B2B Integrator cluster for the first time, you should run the startCluster.sh command with the database update value set to true (startCluster.sh 1 true), or just startCluster.sh 1, since on node 1, dbupdate defaults to true. This makes all cluster-related configurations take effect. The database update will synchronize the scheduled jobs between the nodes by assigning them all to node 1.

The startCluster.sh command with the database update value turned off (startCluster.sh 1 false) prevents any configuration changes from affecting the system, especially after you install a fix pack or interim fix.

The following services and adapters are associated with node 1 in the cluster:
* File System adapter
* Command Line 2 Adapter
* Connect::Direct Server Adapter
* Connect::Direct Requester Adapter
* Connect:Enterprise for UNIX Server Adapter
* HTTP Server adapter
* HTTP Client adapter
* FTP Client adapter
* FTP Server adapter
* SFTP Client adapter

The following services and adapters have storage set to database:
- HTTP Server adapter
- Connect:Enterprise for UNIX Extract Service
- Connect::Direct Server Adapter

The default storage for all of the workflows is set to database.

Configure Shared File Systems as Document Storage:
About this task

To configure the shared file systems as document storage:

Procedure
1. Navigate to */install_dir*/install/properties.
2. Open the jdbc.properties.in file.
3. Update the value of the *document_dir* attribute to point to the shared files system directory where you store documents.
4. Save and close the file.
5. Navigate to */install_dir*/install/bin.
6. Enter `./setupfiles.sh`.
7. Restart Sterling B2B Integrator.

Changes to Network Interface Bindings: To increase the security of the Administrator Console User Interface, the system only binds to specific network interfaces. After installing, if the URL returns the error message **Page cannot be displayed**, you can adjust property settings to correct the problem.

Update Property File for Network Interface Binding Changes:
About this task

On the server where the system resides, edit the noapp.properties_platform_ifcresources_ext.in file.

Procedure
1. Locate the **admin_host** parameter. The default settings are: *hostname1* is the name of primary network interface, the one given highest priority by the system. *localhost* is the name of the network interface on the server where the system resides. Default entries: admin_host.1 = hostname1 and admin_host.2 = localhost
2. Correct the parameters as necessary.
3. If no interface is being displayed, edit *hostname1* so that it correctly identifies the primary network interface that accesses the system.
4. If an additional network interface needs to access the system, add an additional *admin_host* entries. For example: admin_host.3 = hostname2
5. Stop Sterling B2B Integrator.
6. Navigate to the *install_dir*.
7. Navigate to the bin directory.
8. Run the setupfiles.sh (UNIX) or setup.cmd (Windows).
9. Start Sterling B2B Integrator.

Update Dashboard for Network Interface Binding Changes:

About this task

For the Dashboard user interface, the system provides unrestricted binding to network interfaces through the perimeter server. To restrict access to the Dashboard user interface, you can adjust property settings so that only one network interface accesses the system.

On the server where the system resides, edit the perimeter.properties.in file.

Procedure
1. Locate the localmode.interface parameter. The default setting is unrestricted. Unrestricted Setting (Default) localmode.interface=*
2. To restrict access to the Dashboard, enter the network interface that you want to support. Restricted Setting localmode.interface=hostname1
3. Stop Sterling B2B Integrator.
4. Navigate to the *install_dir*.
5. Navigate to the bin directory.
6. Run the setupfiles.sh (UNIX) or setup.cmd (Windows).
7. Start Sterling B2B Integrator.

Disable Services:
About this task

The upgrade process enables services that might have been disabled before the upgrade. If you want to disable these services again, you must disable them in after the upgrade process.

Download of the Sterling B2B Integrator tools:

After you install Sterling B2B Integrator, you can install tools like the Map Editor and the Graphical Process Modeler (GPM).

Sterling B2B Integrator includes tools that run on a desktop or personal computer. After you install Sterling B2B Integrator, you can install the following tools:
* Map Editor and associated standards

    Note: The Map Editor requires a 32-bit JDK. This JDK is not provided with the product download or media. For more information, see *System Requirements*.
* Graphical Process Modeler (GPM)
* Web Template Designer
* (If licensed) MESA Developer Studio plug-ins, including MESA Developer Studio Software Development Kit (SDK) and MESA Developer Studio Skin Editor
* (If licensed) Reporting Services, which require MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports

Attention: Conflicting IP addresses can cause problems when you download a desktop tool.

Enable Business Processes:

About this task

During the upgrade process, your customized business processes are preserved, but they may not be the default business process. Review the business processes and enable the customized versions.

Property files configuration in a UNIX environment: Property files contain properties that control the operation of Sterling B2B Integrator. For example, the REINIT_DB property in the sandbox.cfg file controls whether or not a database is initialized when you install Sterling B2B Integrator.

By modifying the values of these properties, you can customize Sterling B2B Integrator to suit your business and technical needs. Most property files are in the:
- For UNIX, /*install_dir*/install/properties directory
- For Windows, *install_dir*\install\properties directory

After installing Sterling B2B Integrator, most property files and scripts do not need any further configuration for basic operation. However, if you want to customize any specific operations, for example setting a different logging level - you will need to edit (or in some cases, create) certain property or .xml files.

Before changing any property files, refer to Working with Property Files documentation for general information about how to work with Property Files.

Areas where you might need to make specific property files changes after an installation include:
- LDAP user authentication
- Prevention of cross-site script vulnerabilities
- Logging configuration
- Process-specific property file settings

Add cdinterop Files:
About this task

During the upgrade, the cdinteropt files were replaced. Copy the customized version into the upgrade.

Updating the sandbox.cfg file with a new JCE file:

If you upgrade from Sterling B2B Integrator release 5.2.4.2 to 5.2.5 and you change the JDK from Sun to IBM, you must manually update the Java Cryptography Extension (JCE) policy file information in the `sandbox.cfg` file.

Procedure
1. Open the *install_dir*/install/properties directory.
2. Open the `sandbox.cfg` file.
3. Change the **JCE_DIST_FILE** property to the path to the JCE file that you specified during the upgrade.
4. Save and close the `sandbox.cfg` file.
5. Open the *install_dir*/install/bin directory.
6. Enter the `setupfile.sh` command to update your installation with the new **JCE_DIST_FILE** property value.

Add Third-Party Libraries:
About this task

If you added third-party libraries to configure adapters for the previous release, you need to add each of the libraries again after you complete the upgrade. See the documentation for each third party adapter you use.

Configure Services and Adapters:
About this task

You may need to reconfigure services and adapters after an upgrade. During an upgrade, packages for services and adapters are reprocessed to update the service configurations.

After an upgrade, the configurations of default adapters and services are re-set to their default configurations. This includes directory paths, which are restored to their default paths. You need to reconfigure those adapters and services, which include, but are not limited to:
- All default FTP adapters
- All default SFTP adapters
- Connect:Enterprise UNIX Server Adapter
- OdetteFTP Adapter
- SAP Suite Adapter
- SWIFTNet Client Service
- SWIFTNet Server Adapter

If you modified the standard configuration for a service or adapter, you may need to reconfigure or reactivate the service or adapter following an upgrade. You may also need to reconfigure adapters that used directories or scripts in the installation directory of your previous release.

Examples of services and adapters that commonly need to be reconfigured following an upgrade include:
- FTP adapter
- System services such as the Alert service and the BP Fault Log adapter

The following adapters need special consideration following an upgrade:
- JDBC Adapter and Lightweight JDBC Adapter
- File System Adapter and Command Line2 Adapters
- Odette FTP Adapter

Configure JDBC Adapter and Lightweight JDBC Adapter:
About this task

Storage locations of the database pool properties that allow the JDBC adapter and the Lightweight JDBC adapter to communicate with your external database have been streamlined. The poolManager.properties file has been eliminated and some of its pool properties are now included in the jdbc.properties file, along with some new properties. You will need to manually update your existing jdbc_customer.properties.in file to add some new database pool properties. If you do not have a jdbc_customer.properties.in file, create one since customer.properties are not affected by product updates.

Configure File System Adapter and Command Line2 Adapters:
About this task

You must configure your File System and Command Line2 adapters before you remove the previous release directory. Reconfigure any File System and Command Line2 adapters that were configured to use directories or scripts in the installation directory for the previous release. Ensure that you create new directories and save scripts outside of the current installation directory and edit each configuration to use the appropriate directories and scripts.

Consider the following:
- If you are using the Command Line2 adapter and have located the CLA2Client.jar file anywhere other than the default location, you must replace it with the new version. For information about the default location and how to start the Command Line2 adapter, see the *Command Line2 adapter*.
- If you are upgrading to this version of Sterling B2B Integrator from a version lower than 4.0.1 and are using the Command Line2 adapter, you must update the version of the CLA2Client.jar file with the CLA2Client.jar located in the */install_dir*/install/client/cmdline2 UNIX directory or in the *install_dir*\install\client\cmdline2 for Windows. If you installed the CLA2Client.jar file anywhere other than the default location, you must replace each copy of the file with the new version. If you only installed it in the default location, the update occurs automatically during the upgrade process.
- If you are upgrading to this version of Sterling B2B Integrator from a version prior to 4.0 and are using the Command Line adapter, you must update the version of the CLAClient.jar file with the CLA2Client.jar located in the */install_dir*/install/client/cmdline2 UNIX directory or in the *install_dir*\install\client\cmdline2 for Windows. If you installed the CLAClient.jar file anywhere other than the default location, you must replace each copy of the file with the new version. If you only installed it in the default location, the update occurs automatically during the upgrade process.

The CLA instances are now pointing to the CLA2 Service definition. After importing old service instances of CLA onto Sterling B2B Integrator, you need to reconfigure the imported CLA services to re-set the Remote Name and Remote Port service configuration parameters. For more information, refer to the documentation for the Command Line Adapter and Command Line2 Adapter.

Configure Odette FTP Adapter:
About this task

If you use the Odette FTP Adapter and are using the Partner Profile XML file version 2.00 used in Sterling Gentran Integration Suite 4.3, you must modify it to match the new Partner Profile version 3.00. To modify the XML file, refer to the following table:

Section	Name of Structure or Field	Action	Comment
Partner Profiles	<GeneralParameters> <PartnerProfileVersion>3.00 </PartnerProfileVersion> </GeneralParameters>	Use correct version label of the Partner Profile.	New Version label: 3.00

Section	Name of Structure or Field	Action	Comment
Physical Partner	Description	Add field and description content	Mandatory in OFTP Partner database
Physical Partner	SubMailbox	Add field, if used.	Optional
Physical Partner	<AuthenticationCertificate type ="…"> <Subject>string</Subject> <Issuer>string</Issuer> <Serial> Bignumber_string </Subject> </AuthenticationCertificate>	Add Structure, if used.	OFTP 2.0: Mandatory for security only. Structure may be repeated.
Physical Partner	<AuthenticationCertificate type ="Private Key"> <Subject>string</Subject> <Issuer>string</Issuer> <Serial>Bignumber_string </Subject> </AuthenticationCertificate>	Add Stucture, if used.	OFTP 2.0: Mandatory for security only.
Physical Partner/ CAPI	DWindowSize	Delete field	
Physical Partner/ IP	IPFilter		Uses IPv4 or IPv6 addresses.
Physical Partner IP	SSL	Add field, if used.	OFTP 2.0: Mandatory for security only.
Physical Partner IP	CipherStrength	Add field, if used.	OFTP 2.0: Mandatory for security only.
Physical Partner IP	<SSLCertificate type ="…"> <Subject>string</Subject> <Issuer>string</Issuer> <Serial> Bignumber_string </Subject> </SSLCertificate>	Add structure, if used.	OFTP 2.0: Mandatory for security, only. Structure may be repeated.
Physical Partner Contract	Description	Add field and description content.	Mandatory in OFTP Partner database.
Physical Partner Contract	MultipleLoginSessions		Now used.
Physical Partner Contract	DuplicateFilePeriod	Rename DuplicateFileProcessingTestings To DuplicateFilePeriod	

Section	Name of Structure or Field	Action	Comment
Physical Partner Contract	SessionLogLevel	Add fields.	Optional
Physical Partner Contract	GroupNameList	Add fields, if used.	Optional
Physical Partner Contract	SecureAuthentication	Add fields.	OFTP 2.0: Mandatory
Physical Partner Contract	<TimeScheduleTable> ... <TimeScheduleTable>	Delete structure and create schedules in the Scheduler.	Initiator Business Process and Business Process user fields are still used.
Physical Partner Contract	OdetteFTPAPILevel	Rename OdetteAPILevel to OdetteFTPAPILevel	
Logical Partner	Description	Add field and description content.	Mandatory in OFTP Partner database.
Logical Partner	<FileServiceCertificate type ="..."> <Subject>string</Subject> <Issuer>string</Issuer> <Serial>string</Subject> </FileServiceCertificate>	Add structure, if used.	OFTP 2.0: Mandatory for security, only. Structure may be repeated.
Logical Partner Contract	Description	Add field and description content.	Mandatory in OFTP Partner database.
Logical Partner Contract	FileTransmissionRetries	Rename FileTransmitRetries to FileTransmissionRetries	
Logical Partner Contract	SignedEERPRequest	Add field, if used.	
Logical Partner Contract	EERP/NERPSignatureCheck	Add field, if used.	
Logical Partner Contract	File Signing	Add field, if used.	
Logical Partner Contract	File Encryption	Add field, if used.	
Logical Partner Contract	CipherSuite	Add field, if used.	
Logical Partner Contract	File Compression	Add field, if used.	
Logical Partner Contract	CharEncoding	Add field, if used.	
Logical Partner Contract	Receive VitualFilenamePattern	Add field, if used.	
Logical Partner Contract	EERPTimeout	Rename WaitForEERP to EERPTimeout	
Logical Partner Contract	FileScheduleTimeout	Add field, if used.	
Logical Partner Contract	InboundBusinessProcess	Add field, if used.	Optional

Section	Name of Structure or Field	Action	Comment
Logical Partner Contract	InboundBusinessProcessUser	Add field, if used.	Optional, if no Inbound business process is specified.

After changing the Partner Profile for version 3.00, import the Partner Profile into the new Odette FTP Partner Profile database. For additional information, see Odette FTP Partner Profile.

Restore Performance Tuning Configuration:
About this task

Before you begin this procedure, you need to add the Advanced File Transfer Tab.

To restore the performance tuning configuration:

Procedure
1. From the **Administration Menu**, select **Operations** > **System** > **Performance** > **Tuning**.
2. Next to **Edit Performance Configuration**, click **Go!**
3. Click **Edit settings**.

Add Advanced File Transfer Tab:
About this task

The Advanced File Transfer tab will not be enabled by default after an upgrade. If you have a license for Advanced File Transfer, perform the following steps to add the Advanced File Transfer tab:

Procedure
1. Log in as **Admin**.
2. Click **Manage Layout**.
3. Click **Add Pane**.
4. Enter the following name: `Advanced File Transfer`
5. Click **Apply**.
6. Click the **customize** icon for the new **Advanced File Transfer** tab.
7. Click **Add Portlet**.
8. Select the Add box for **Advanced File Transfer Management**.
9. Click **Apply**.
10. Select **Clear Borders and Title** from the Decoration menu.
11. Click **Save and Apply**.

Reconfigure Archive Settings:
About this task

The upgrade does not automatically reconfigure the archive configuration. You must reconfigure the Backup Directory setting in Archive Manager after an upgrade.

To reconfigure your Archive settings, use the following procedure:

Procedure
1. From the **Administration Menu**, select **Operations** > **Archive Manager**.
2. Next to **Configure Archive Settings**, click **Go!**
3. If a message displays about the UI Lock, click **OK** to continue.
4. Click **Next**.
5. Update the Backup Directory field with the correct path information:
6. Click **Save**.
7. Confirm the settings and click **Finish**.

Review the EDI Sequence Check Queue:
About this task

The EDI Sequence Check Queue is used for X12 and EDIFACT sequence and duplicate checking. You can check the contents of the queue through the UI (**Trading Partner > Document Envelopes > EDI Sequence Check Queue**). Any interchanges that are in the queue will not be able to be processed after upgrade because the EDI compliance report serialized format has changed.

The EDI Post Processor displays the following error:

```
The compliance report for interchange <interchange document ID> could not be
deserialized because the format has changed. The entry for this interchange
should be manually removed from the EDI Sequence Check Queue through the UI,
and the inbound deenvelope workflow should be rerun (WF ID <wfid>).
```

If you receive this error, you should follow the instructions in the error message to correct the situation.

Correct Missing Manager IDs:
About this task

If you created a Manager ID with no corresponding User ID in your previous version, the Manager ID may be missing after upgrading. If this occurs, create a user in the system with a User ID that matches the missing Manager ID.

Configure Document File Systems:
About this task

If you use a File System as your document storage method, determine and record the path to the File System.

You will need the File System path structure so that after the upgrade, you can copy/mount the documents to the new installation directory. The directory structure (path to the File System) must be the same in the current and in the upgraded system.

Manage Nodes in a Cluster:
About this task

You can add or remove nodes in a cluster environment. The following prerequisites should be considered before performing any modification in the cluster environment:
- New nodes should have the same range of ports available as the current nodes.
- Sterling B2B Integrator license file should be updated to include the IP address of the new nodes.

- Directory structure on the new nodes should match with the directory structure of the existing nodes.
- Perimeter servers should be updated with the new IP addresses to ensure proper configuration.
- Any adapters, services, or business processes assigned to or scheduled to run on the node being removed should be assigned to run on other nodes.

Add a Node to the Cluster (UNIX or Linux):

You do not need to stop the cluster environment while adding a new node.

About this task

To add a node into the cluster:

Procedure
1. Install a new Sterling B2B Integrator node to be added into the cluster during installation. Ensure that the new node being added is not a primary node.
2. Update the `jgroups_cluster.properties` file and the `jgroups_cluster.properties.in` file with the new node details.
3. Configure the new node by running `startcluster.cmd nodeNumber` from the `/<install_dir>/install/bin` directory. The node number should be greater than 1.

   You should run `startCluster.sh` only after you install Sterling B2B Integrator. You should not run `startCluster.sh` when you restart a Sterling B2B Integrator instance.
4. Start the new node.

Remove a Node from the Cluster:
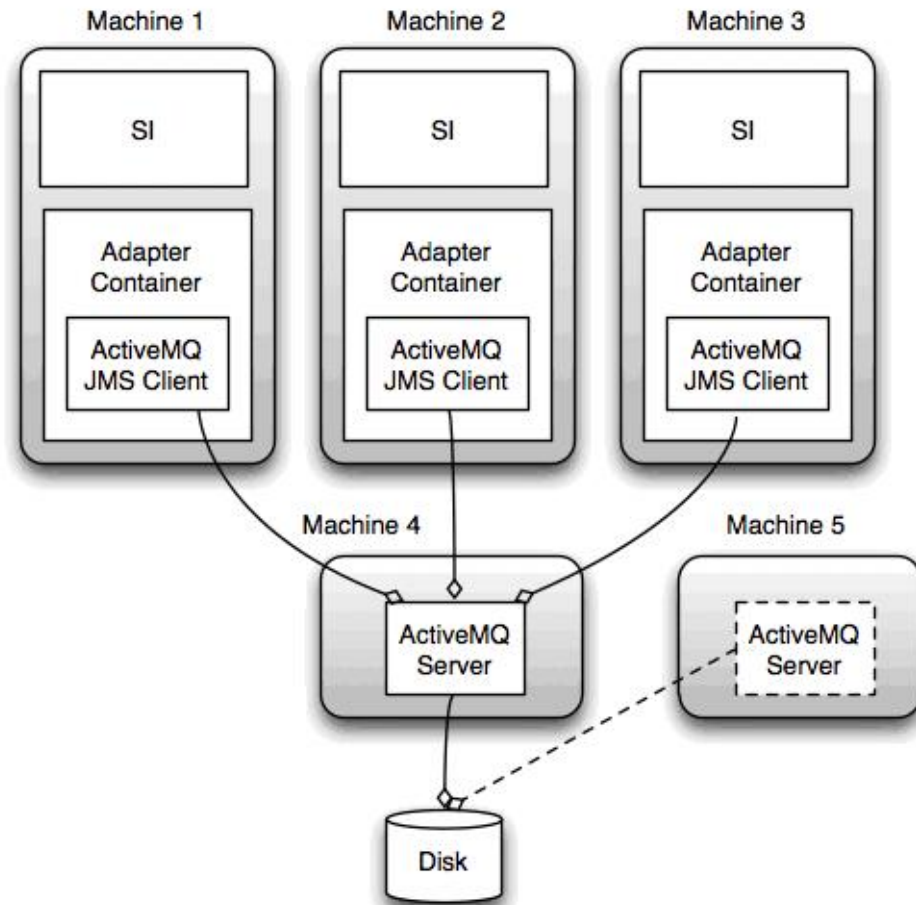**About this task**

To remove a node from the cluster:

Procedure
1. Reassign or stop any adapters, services, or business processes assigned to or scheduled to run on the node being removed.
2. Perform backup of the node being removed.
3. Edit the `jgroups_cluster.properties` file and the `jgroups_cluster.properties.in` file in all nodes to remove the IP address of the node being removed.
4. Restart the cluster environment.

   Important: Start node 1 with the **restart** option to update the node information.

JMS Cluster Configuration for Failover: To allow proper JMS execution and failover in the Sterling B2B Integrator cluster environment, you must configure an external ActiveMQ using the *Configure ActiveMQ for a Cluster Environment* task.

The following diagram illustrates how the ActiveMQ can be configured to increase availability and failover.

Configure ActiveMQ for a Cluster Environment:
About this task

To configure the ActiveMQ for the cluster environment:

Procedure
1. Download the ActiveMQ 5.2 from http://activemq.apache.org/activemq-520-release.html for the appropriate OS.
2. Deploy an instance of ActiveMQ 5.2. This can be on the same machine as Sterling B2B Integrator or on a separate machine.
3. Navigate to */install_dir*/install/properties.
4. Copy the **activemq.xml** file to the AMQ conf directory. This file configures the ActiveMQ to:
   - Use failover clustering
   - Use the SI database for storage
   - Configures the AMQ port usage

   By default, ActiveMQ is configured to listen at the Sterling B2B Integrator base port + 64 and the ActiveMQ interface will be at base port + 65 (http://server:base port + 66/admin). The port can be changed by editing the config file. The port number must be higher than 1024.
5. Navigate to */install_dir*/install/properties.

6. On each Sterling B2B Integrator application node and each Sterling B2B Integrator container node, the queue configuration must be re-directed to utilize the ActiveMQ cluster. In each node, add the following to the customer_overrides.properties:

   For FIFO Processing:

   ```
   fifo.broker.username=
   fifo.broker.password=
   fifo.broker.url=failover:(tcp://amq_master_hostname:amq_master_port,
   tcp://amq_slave_hostname:amq_slave_port)
   ```

   For adapters running in separate JVM containers:

   ```
   iwfcqueue.username=
   iwfcqueue.password=
   iwfcqueue.protocol_config=failover:(tcp://amq_master_hostname:amq_master_port,
   tcp://amq_slave_hostname:amq_slave_port)
   ```

7. Start the ActiveMQ instances. To start ActiveMQ, it is necessary to supply the activemq.hostname property with the hostname for the current system. For example:

   ```
   activemq -Dactivemq.hostname=ExampleHostname
   ```

   See http://activemq.org for additional information about running an ActiveMQ instance.

8. Start Sterling B2B Integrator.

Add host[port] From all the Nodes to the jgroups_cluster.property.in for Each Node:
About this task

Complete this task for both vertical and horizontal clusters. You will need to complete this task for each node, starting with node 1.

Before you begin, it is important to note that you should never override mcast_addr in the jgroup_cluster.properties.

To add the host [port] to the jgroups_cluster.property.in file:

Procedure

1. Navigate to the properties file directory for the node.
2. Determine the initial_hosts port for each node:
   - Navigate to the properties file directory for the node.
   - Find the initial_hosts from the jgroups_cluster.property (initial_hosts=host{port}).
   - Record the value from the initial_hosts for each node.
3. Open the jgroups_cluster.property.in file.
4. Add the initial_hosts property to the file. For example, if node 1 is on host1 and node 2 is on host2. For node 1, you would add:

   ```
   initial_hosts=host1[port1],host2[port2]
   ```

   For node 2, you would add:

   ```
   initial_hosts=host2[port2],host1[port1]
   ```

5. Save and close the file.

Configure JVM Containers:

About this task

After you have upgraded the system, you will need to reconfigure the JVM containers.

Before you reconfigure the JVM containers, you need to know the container numbers from the previous installation.

For example, if you configured the container using the command, setupContainer.sh (or cmd) 1, then the container number is 1.

Use one of the following tasks to reconfigure your containers:
- *Set Up Adapter Container - iSeries*
- *Set Up Adapter Container - UNIX/Linux*
- *Set Up Adapter Container - Windows*

System Maintenance

From time to time, you may need to perform system maintenance activities.

These activities might include any or all of the following:
- Performing a Checksum
- Adding or removing a license

DB Checksum tool:

A checksum is a simple redundancy check used to detect errors in data.

In Sterling B2B Integrator, a verification process compares the checksum between the existing default resource and the resource that was added after applying a fix pack or upgrading. The DB Checksum tool, a resource difference tool generates a granular report of the changes in the system that was not permitted to be set as defaults.

The DB Checksum tool generates the difference in resource checksum between the default resource and the latest system resource from the database.

Performing a checksum:

Use a command to run the DB Checksum tool.

Procedure

To run the DB Checksum tool:
1. Open the */install_dir*/install/bin directory.
2. Enter the following command:
   ```
   ./db_checksum_tool.sh [-d] [-i [1 | 2 | 3 | 4 | 5]]
   [-r [wfd | map | schema | sii | template]] [-o <output file>] [-g]
   ```
   Where:
   - **-d** is the mode to dump the difference of resource checksum between the default resource and latest system resource.
   - **-i** is the resource type integer (optional).
   - 1 is WFD.
   - 2 is MAP.

- 3 is SCHEMA.
- 4 is SII.
- 5 is TEMPLATE.
- **-r** is the resource name (optional). For example, wfd, map, schema, sii, or template.
- **-o** is the file name to output all the messages (optional).
- **-g** is the file name that lists all the ignored resources (optional).
- **-h** is the help screen.

The DB Checksum tool performs the relevant checksum operation that is based on the command options and generates the output message.

License modifications:

After the installation finishes, you can modify the software licenses that you loaded with the **AddLicenseSet** command.

The **AddLicenseSet** command is in the `bin` directory of your UNIX or Windows installation. After the initial installation, the license files are in the following directories:
- UNIX - /*install_dir*/install/properties/licensefiles
- Windows - *install_dir*\install\properties\licensefiles
- iSeries - /*install_dir*/properties/licensefiles

You can add licenses or review the license list from the UI. On the Administration Menu, click **System** > **B2B Console** > **Operations** > **System** > **Licenses**.

AddLicenseSet Command Parameters

Use the **AddLicenseSet** command to modify a single license file or the entire license file directory.

To use the **AddLicenseSet** command, you must do the following:
- Open the `bin` directory
- Include the absolute path to the license file directory or to a license file

The **AddLicenseSet** command has the following parameters:

AddLicenseSet Parameter	Description
-reload	Use this parameter to reload the license files.
	This parameter deletes all of the license files from the database before the new files are loaded. The old license files are saved to the following locations:
	• UNIX - /*install_dir*/install/logs/security/ old_licenses
	• Windows - *install_dir*\install\logs\security\ old_licenses
	• iSeries - /*install_dir*/logs/security/old_licenses

AddLicenseSet Parameter	Description
-upgrade	Use this parameter during an upgrade only. This parameter deletes all of the old license files from the database and installs the new license files. The old license files are saved to the following locations: • UNIX - */install_dir*/install/logs/security/upgrade • Windows -*install_dir*\install\logs\security\upgrade • iSeries -/*install_dir*/logs/security/old_licenses

The **AddLicenseSet** command will check if Sterling B2B Integrator is running. If it is running, the command will call the Ops server to refresh the license from the database. If you have any problems with your licenses after running the **AddLicenseSet** command, stop and restart Sterling B2B Integrator.

License Modification: Examples:

There are several different ways you can use the **AddLicenseSet** command to modify your licenses.

UNIX Examples

From the *install_dir*/bin directory:

Scenario	Command usage (UNIX example)
Reload a single license file	./AddLicenseSet.sh /*install_dir*/install/properties/ licensefiles/SI_SFG_License.xml -reload
Reload all of the license files in the directory	./AddLicenseSet.sh /*install_dir*/install/properties/ licensefiles/ -reload
Upgrade a single license file	./AddLicenseSet.sh /*install_dir*/install/properties/ licensefiles/SI_SFG_License.xml -upgrade
Upgrade all of the license files in the directory	./AddLicenseSet.sh /*install_dir*/install/properties/ licensefiles/ -upgrade

Windows Examples

From the *install_dir*\bin directory:

Scenario	Command usage (Windows example)
Reload a single license file	AddLicenseSet.cmd*install_dir*\install\properties\ licensefiles\SI_SFG_License.xml -reload
Reload all of the license files in the directory	AddLicenseSet.cmd*install_dir*\install\properties\ licensefiles\ -reload
Upgrade a single license file	AddLicenseSet.cmd*install_dir*\install\properties\ licensefiles\SI_SFG_License.xml -upgrade
Upgrade all of the license files in the directory	AddLicenseSet.cmd*install_dir*\install\properties\ licensefiles\ -upgrade

User Documentation
The user documentation is available from an online documentation site on the web.

Providing the documentation in an online environment allows for frequent updates of content that is based on user feedback and usability.

If you need a printed copy of the documentation, you can print topics of information through your Internet browser, or you can download documents in PDF format, after you add it to a collection on IBM Knowledge Center.

To access the documentation site from within Sterling B2B Integrator or one of its tools, select the help icon. The system must reside on a computer that supports Internet access and an Internet browser.

Improving your access to online documentation:

You can improve your access to online documentation by using several methods.

About this task

After you access the IBM Knowledge Center, you can perform the following tasks:
- Enter a word or phrase and search the entire library for information.
- Move through a hierarchy of contents pages to identify the topic you want to read or print.
- Print topics by using your browser's Print function.
- Add documents to your collection and download them in PDF format.

Uninstall Sterling B2B Integrator from a UNIX/Linux Cluster Environment
Before you begin

If you have installed Sterling B2B Integrator software using IIM, then perform these steps to unregister Sterling B2B Integrator packages from the IIM registry:
- Launch IIM.
- Click **Uninstall** and select the required Sterling B2B Integrator package (Media, FixPack, or Interim Fix).
- Confirm and click **Uninstall**.

About this task

To uninstall Sterling B2B Integrator from a UNIX/Linux cluster environment, perform the following procedure on each node, starting with node 1:

Procedure
1. Stop Sterling B2B Integrator and wait for shutdown to complete. If you begin removing files before all business processes and Sterling B2B Integrator are stopped, you may be unable to remove Sterling B2B Integrator successfully.

   To stop Sterling B2B Integrator, navigate to /*install_dir*/install/bin and run the following command:

    `./hardstop.sh`
2. Back up the file system and database.

   This step is optional. However, by backing up the file system and database, you are ensured that Sterling B2B Integrator is completely recoverable.
3. Remove the installation directory by entering the following command in the parent directory of your installation directory: `rm -rf` *install_dir*

4. If you use an Oracle, Microsoft SQL Server, or DB2 database, these remain intact even after you remove Sterling B2B Integrator from the server. If you no longer want to reference the data, contact your database administrator about removing unwanted tables and recovering the database space where Sterling B2B Integrator used to reside.

5. (Optional) To remove the JDK, review and perform the uninstall procedure for the JDK you are using.

6. After you remove Sterling B2B Integrator from the server, you can remove Eclipse, and any tools that were downloaded to the desktop, including the following:

   - Map Editor and associated standards

     Refer to the *Map Editor Guide* for information about removing the Map Editor.

   - Graphical Process Modeler

     Refer to the *Graphical Process Modeler Guide* for information about removing the Graphical Process Modeler.

   - Web Template Designer

     Refer to the *Web Extensions Guide* for information about removing the Web Template Designer.

   - (If licensed) MESA Developer Studio plug-ins, including:

     – MESA Developer Studio Software Development Kit (SDK)

     – MESA Developer Studio Skin Editor

     Refer to the *MESA Developer Studio* guide for information about removing MESA Developer Studio.

   - (If licensed) Reporting Services, which requires MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports.

     Refer to the *MESA Developer Studio* guide for information about removing Reporting Services.

Troubleshooting Tips for Cluster Environment

Situation	Message or Symptom	Explanation/Resolution
Installing	You encounter errors or problems during installation.	**Explanation** The installation creates several log files that you can use to diagnose problems like the failure of an installation. **Resolution** Examine the log files generated during installation: • ant.install.log (in the *parent_install* directory) • /*install_dir*/PreInstallSI.log • /*install_dir*/InstallSI.log
Installing	When you entered an absolute path during installation, a message indicated that the command was not found.	**Explanation** You entered an incorrect path. Check the information entered. **Resolution** Enter the correct path.

Situation	Message or Symptom	Explanation/Resolution

Installing a desktop tool or resource	Cannot download any of the following:
	• Map Editor and associated standards
	• Graphical Process Modeler
	• Web Template Designer
	• (If licensed) MESA Developer Studio plug-ins, including:
	  – MESA Developer Studio Software Development Kit (SDK)
	  – MESA Developer Studio Skin Editor
	• (If licensed) Reporting Services, which requires MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports.
		Explanation
		
		When you install Sterling B2B Integrator, system files are created that contain an internal IP address. If you install Sterling B2B Integrator behind a firewall, and your firewall is configured to accept an external IP address from a client computer, you may not be able to download the desktop tools and resources. The firewall will reject the internal IP address from a client residing outside of the firewall.
		
		Resolution
		
		Modify the system files that contain the invalid IP address. Follow these steps:
		1. Navigate to */install_dir*/install/bin.
		2. Stop Sterling B2B Integrator.
		3. Enter the following command followed by the external IP address:
		   `./patchJNLP.sh` *external_IP_address*
		4. Restart Sterling B2B Integrator.

Installing	Memory and ulimit errors.	**Explanation** The installation fails with memory and ulimit errors. **Resolution** • Refer to the *Viewing and Editing Performance Configuration Settings* in the *Performance Management* documentation. Modify your memory setting accordingly. • Refer to the *Operating System Configuration Checklist* and tune the ulimit settings.
Accessing the URL	Attempts to access the URL for Sterling B2B Integrator display the message: Page cannot be displayed	**Resolution** See the information on *Changes to Network Interface Bindings* to update either the property file or the dashboard.

Situation	Message or Symptom	Explanation/Resolution

Node status on a dual-stack machine	Displays **Node went down** status in Node Status page, but the node is up and running.	**Explanation**
		
		Sterling B2B Integrator is configured using an IPv4 address on a dual-stack machine. The Node Status page displays Node went down status, but the node is up and running.
		
		Resolution
		
		Modify the noapp.properties_platform_ifcresources_ext.in and jgroups_cluster.properties.in files by performing the following:
		1. Identify the IPv6 address of the host machine from the /etc/hosts file.
		2. Navigate to the /install_dir/properties directory.
		3. Edit noapp.properties_platform_ifcresources_ext.in file and add the IPv6 address: admin_host.2 = <IPv6 address>
		4. Edit jgroups_cluster.properties.in and modify the following:
		  • &HOST_NAME=<IPv6 address>
		  • mcast_addr=FFFF::<IPv4 address
		5. Run the ./setupfiles.sh script to apply the changes.

Installing (HP-UX 11.31)	When entering your email address the @ key is not recognized.	**Explanation** The @ key is being mapped to kill or eol, it needs to be mapped to another character. **Resolution** This resolution only applies to HP-UX 11.31. Map the @ key to another character. Note: If you need want to see what the key is mapped to, use the stty -a command.
Cluster Installation	Cluster is not working properly and your machine is running dual-stack - ipv4 and ipv6.	**Explanation** You can see the node went down from User Interface, but the node is running. **Resolution** • Find your ipv6 address in the /etc/hosts file and update noapp.properties.in file admin_host.2 = <ipv6_address>. • Edit jgroups_cluster.properties.in file and replace &HOST_NAME with the ipv6 address string and change mcast_addr=FFFF::239.255.166.17. • Enter setupfiles.sh.

Situation	Message or Symptom	Explanation/Resolution
Cluster Installation or Upgrade	When configuring TCPS the following warning can be found in the activemqbroker.log: sun.security.provider.certpath. SunCertPathBuilderException: unable to find valid certification path to requested target.	**Resolution** Add the system certificate to the trust store using the KeyTool command.
Cluster Installation or Upgrade	When configuring TCPS the following warning can be found in the activemqbroker.log: oracle.net.ns.NetException: Invalid cipher suites specified.	**Resolution** Do not mention any SSL cipher in the ActiveMQconfig.xml.
e-Invoice Upgrade: Oracle Add Constraint Error	When you upgrade Sterling e-Invoicing and are using an Oracle database, if the upgrade fails with the error message `name is already used by an existing object`, this occurs because the default behavior for the `drop constraint` command changed in Oracle 10.	**Explanation** The index that is used to support the constraint is now only removed if the index was generated by the `create constraint` command. The indexes for Sterling e-Invoicing are always generated from constraints during an install. If you receive this error during a Sterling e-Invoicing upgrade, it is because of how the database was restored, the version of Oracle you are using, and because the Oracle `imp` command exported the indexes and constraints separately. There is no way to determine when the imp command will not add a create index command to the export file if it was generated by a constraint – but if it does add the command, the database restore process loses the association of the constraint and its underlying index. The database script that runs during a Sterling e-Invoicing upgrade executes two steps: 1. First, it drops the unique constraint so the next step can redefine it using additional columns. However, the drop constraint command does not remove the underlying index if the association with its index was lost. 2. The next command that redefines this constraint requires a different index definition, but in this scenario the name of the index the constraint wants to use already exists, which causes the `name is already used by an existing object` error. **Resolution** If you receive this error message, the solution for this problem is to drop the index and rerun the Sterling e-Invoicing upgrade. The drop index command you should use is: `drop index UNQ_EINV_CANON`

Situation	Message or Symptom	Explanation/Resolution
Applying a fix pack or upgrading	The `/install_dir`/install/ `installed_data` directory is created (if clustered, on each node) during upgrade or applying a fix pack. This directory can become very large and take up needed space on the file system.	**Explanation** The information in this directory is used during upgrade or when applying a fix pack, but is not required afterward. The deployment/cleanup tasks for the upgrade do not remove this directory. **Resolution** The directory can be manually removed to increase the available space for the file system: 1. Navigate to `/install_dir`/install 2. Enter `rm -r installed_data`

UNIX/Linux Non-Cluster Environment Upgrade (V5.2.6 or later)

You can upgrade the Sterling B2B Integrator software in a UNIX/Linux non-cluster (single node) environment.

CAUTION: Sterling B2B Integrator should be installed behind a company firewall for security purposes. See the *Perimeter Server* and *Security* topics in the Sterling B2B Integration documentation library for more information on secure deployment options.

You should also review the following documents:
* System Requirements
* Release Notes
* What's New
* Installation and Upgrade Information

It is important to remember that upgrading involves a full installation of Sterling B2B Integrator. You need to prepare for an upgrade the same way that you would prepare for an installation. It is also recommended that you thoroughly test this process in a test or development environment prior to implementing in a production environment.

This upgrade does not overwrite your current Sterling B2B Integrator directory structure on disk. Instead, it creates a new installation of Sterling B2B Integrator that will point to and upgrade the database of your current installation of Sterling B2B Integrator. This means your original instance will no longer be operational after performing the upgrade. After the upgrade, you will be starting your Sterling B2B Integrator instance only from the newly created directory structure.

For new installations, use the Sterling B2B Integrator *UNIX/Linux Non-Cluster Installation Guide*.

Upgrade Overview

Intended audience:

This document can be used by different members of your organization.

This document is intended for use by:
- System administrators
- Installation engineers
- Database administrators.

Assumptions for this guide:

The procedures in this guide are accurate as of the publication date and are specific to this version of the document.

Upgrade Scenarios (Non-Clustered):   Upgrading to Sterling B2B Integrator can follow several paths. Keep these scenarios in mind as you plan for your upgrade:

Upgrade Scenario	High-Level Upgrade Steps
You have V5.2.x installed and want to upgrade by applying V5.2.6 as a fix pack.	The upgrade steps are as follows: 1. Ensure that your JDK version is supported. See the system requirements. Upgrade your JDK if needed. See "Upgrading your JDK (Windows and UNIX)" on page 3. 2. Ensure that your operating system and database versions are supported. 3. See "Applying a Fix Pack (V5.2.6 or later)" on page 625or "Applying Sterling B2B Integrator V5.2.6 Fix Pack using a script" on page 630

Upgrade Scenario	High-Level Upgrade Steps

You have 5.1.x installed and want to upgrade to V5.2.6.	The upgrade steps are as follows:
	
	1. Ensure that your JDK version is supported. See the system requirements. Upgrade your JDK if needed. See upgrading your JDK.
	
	2. Ensure that your operating system version is supported. Upgrade your operating system if required.
	
	3. Ensure your database version is supported. Upgrade you database if required:
	  a. Export the configuration data.
	  b. Back up the database.
	  c. With help from a database administrator (DBA), copy the database to the new version.
	  d. Back up the newly created database.
	
	4. Upgrade to Sterling B2B Integrator V5.2.6 using the full installation media and this Upgrade Guide.
	
	5. Point to your supported database version. If the upgrade stops and leaves the newly created database in an incomplete state, you can re-start the upgrade using the backup of the database.

Upgrade Impacts

This documentation provides information on how system behavior has changed based on upgrading your instance. You should review this information before you begin your upgrade. Depending on which version you are upgrading to, you will need to review one or more topics listed. The upgrade impacts listed for each subsequent version are specific to that version. There is not a cumulative list.

Upgrade impacts for V5.2.6.2:

Upgrading to Sterling B2B Integrator V5.2.6.2 has unique impacts.

DB2 requires additional tablespace

When upgrading to V5.2.6.2 or later you must ensure that all tablespaces used by Sterling B2B Integrator tables have a minimum page size of 8K. Otherwise installation will fail.

Upgrade impacts for V5.2.6:

Upgrading to Sterling B2B Integrator 5.2.6 has unique impacts.

Support for SSLV3 has been removed - TLS 1.2 is the new default

Due to security concerns, Sterling B2B Integrator no longer supports the use of SSLV3. You should be aware of the following changes as you upgrade your system to this version:

- Several properties have been updated to use TLS 1.2 as the default. If your mail server cannot use TLS 1.2, you can change your SMTP and B2B Mail Client adapters to use TLS 1.0 or 1.1 instead.
- If any of your 3rd party programs do not support the use of TLS 1.2, you can change Sterling B2B Integrator to use TLS 1.0 or TLS 1.1.
- In all cases, requests to use "SSLV3" in Sterling B2B Integrator will use instead TLS 1.0, TLS1.1, or TLS1.2.
- TLS 1.2 is used as the default protocol in secure communications. This change applies to any system that is upgraded to V5.2.6.
- If your GPM, or WebSphere MQ or OFTP adapters are configured to use older, non-supported cipher suites (non-TLS 1.2), they will continue to work. However, if you edit them, only TLS 1.2 will be available to select.

JDK 7 is the only supported JDK version for V5.2.6

There are several impacts due to this change:
- If you are not already using JDK 7, you must upgrade your JDK before attempting to upgrade Sterling B2B Integrator to V5.2.6. If you currently have V5.2.4.1 or higher installed, there is a **upgradeJDK** script available to assist you. See *bin Directory Files* for more information.
- Only ciphers that are supported by JDK 7 can be used in Sterling B2B Integrator V5.2.6. You can update your cipher suites in `security.properties`.
- Previously defined ciphers in `customer_overrides.properties` are not changed upon upgrade to V5.2.6.
- **DefaultCipherSuite** contains a list of JDK 7 ciphers in V5.2.6 that can be used when others are not available.

Upgrade impacts for V5.2.5:

Upgrading to Sterling B2B Integrator 5.2.5 has unique impacts.

JDK 7 does not support the TLS_RSA_WITH_3DES_EDE_CBC_MD5 cipher

If you are using JDK 7 with Sterling B2B Integrator V5.2.5, and you want to use a cipher to secure the Sterling B2B Integrator dashboard, you must set one of the following values in the **dashboardCipherSuite** parameter in the `security.properties_platform_asi_ext.in` property file or in `customer_overrides`:
- *JDK* (includes all strong ciphers except the one not supported by JDK 7)
- *Weak*

Do not use *Strong* or *All* with JDK 7 or Sterling B2B Integrator will not start.

Reconciliation of HIPAA Level 5 code lists

When you upgrade to Sterling B2B Integrator 5.2.5, customized HIPAA Level 5 code lists from the previous version are preserved in the system where they were entered, but they are not the default code lists after the upgrade. After the upgrade, you must manually make any customized code lists the default code lists.

For example, you customized the ICD9 or HCPCSCPT code list in the previous version of Sterling B2B Integrator. After the upgrade to version 5.2.5, you must replace the default ICD9 or HCPCSCPT code list with the customized ICD9 or HCPCSCPT code list.

Properties file change to prevent timeout during start (5.1.0.4 to 5.2.5 upgrade)

Before you start Sterling B2B Integrator after you upgrade the application from version 5.1.0.4 to 5.2.5, you must change the values of the following properties in the `centralops.properties` file to 600. This action prevents the start command from timing out before Sterling B2B Integrator starts. The `centralops.properties` file is in the `properties` subdirectory of the installation directory.

- `OpsServer.commandTimeout`
- `PassPhrase.urlTimeout`

jGroups upgrade in V5.2.5 prevents Sterling B2B Integrator from starting for some customers

jGroups is upgraded with V5.2.5. Some of the properties defined in jgroups_cluster.properties have changed. If you modified these files or added custom changes for them to customer_overrides.properties, the upgrade changes are not applied and Sterling B2B Integrator will not start.

This issue is fixed in V5.2.5, Interim Fix 1, where all necessary properties files are changed for you. You can also disable this fix if desired. See APAR IT06654 for more information.

Note: The original and modified properties are output to the noapp.log file. This allows you to see how your properties were modified. Search the log using the value "Initializing jgroups_cluster.property_string" to see the new and changed values for the two affected startup properties. The jgroups_cluster.lock.protocolStack property is also modified with this fix, but is only written to the log when it is used, not at startup.

If you want to manually fix your installation without applying V5.2.5, Interim Fix 1, complete the following steps:

1. Delete the following options (if they exist) from customer_overrides.properties for the jgroups.cluster property file. These occur in the jgroups_cluster.property_sting, jgroups_cluster.distributed_property_string, and jgroups_cluster.lock.protocolStack files:
   - gc_lag
   - up_thread
   - down_thread
   - join_retry_timeout
   - max_xmit_size
   - shun
2. Remove the protocol parameter **VIEW_SYNC** and all of its attributes.
3. In the jgroups_cluster.property_string, replace 'start_port' with 'bind_port'.
4. In the jgroups_cluster.distributed_property_string and jgroups_cluster.lock.protocolStack properties, add the following items:
   - In distribution_property_string the attribute **thread_pool_rejection_policicty=run** should be added to the protocol 'TCP'. For example,

     `TCP(bind_port=22261`**`;thread_pool_rejection_policy=run`**`)`
   - In lock.protocolStack: the protocol and attribute **CENTAL_LOCK(num_backups=2)** should be added to the end of the property. For example,

```
lock.protocolStack=UDP(bind_addr=&HOST_ADDR;;bind_port=
&MULTICAST_NODE_PORT3;;mcast_addr=239.255.166.17;<other
protocol parameters here>pbcast.GMS(join_timeout=5000;print_local_
addr=true):CENTRAL_LOCK(num_backups=2)
```

Upgrade Impacts for V5.2.0:   Before you begin an upgrade, you should review the following information.

Features and Services Not Supported as of V5.2.0

The following features and services are no longer supported:
- Channels portlet
- Federated Systems
- Community Management (AFT Communities are still available)
- Sterling Community Management (SCM) Integration
- Archive Commandline Service
- Sync Engine Data Clean Manager Service
- Sync Engine Task Manager Service

If you need more information, please contact your IBM sales representative.

Port Allocation Changes

If you are upgrading to V5.2, and configured the CLA2 or the SWIFTNet HTTP Server Adapter, the remote port numbers have changed. The port numbers are as follows:

Table 4. Remote Port Numbers

Adapter Name	Version 5.2.0 Base Port	Version 5.2.1 Base Port	Version 5.2.2 Base Port	Version 5.2.3 Base Port
CLA2	+51	+52	+53	+54
SWIFTNet HTTP Server	+52	+53	+54	+55

Note: You should check adapter configurations and the sandbox.cfg file for ports greater than 51 which may have changed.

After upgrading to 5.2.x, you need to change any references to the old remote port numbers. For example, if you have any business processes that use the CLA2 adapter, you will need to update the remote ports in the business process.

Database Table Sizes

While upgrading if you encounter any database table size issues, you may have to manually adjust the database tables and restart the upgrade process. An upgrade using the production database in a test environment can be used to help you determine what tables need to be manually adjusted.

Resource Tags

If you are using resource tags in your current version, you should check all of your existing resource tags before you start the upgrade process. The resource tags you should check are:

- Adapter Policies
- Agreements
- Sterling Connect:Direct Netmaps
- Proxy Servers
- Security Tokens
- SSH Resources
- SWIFTNet Copy Service Profiles
- SWIFTNet Service Profiles

You can check the resource tags by running the following SQL query from the SQL Manager page (**Operations > Support Tools**):

```
SELECT * FROM TAG_RESOURCE_ASSOC WHERE TYPE=41 OR TYPE=42 OR TYPE=43 OR TYPE=44 OR
TYPE=45 OR TYPE=52 OR TYPE=53
```

The TAG_NAME column in the SQL results will contain the names of any resource tags that need to be edited or deleted.

If any of the resource tags contain tagged resources using the types listed, remove those resources from the resource tags or delete the resource tags that contain these resource types.

Silent Installation Parameters

The following parameters are new or have an updated definition:

What has changed	parameter	Definition
Parameter definition has changed	LICENSE_FILE_PATH	(Required) Full path to Core_License.xml.
New parameter	LICENSE_FILE_# (where # is a number between 1 and 99)	(Required) This is required for each license you install. You must add an entry for each license file to the silent install file. The LICENSE_FILE numbering (#) does not need to be sequential. For example: LICENSE_FILE_1= SI_SFG_License.xml LICENSE_FILE_2= Fin_Serv_License.xml LICENSE_FILE_3= SI_SFG_FIPS_License.xml LICENSE_FILE_4= AS2_License_.xml LICENSE_FILE_5= EBICS_License_.xml

Channels and Community Management Tabs (Optional)

The Dashboard PSML files are not updated during an upgrade. The PSML file impacts any custom tabs you may have configured, such as Channels or Operator. The Channels and Community Management tabs appear in your browser but are no longer operational.

To remove the Channels and Community Management tabs:

Warning: The psmlRestore command gets the 5200 psml file which resets ALL of the custom tabs from the previous release.

1. Navigate to the installation directory.
2. Navigate to the bin directory.
3. Enter this command: `./psmlRestore.sh admin`

Custom BI Fact Models Need to be Upgraded

Scripts named recreateBITablePKs.cmd.in (Windows) and recreateBITablePKs.sh.in (UNIX) are now provided which allow you to upgrade any custom BI fact models tied to a separate BI repository.

BI fact models need to be upgraded to continue to work with the Entity Framework, which replaced Hibernate usage in the BI framework in version 5.2.0.

Backups Are Not Generated During Install, Upgrade, or When Applying a Fix Pack or Interim Fix: Before you begin an upgrade, review the following backup information.

Some of the standard resources installed during install or upgrade use the import mechanism available to customers to load the standard resources into the database. The standard import mechanism by default creates a backup of the table containing the resource prior to importing to provide the ability to restore to the previous state if later it was decided that the import should not have been performed. This table backup was also being performed by default during the basic installation processes. And, since the import mechanism was sometimes used multiple times during the installation processes, some of the tables were backed up several times. Depending on the size of the table, this could add a very large amount of time to the installation process. Since it is recommended that a backup is completed prior to beginning any of these installation processes, the default behavior has changed to not perform the backup by default. If you would like backups to be performed, then `SKIPIMPORTBACKUP=false` should be added to the **sandbox.cfg** file.

Capitalization Insensitivity for Header Value:
About this task

Before you begin an upgrade, review the following AS3 information.

For AS3, when searching for a header value in a multipart/report, you do not need to consider whether the header value contains any capitalization. The search has been enhanced to be capitalization insensitive.

For example, the following searches will result in a match:
- Multipart/Report
- Multipart/report

- multipart/Report
- multipart/report

The search would not find the following as a match:
- MulTiPart/RePorT

CA Certificates Impacts: Before you upgrade, review the following information on CA certificates.

Users may add multiple copies of the same certificates to the database. Having multiple copies of the same certificate in the database is not, in principle, a problem for the system except for the minor amount of wasted storage. Each copy has a different object ID in the database and is a separate database object.

The specific changes in this release is the ability to easily populate the product database with the set of authority root certificates distributed with the JVM.

Retry Logic Added to WebSphereMQ Suite Adapter PUT Service:
About this task

Before you begin an upgrade, review the following WebSphereMQ Suite Adapter PUT Service information.

Retry logic has been added to the WebSphereMQ Suite. To accommodate this new functionality, you need to configure two new parameters for the PUT service:
- wsmq_send_retryCount
- wsmq_send_retrySleepInterval

To configure the new parameters:

Procedure
1. Log into Sterling B2B Integrator.
2. From the **Admin Console Home**, you need to start the Graphical Process Model (GPM).
3. Log into the GPM. You will need a **User ID** and **Password**.
4. In the GPM, select **View > Stencil > Services**.
5. Select **File > New**.
6. Drag the **WebSphereMQ Suite Put Message Service** from the **All Services** pane into the center pane.
7. Double click the **WebSphereMQ Suite Put Message Service**.
8. Select the configuration from the **Config** dropdown.
9. Enter the number of retries in to the **wsmq_send_retryCount** value.
10. Enter the sleep interval in seconds in to the **wsmq_send_retrySleepInterval** value.
11. Save the changes to the service configuration.
12. Exit from the GPM.

Services and Adapters - Show Advance State Button: Before you begin an upgrade, review the following Show Advance State button information.

The Show Advanced State check box has been removed from the Services Configuration search screen. Instead, the default has been changed to always show the advanced state without needing to check a checkbox on the search screen to display it.

Some Certificate Fields Are Optional:
About this task

Before you begin an upgrade, review the following certificate field information.

When generating certificate keys, the following fields may have been missing in the release you are upgrading from, but the entries are now optional:
- alt.name.dns
- alt.name.IP

Support for Multiple AS2 Organizations: Before you begin an upgrade, review the following AS2 schema information.

Sterling B2B Integrator now supports multiple sponsoring organizations and multiple partners for AS2. During upgrade, the single organization will be flagged as the default organization.

Once you have upgraded to this version, a prefix designation is used to differentiate between an AS2 organization (AS2_ORG_) and an AS2 partner (AS2_PART_). Each of these will require the full configuration of a trading partner to allow for a partner to trade with multiple organizations as well as an organization that trades with multiple partners.

The AS2_TRADEPART_INFO and AS2_EMAIL_INFO tables have been modified and the AS2_PROFILE table is newly introduced. Updates to these tables will occur during the SI in-place upgrade process in the following manner:
- Identify the default organization and populates the AS2_PROFILE table with organization information. A default organization is an AS2 organization profile named "profile_ORGANIZATION" present in the system before upgrade.
- Identify partner records and populates the AS2_PROFILE table with partner information.
- Populate the new columns of table AS2_TRADEPART_INFO with the default organization information.
- Populate the new PROFILE_ID column in the AS2_EMAIL_INFO table with the profile id of the AS2 organization profile present in the system.

Web Services: Before you begin an upgrade, review the following Web Services information.

Many of the Web Services configuration settings that were generated from the WebServices Provider Configuration UI have moved from the property files into database tables. This change was made to allow a single location of these settings in cluster environments and to ensure that these settings would not be reset during a fix pack installation.

After you have completed your upgrade, you should run the convertWSSoaProperties script found in the installation bin folder. This script reads the settings from the property file and places them into the proper database tables. You can then review the results in the WebServices Provider Configuration UI.

Perimeter Server Installation:
About this task

Before you begin an upgrade, review the following Perimeter Server installation information.

Silent install is the default installation mode. If you want to complete the Perimeter Server installation using an interactive mode, you need to use the following command:

```
java -jar ps_xxxx.jar -interactive
```

where ps_xxx.jar is the perimeter server jar file name for the version of Sterling B2B Integrator you are upgrading to.

MySQL Upgrade Impacts: The MySQL database is no longer bundled with Sterling B2B Integrator software. Therefore, you will need to install and configure an external version of the MySQL database prior to upgrading to the new version of Sterling B2B Integrator.

Upgrade MySQL Checklist (External MySQL): This checklist assumes you are upgrading from a previous version of Sterling Gentran Integration Suite or Sterling B2B Integrator directly to Sterling B2B Integrator 5.1 and higher and you are knowledgeable on the MySQL database.

If you need additional MySQL database information, see the documentation provided by the vendor at http://dev.mysql.com/doc/refman/5.0/en/.

If you are moving from a version of MySQL earlier than MySQL 5.0, you will need to export the data from the earlier version to the MySQL 5.0 version using the following procedure. Your existing Sterling Gentran Integration Suite instance will no longer function if you upgrade your existing database without making a copy. After this procedure, you will have two databases:

- A database that you will use in your upgraded version of Sterling B2B Integrator (Sterling B2B Integrator 5.1 and higher).
- A database that you can use in your old version of Sterling B2B Integrator.

Task	Which database	MySQL Upgrade Checklist	Your Notes
1	New external database	Install an external MySQL database. Refer to MySQL documentation for information about installing the database. Be sure to install the correct version and patches. See System Requirements for supported version information.	
2	New external database	Update the MySQL Parameters.	
3	New external database	Create the database. For example, you can run the following command to create the database: `CREATE DATABASE database_name` Refer to MySQL documentation for information about creating the database.	
4	New external database	Create a user account and grant permissions.	

Task	Which database	MySQL Upgrade Checklist	Your Notes
5	New external database	Install the JDBC Driver for MySQL.	
6	Previous database	Rename the SCHEMAS table to XMLSCHEMAS to avoid reserved word collision: • Only required when moving from MySQL version earlier than 5.0 • Use the following command: `Alter table SCHEMAS rename to XMLSCHEMAS`	
7	Previous database	Perform a MySQL database export. As part of the export, you will have a backup copy of the database.	
8	Previous database	If you renamed the SCHEMAS table in task 6, you need to rename the SCHEMAS table, so that your older version of Sterling B2B Integrator will be operational. Use the following command: `Alter table XMLSCHEMAS rename to SCHEMAS`	
9	New external database	Import the exported data for MYSQL into the new external database.	

Update the MySQL Parameters: Sterling B2B Integrator requires the following parameter settings in your MySQL database.

The parameter values recommended are minimum values. You can increase the values based on your requirements or if the database server is used by more than one instance of Sterling B2B Integrator.

It is recommended to configure a data file for auto extension (innodb_data_file_path = ibdata1:400M:autoextend).

Parameter	Value
max_connections	500
max_allowed_packet	100M
default-table-type	INNODB
wait_timeout	31536000
max_write_lock_count	500000
transaction-isolation	READ-COMMITTED
character-set-server	utf8
binlog_format	mixed
table_open_cache	512
key_buffer_size	384M
sort_buffer	512K
connect_timeout	15
innodb_data_file_path	ibdata1:400M:autoextend
innodb_data_home_dir	/*install_dir*/mysql/var/

Parameter	Value
innodb_log_group_home_dir	*/install_dir*/mysql/var/
innodb_flush_log_at_trx_commit	1
innodb_mirrored_log_groups	1
innodb_log_files_in_group	3
innodb_file_io_threads	4
innodb_lock_wait_timeout	600
innodb_log_file_size	5M
innodb_log_buffer_size	8M
innodb_buffer_pool_size	128M
innodb_additional_mem_pool_size	32M

Review the innodb_buffer_pool_size and the innodf_additional_mem_pool_size in the */install_dir*/install/mysql/data my.cnf. If the values from the previous Sterling B2B Integrator tuning.properties are larger than what is in your new my.ini file, you need to adjust them accordingly.

Create User Account and Grant MySQL Database User Privileges:
About this task

You must grant all privileges on the MySQL database to the Sterling B2B Integrator administrative user. The following example creates and grants all privileges to the user in the MySQL database:

```
GRANT ALL PRIVILEGES ON database_name.* TO user@localhost IDENTIFIED BY 'password'
WITH GRANT OPTION
```

Where:
* database_name - refers to the name of the database created.
* user - refers to the database user account that will be used by Sterling B2B Integrator.
* password - refers to the password associated with the database user account.

Once you have granted all the privileges, you will need to FLUSH the privileges to complete the setup. For example, run this command from the SQL prompt:

```
FLUSH PRIVILEGES;
```

Install the JDBC Drivers for MySQL:
About this task

Sterling B2B Integrator requires appropriate JDBC driver for MySQL database. These drivers are platform independent and architecture independent drivers. See *System Requirements* for supported version information.

After obtaining the correct JDBC driver, record the absolute path to its location on your system. You must supply this absolute path when installing Sterling B2B Integrator.

Perform a MySQL Database Export:

About this task

The full backup can be performed using the mysqldump utility. The details on the usage of this MySQL utility can be found in the MySQL reference documentation. Since there are many options that are provided with this utility, the following are the minimum recommendations:

- Specifying the db_name on the mysqlcommand will prevent the subsequent import from creating a new database. You should specify the db_name of the Sterling B2B Integrator database.
- --extended-insert: Use multiple-row INSERT syntax that include several VALUES lists. This results in a smaller dump file and speeds up inserts when the file is reloaded.
- --quick: This option is useful for dumping large tables. It forces mysqldump to retrieve rows for a table from the server a row at a time rather than retrieving the entire row set and buffering it in memory before writing it out.
- --disable-keys: This makes the dump file faster because the indexes are created after all rows are inserted.

To export the database:

Procedure

1. Perform a backup of the database. For example, enter:

   ```
   myysqldump –u <internal_mysql_username> -p<password> <db_name>
   --host=<internal_mysql_host> --port=<internal_mysql_port> > <dump_file_name>
   ```

2. Make a copy the resultant dump file (.dmp) file from the file system on the source server file system to the file system on the MySQL destination server.

   If the MySQL database was created as part of a Sterling B2B Integrator installation, you can determine the port number by reviewing the MYSQL_PORT entry in the sandbox.cfg that is in the Sterling B2B Integrator install directory.

Import the Data to the New Version of MySQL Database:
About this task

Before you begin:
- Make sure the new version of the MySQL database is not in use.
- Know the name of the new database.

To import the exported data:

Procedure

Enter:

```
mysql -u <external_mysql_username> -p<password> <db_name>
--host=<external_mysql_host> --port=<external_mysql_port> < <dump_file_name>
```

Where database_name is the name of the new database created in task 3 of the checklist.

Upgrade Planning
Proper planning will help ensure a trouble-free upgrade.

Before you begin an upgrade you should:

- Read and become familiar with this document so that you have a clear understanding of what the upgrade requires.
- Review upgrade scenarios to determine which scenario you want to use.
- Review and record system configuration information.
- Review and record performance and tuning information.

Upgrade Planning Checklist: To assist you with your upgrade planning, review the following planning checklist:

#	Upgrade Planning Checklist	Your Notes
1	Read through this entire document so that you have a clear understanding of what the upgrade requires.	
2	Download and review the following information from the Sterling B2B Integrator documentation library. • *System Requirements* - With each release, IBM introduces leading edge technology to improve and enhance its software. Review the *System Requirements* to confirm that your system and databases meet the requirements for this release. • *Release Notes* - Review the release notes to obtain information about issues and resolutions which have been identified for this release. • *What's New in this Release* - Review this guide to find out about new features and functionality provided in this release. • *Installation and Upgrade Information* - Lists the installation and upgrade documents available for this version of Sterling B2B Integrator.	
3	**CAUTION:** **Before upgrading to the latest product version, contact your sales representative to verify that it includes all of your current functionality. Depending on the timing, even though it's in a higher version that the one you have installed, a particular mod release or fix pack might not include all the functionality in your current version or fix pack.**	
4	Collect information on third-party libraries used for adapter configurations that were added to your current release. You will need to add each of these libraries to the upgraded system.	
5	Locate any configuration file changes for JDBC adapter or Lightweight JDBC adapter in your current release. You will need to copy these changes to the upgraded system.	
6	Record your performance tuning configuration. You will need to restore these settings after the system has been upgraded.	

#	Upgrade Planning Checklist	Your Notes
7	Review and note the adapters, business processes, and other configurations in your current release. This information will help you identify the need for updating transport messages, third-party adapters, or configurations to adapters, such as File System or Command Line adapters.	
8	Determine if you have edited any of the property files (.properties or .properties.in). The upgrade process overwrites these property files, unless these changes were made using the customer_overrides.properties file. Your previous property file edits might not be applicable this version of the software.	
9	Determine if you edited any of the following cdinterop files: • cdinterop-proxy-records.properties • cdinterop-spoe-auth.properties • cdinterop-spoe-policy.properties • cdinterop-user-records.properties You must back them up before upgrading. The cdinterop files do not have initialization (*.in) files. After the upgrade, use the backup version of the files in your upgraded installation.	
10	Determine if you have LDAP (Lightweight Directory Access Protocol) configuration information in the security.properties file. This information will automatically be moved to the authentication_policy.properties file.	
11	Determine whether Sterling B2B Integrator is using an application server (JBoss™, WebLogic® or WebSphere®). Sterling B2B Integrator does not require an application server for installation or at runtime. Sterling B2B Integrator supports integration with JBoss and WebLogic during the installation. You can also integrate with WebSphere, JBoss, or WebLogic by using the Sterling B2B Integrator EJB Adapter. This does not represent a WebLogic server for deploying the Application Console.	
12	If you use a File System as your document storage method, determine and record the path to the File System. You will need the File System path structure so that after the upgrade, you can copy/mount the documents to the new installation directory. The directory structure (path to the File System) must be the same in the current and in the upgraded system.	
13	Review the EDI Sequence Check Queue to ensure that no interchanges are in the queue. The EDI Sequence Check Queue is used for X12 and EDIFACT sequence and duplicate checking.	

#	Upgrade Planning Checklist	Your Notes
14	Determine if you have any JVM Containers configured. If yes, you will have to reconfigure the JVM containers after you have upgraded the software.	

Prepare Your System for the Upgrade

To help ensure a trouble-free upgrade, be sure to prepare your system before beginning the upgrade.

Before you begin the upgrade :

- Complete all Pre-Upgrade Checklists.
- Verify that your system meets all system requirements.
- Obtain the upgrade media.
- Create a process output log (optional).
- (Microsoft SQL Server only) Configure the snapshot feature (optional).
- (DB2 only) Upgrade DB2 to version 10.1 or 10.5, if needed.

Pre-Upgrade System Checklist:

Use the Pre-Upgrade System Checklist to help ensure that your system is ready for upgrading and reduce the chance of errors or other problems during upgrade.

Before you begin an upgrade:

#	Pre-Upgrade System Checklist	Your Notes
1	Use the system requirements to verify that your system hardware and software meet the requirements specified for this release. Verify you have the correct: - Patches required by Java™ for the operation system - Version of the JDK - JDK Patches - Absolute path to JDK and patches - Database must match the version listed in the requirements If any of the above requirements are not met, the installation will fail and print/log a report of all items that were non-compliant. Ensure that you have the correct license file and JCE file. **Important:** Do not remove the existing license file or JCE file from your system. The files specified by the `LICENSE_FILE_PATH` and `JCE_DIST_FILE` parameters in the sandbox.cfg file must be present during the upgrade, or the upgrade will fail.	
2	For systems with multiple IP addresses, verify that the IP address on which Sterling B2B Integrator resides is accessible by any client computer that is running a browser interface. If you do not verify the IP addresses, your system may not operate properly after installing Sterling B2B Integrator.	
3	If you are using a non-English environment, confirm that you are using the appropriate character set.	
4	Verify the file system has adequate free disk space.	

#	Pre-Upgrade System Checklist	Your Notes
5	Obtain the upgrade media. It is a best practice to check the Product Updates and Downloads site to ensure you have the latest version of the media.	
6	Backup your Sterling B2B Integrator installation directory and the database. If there are problems with your upgraded system, the only way to ensure that you can roll-back to your previous version is to back up Sterling B2B Integrator and the database.	
7	Archive your data. Archived data can only be restored from the same version of Sterling B2B Integrator from which it was archived. If you need to restore archived data that was archived prior to performing the upgrade, then you must have a running instance of Sterling B2B Integrator that matches the version from which the archive was taken.	
8	Purge any unneeded data.	
9	Export any business objects that can not be upgraded. Including business processes, service configurations, trading partners, and maps. The exported business object can be imported into the upgraded system if you need them.	
10	Create a process output log.	
11	Disable the virus protection software on the server. If the virus protection software is enabled, the upgrade will fail.	

Pre-Upgrade Database Checklist: Before you begin an installation, you need to:

#	System Verification Tasks	Your Notes
	If required, copy your Microsoft SQL Server Database to a supported version. This is an optional procedure, and it is the customer's responsibility to perform it. (IBM Customer Support can not help with this procedure.)	
	If you are using Oracle 8i with Sterling B2B Integrator 4.0, upgrade to Oracle 9i before upgrading to this version of Sterling B2B Integrator.	

#	System Verification Tasks	Your Notes
	If you plan to import an Oracle 9 or Oracle 10 database, while upgrading to this version of Sterling B2B Integrator, you must import the database without the indexes. For example, if you are using the Oracle import (imp) tool, you should use the INDEXES=N option. If you attempt upgrading to this versin of Sterling B2B Integrator with indexes turned on, the upgrade will fail. If you had created any custom indexes in Oracle database, add them after performing the upgrade as they are not imported.	

Pre-Upgrade Operating System Verification Checklist:

Before you begin the upgrade, you need to verify your operating system configuration.

For the Operating System	Operating System Configuration Checklist	Your Notes

HP-UX Operating System	Verify these settings:
	• Verify kernel parameters and establish the following minimum settings by running the **kctune** command:
	  – kctune max_thread_proc 1024
	  – kctune maxdsiz 2147483648
	  – kctune maxdsiz_64bit 8589934592
	  – kctune maxssiz 369098752
	  – kctune maxssiz_64bit 536870912
	• Run ulimit utility, verify, and establish the following minimum settings:
	  – ulimit -d = 2097152 (in kilobytes) or higher
	  – ulimit -s = 360448 (in kilobytes) or higher	

For the Operating System	Operating System Configuration Checklist	Your Notes

AIX Operating System	You must specify the name of the installation directory name. The installation process creates the directory and beneath it, a directory called "install".
	
	 To ensure that /*install_dir*/install has the necessary permissions, AIX users must run the following command on the parent directory of /*install_dir*/install before installation:
	
	 `chmod -R a-s <absolute path>/install_dir_parent`
	
	 where *install_dir_parent* is the directory in which /*install_dir*/install will be created.
	
	 For example, to specify
	
	 `AIX_1/applications/test1/my_install` as your installation directory, you could run the command from the AIX_1/applications directory (directly above the test1 directory):
	
	 `chmod -R a-s test1`
	
	 or from another location on the file system:
	
	 `chmod -R a-s /AIX_1/applications/test1`
	
	 This ensures that when the *my_install* directory is created during installation, it inherits the correct permissions from test1.	

Solaris Operating System	Set the following entries in the /etc/security/limits file:
	
	 `    nofiles = 4096`
	 `    set rlim_fd_max=4096 (limit is 65535) - hard limit`
	 `    set rlim_fd_cur=4096 - soft limit`
	
	 For **nofiles**, the value shown is an example. The possible values are unlimited, so the number for **nofiles** can be much larger. Revise the value as appropriate for your business needs.
	 • To make the setting effective as the hard limit, reboot the server or run the following command:
	 `kill -1 inetd`
	 • To make the setting effective as the soft limit, use the parent shell configuration (for example, .profile). Then, reboot the server.	

Linux Operating System	You need to disable SELinux by enter the following: `/etc/sysconfig/selinux: SELINUX=disabled` Ensure that /etc/hosts has short-names first for all entries. For example, 127.0.0.1localhostlocalhost.localdomain If the base locale is English, verify: • that the LANG variable is en_US • LANG variable is exported	

For the Operating System	Operating System Configuration Checklist	Your Notes

RedHat Enterprise Linux Operating System	Make the following system changes:
	
	• If the base locale for the system is English, edit the /etc/sysconfig/i18n file by changing the SUPPORTED variable from en_US.utf8 to en_US. You can also allow multiple support using the following format: en_US.utf8:en_US
	
	• Save and close the /etc/sysconfig/i18n file. Edit the /etc/security/limits.conf file by adding the following lines:
	  – * hard nofile 8196
	  – * soft nofile 4096
	  – * hard memlock 3000000
	  – * soft memlock 3000000
	  – * hard nproc 16000
	  – * soft nproc 16000
	  – * hard stack 512000
	  – * soft stack 512000
	  This updates the system ulimits.
	
	  For **nofile**, the values shown are examples. The possible values are unlimited, so the numbers for **hard nofile** and **soft nofile** can be much larger. Revise these values as appropriate for your business needs.
	
	• Save and close the /etc/security/limits.conf file.
	
	• Reboot the system.
	
	IBM Installation Manager in UI mode may fail to start on an RHEL 6.1 or higher x86_64 (64-bit) OS because Installation Manager is a 32-bit application and is dependent on some of the 32-bit libraries.
	
	For information on installing the required 32-bit OS libraries, refer to the IBM Support Website (https://www-304.ibm.com/support/docview.wss?uid=swg21459143)
	
	CAUTION:
	Due to a known issue with the IBM JDK on RHEL 6.1 or higher, a performance degradation might be seen in comparison to previous RHEL releases. To avoid this issue, disable the CFS on RHEL 6.1 or higher.
	
	To disable CFS:
	• **Log in as root**
	• **Edit /etc/sysctl.conf and add "kernel.sched_compat_yield = 1"**
	• **Reboot the system**
	
	For more information go to the IBM SDK and Runtime Environment Java Technology Edition Version 6 Information Center and search for *known limitations on linux*.	

For the Operating System	Operating System Configuration Checklist	Your Notes
SUSE Linux Operating System	Make the following system changes: • If the base locale for the system is English, edit the /etc/sysconfig/i18n file by changing the SUPPORTED variable from en_US.utf8 to en_US. You can also allow multiple support using the following format: en_US.utf8:en_US • Save and close the /etc/sysconfig/i18n file. Edit the /etc/security/limits.conf file by adding the following lines: – * hard nofile 8196 – * soft nofile 4096 – * hard memlock 3000000 – * soft memlock 3000000 – * hard nproc 16000 – * soft nproc 16000 – * hard stack 512000 – * soft stack 512000 This updates the system ulimits. For **nofile**, the values shown are examples. The possible values are unlimited, so the numbers for **hard nofile** and **soft nofile** can be much larger. Revise these values as appropriate for your business needs. • Save and close the /etc/security/limits.conf file. • Reboot the system.	

Verification of the system requirements:

Before you begin the installation, verify that your system meets the hardware and software requirements that are specified for this release.

The hardware requirements that are listed in the *System Requirements* are the minimum requirements. Your system requirements might exceed these requirements if you are running other applications on the same machine as Sterling B2B Integrator.

The installation strictly enforces the following system requirements:
• Operating system version must match requirement exactly.
• The minimum patch level for the operating system is enforced, but you can apply higher patch levels.
• JDK version must match requirement exactly.
• The disk space is a minimum for the installation. The system must be separately sized to handle whatever load is going to be put on the system.
• Database version must match exactly.
• JDBC driver version supports exact matches and wildcard matches.

If any of these requirements are not met, the installation fails. If the installation fails, review the installation log for a list of non-compliant items.

Upgrading your JDK (Windows and UNIX):

Sometimes you need to upgrade your JDK version to support a new version of Sterling B2B Integrator.

About this task

If you have V5.2.4.1 or higher installed, you can use the **upgradeJDK** script to upgrade your version of the JDK. See *bin Directory Files* for more information.

If you have V5.2.4.0 or lower installed, follow the steps below to upgrade your JDK.

Procedure
1. Download the new JCE file. For example, the `UnrestrictedPolicy.zip` policy file for the IBM JDK.
2. Back up the existing JDK in `<Install Dir>`/jdk. Change the folder name to `jdk_back`)
3. Copy the new IBM JDK (1.7.0) folder to the installation Directory. Directory Name should be `jdk`)
4. Copy all the jars present in `<Install Dir >`jdk_back\jre\lib\ext to `<install Dir>`jdk\jre\lib\ext directory.
5. If your installation of V5.2.4 or lower was built using the Oracle (SUN) JDK, continue to the next step. Otherwise skip to step 6.
   a. Edit the `sandbox.cfg` property file.
   b. Set JCE_DIST_FILE=`<New Path of Supported JCE File>`. For example, `JCE_DIST_FILE=D\:\\IBM\\unrestrictedpolicyfiles.zip`.
   c. Back up the `local_policy.jar` and `US_export_policy.jar` files present in `<Install Dir>`jdk\jre\lib\security.
   d. Unzip the new JCE file. For example, `Unrestrictedpolicyfiles.zip` file. Copy `local_policy.jar` and `US_export_policy.jar` to `<Install Dir>`jdk\jre\lib\security.
6. Run updateJavaSecurity.cmd `<path_to_new_jdk><Install Dir>`/jdk.
7. Verify that security providers have been updated in `<Install Dir>`\jdk\jre\lib\security\java.security.
8. Follow the Upgrade Guide instructions for your upgrade scenario.

Obtain Upgrade Media:
About this task

Before you upgrade, ensure that you have the latest version of the upgrade media from the Passport Advantage online site or have downloaded the fix pack from Fix Central..

For the latest version and for online support, go to: http://www.ibm.com/software/howtobuy/passportadvantage/pao_customers.htm

Note: For V5.2.6, the fix pack download used for upgrading from V5.2.x to V5.2.6 is very large. It includes the new functionality for Global Mailbox. You must download the full fix pack file to upgrade to V5.2.6 by installing a fix pack even if you do not plan to install Global Mailbox.

Create Process Output Log:

About this task

A log of process activity during the upgrade will help if troubleshooting is required. Output is automatically logged to the upgrade log files (PreInstallSi.log and InstallSi.log). Use this procedure to generate a separate output log for each process you want to log.

To create a process output log:

Procedure

1. From any directory, run the script command to record the processes, ensuring that you have created and specified the name of the file in which to save the process output.

    For example, to start recording output to a file named processoutput.log, type script processoutput.log at the command line. The processoutput.log file will be created in the directory where you ran the script command.

2. After the upgrade is complete, enter exit at the command line to stop recording.

3. You can now retrieve the file containing the process output.

    The following example shows a session after starting the script command, specifying the output to be saved to the file named listing.log, and typing exit to stop the script command from running:

```
[2]%script listing.log
    Script started, file is listing.log
    [3]%ls
    Custard.Recipe FavoriteRecipes Curry.Recipe
    VindalooCurry.Recipe Jelly.Recipe
    [4]%exit
     Script done, file is listing.log
```

Configuring the snapshot feature for Microsoft SQL Server:

The snapshot feature in Microsoft SQL Server allows you to view a read-only copy of the database even when it is locked. Configuring the snapshot feature can also reduce deadlocks. To enable the snap shot feature, enter the following command:
ALTER DATABASE db_name SET READ_COMMITTED_SNAPSHOT ON;

Upgrading DB2 to version 10.1 or 10.5:

To upgrade from DB2 9.5 or 9.7 to 10.1 or 10.5, you must make configuration changes.

Procedure

1. Complete the steps in the following table that pertain to your version of Sterling B2B Integrator before you proceed to step 2.

    Important: Back up all files before you change any settings.

If you are upgrading from ...	Do the following steps:
Sterling B2B Integrator 5.1.x	Upgrade Sterling B2B Integrator to V5.2.6 and point to your DB2 9.5 or 9.7 database
Sterling B2B Integrator 5.2.x	Upgrade your 5.2.x installation to V5.2.6

2. Copy your DB2 9.5 or 9.7 database content to DB2 10.1 or 10.5.

3. Take a backup of the database driver located at `/install_dir/dbjar/jdbc/DB2/` and then replace it with the DB2 10.1 or 10.5 version.

4. Update the following `sandbox.cfg` file fields with your environment-specific parameters:

```
DB_PASS=
DB_SCHEMA_OWNER=
DB_DRIVERS_VERSION=
YANTRA_DB_PORT=
DB_DATA=
DB_HOST=
YANTRA_DB_USER=
DB_PORT=
YANTRA_DB_PASS=
YANTRA_DB_DATA=
YANTRA_DB_HOST=
DB_DRIVERS=
DB_USER=

DB2_PORT=
DB2_USER=
DB2_PASS=
DB2_DATA=
DB2_HOST=
```

5. Edit the following in the `activemq.xml` file:

   `activemq.xml: <value>jdbc:db2//DB_HOST:DB_PORT/DB_DATA</value>`

6. Run the `setupfiles` script.

7. Run the `deployer` script.

8. Start Sterling B2B Integrator.

Information Gathering Checklist

Information Gathering Checklist for Upgrade (UNIX/Linux Non-Cluster): Before you begin the upgrade, you should review the information in the Information Gathering Checklist. The checklist contains all of the information that you will need to have while running the upgrade scripts. Supporting information and details are included at the end of this chapter.

The checklist contains:

* Brief descriptions for tasks (detailed procedures are provided after the checklist)
* Information you need to gather to prior the starting the upgrade

You may want to make a copy of the following checklist and use it to record the information you collect.

#	Information Gathering Checklist for Upgrade	Your Notes
1	Review your IBM contract to determine what software you have licensed. You need to know this *License Information* so that you can select the correct components/features to upgrade.	
2	Determine which upgrade method you are going to use: • IBM Installation Manager (Graphical User Interface) • Silent Installation	

#	Information Gathering Checklist for Upgrade	Your Notes
3	Determine if you are going to run the pre-upgrade checks during the upgrade.	
4	Decide which type of security certificates you will use: • The default self-signed SSL (Secure Sockets Layer) certificate that is automatically installed. • A Certificate Authority-related certificate that you install before installing the software.	
5	If you are using an Oracle, Microsoft SQL Server, or DB2 database, decide if you are going to manually or automatically apply Database Definition Language (DDL) Statements (schema) to the database.	
6	If you are using an Oracle 11.1 database, you must set it up for native compilation by allocating space and by setting the plsql_native_library_dir parameter.	
7	Determine if the database password needs to be encrypted.	
8	Record the Hostname on which you plan to install the software.	
9	Determine if you are going to use FIPS (Federal Information Processing Standards) mode.	
10	Record the Directory Name where you plan to install the software.	
11	Record the Login to host machine.	
12	Record the Password to the host machine.	
13	Record the path to the JDBC drivers.	
14	Record the path to the installation wizard and file name.	
15	Record the path to JDK.	
16	Record the path to JCE file.	
17	Record the Host IP address.	
18	Record the Initial Port Number.	
19	Record the System passphase.	
20	Record the Administrative e-mail address to which system alert messages are sent.	
21	Record the Database vendor name.	
22	Record the Database user name.	
23	Record the Database password.	
24	Record the Database (catalog) name.	
25	Record the Database host name.	
26	For Oracle, Microsoft SQL Server, MySQL, or DB2, record the Path and file name for the JDBC Driver.	

Supporting Information and Detailed Procedures:

Pre-Upgrade Checks: Pre-upgrade check reviews Oracle, SQL Server, and DB2 database environments prior to starting the upgrade. This is an optional installation feature which looks for common upgrade errors. The pre-upgrade checks ensure:
- SI_VERSION table exists
- Database character set is correct for Oracle and DB2
- Schedule start times are not later than the end times
- Passphrase entered matches the existing passphrase in the database
- Database implementation for Oracle Long Raw and BLOB
- User has permission to perform the upgrade
- Collation settings are validated for MS SQL
- OBJECT_NAME in table SCI_ENTITY is no longer than 100 characters
- Default schema you identified during upgrade matches the existing database

If any of these items are not validated, the upgrade fails. You are provided with an error message and must correct the situations and then restart the upgrade.

License information:

A separate license is required for each Sterling B2B Integrator feature that you purchased. During installation, you must choose the license files according to what you purchased. Product licenses do not require an activation key.

IBM assumes customers will only install and use the products they purchased. IBM reserves the right to inspect installs for compliance at any time.

After the installation finishes, if you determine that you need to modify licenses files, see "License modifications" on page 58.

Product Licenses for Sterling B2B Integrator

Sterling B2B Integrator Standard and Enterprise Edition includes:
- MESA Studio
- eInvoicing
- Report Services
- all services and adapters not listed below

Sterling B2B Integrator Standard and Enterprise Financial Edition includes everything listed above plus:
- CHIPS
- SWIFTNet
- NACHA ACH CTX adapter
- FEDWIRE
- Fin Serv XML standard
- FIPS Mode
- Image Cash Letter service
- EBICS

Security certificates:

You can choose between different security certificates before you install Sterling B2B Integrator.

Before you begin the installation, you must decide which of the following security certificates to use:
- The default self-signed SSL (Secure Sockets Layer) certificate that is automatically generated by the installation.
- A Certificate Authority-related certificate that you generate before you install the software.

If you install with the default SSL certificate, but you later want to switch to a CA-related certificate, you can change the certificate with the `sslCert` property in the `noapp.properties_platform_ifcresources_ext.in` file.

UNIX accounts:

In a UNIX or Linux environment, create one UNIX administrative account on the host server for all of the installations.

For example, if you want to create a test environment and a production environment, create one UNIX account on the host server. For more information about creating UNIX accounts, see your operating system documentation.

Port numbers:

During installation, you are prompted to specify the initial port number.

Use the following guidelines for port numbers:
- A range of 200 consecutive open ports (1025 - 65535) is required for this installation.

  Important: Because of RMI, on occasion, a port number outside the range can be assigned.
- The initial port number represents the beginning port number in the range.
- Make sure that port numbers in the port range are not used by any other applications on your system.

After your installation, refer to the `/install_dir/install/properties/sandbox.cfg` file for all of the port assignments.

Database Definition Language (DDL) statements:

When you install Sterling B2B Integrator, you can manually apply Database Definition Language (DDL) statements to your database tables instead of requiring the installation process to do it directly.

This feature increases database security by reducing the database permissions of the Sterling B2B Integrator database user. The rights to database objects can be reserved for a secure user like a customer database administrator (DBA). A business can require that only a DBA with the proper permissions can make database changes.

Upgrade the Software

General UNIX/Linux Upgrade Information:

CAUTION:
Sterling B2B Integrator should be installed behind a company firewall for security purposes. See the Perimeter Server and Security topics in the Sterling B2B Integrator documentation library for more information on secure deployment options.

Use one of the following methods to upgrade your system:
- Upgrade using the IBM Installation Manager (Graphical User Interface)
- Upgrade using the Silent Installation

General Upgrade Guidelines

The following are some general guidelines:
- Do not create the new upgrade directory manually before the start of the upgrade. If you create the installation directory before you begin, the upgrade will fail. The directory name provided during the upgrade process is used to create the new installation directory.
- The server on which you are installing must have adequate free disk space.
- If you are on Linux, do not use any soft/symbolic links in the path to the installation package file.
- *install_dir* refers to the installation directory where the new software will be installed. Do not use any pre-existing directory name or an old version of the Sterling B2B Integrator installation directory. If you do, you could inadvertently overwrite the existing installation.
- *parent_install* is the directory one level above the *install_dir* directory.
- Ensure that the *parent_install* directory has the proper read/write permissions.
- If you are using FTP to copy the files, verify that your session is set to binary mode.
- If you are using AIX with the DB2 database, the directory path cannot be longer than 108 bytes.
- The directory path to SI_*<build_number>*.jar cannot include any spaces.
- The installation creates subsequent ports based on the initial port number. For all of the port assignments, see the */install_dir*/install/properties/sandbox.cfg file.
- If you are installing Sterling B2B Integrator on VMware, provide the IP address of the virtual machine, not the IP address of the VMware host. For example, if 10.251.124.160 is the IP address of the VMware host and 10.251.124.156 is the IP address of the Windows 2003 server it is hosting, you should use 10.251.124.156 as the correct IP address to install Sterling B2B Integrator.
- If you are running the upgrade on an active installation of Sterling B2B Integrator, you will need to run the soft stop command to gracefully stop traffic. For more information on performing a soft stop, see the Soft Stop documentation in the System Administration Guide on the Sterling B2B Integrator 5.2 Information Center.

General IBM Installation Manager information:

IBM Installation Manager V1.8.2 is required to install Sterling B2B Integrator on all supported platforms.

Installation Manager is a Java based multiplatform installation application and provides a consistent approach across various platforms. It does not rely on platform-specific installation technology or mechanism.

Installation Manager uses the local Sterling B2B Integrator offering repositories to install or update Sterling B2B Integrator and its add-on features. It determines the packages that must be installed and displays them including the products, fix packs, and interim fixes. It checks that all prerequisites and interdependencies are met before installing the selected product package and feature sets.

Important: The **Uninstall** option only unregisters Sterling B2B Integrator from Installation Manager. The uninstall procedure as described in the related sections must be performed to completely uninstall Sterling B2B Integrator.

Installation Manager must be installed on each computer on which Sterling B2B Integrator is being installed. If you already have Installation Manager installed on your computer for use with other IBM applications, it can be used with installing Sterling B2B Integrator as long as it's the correct version. If you do not have Installation Manager installed, it is provided as part of the Sterling B2B Integrator installation media.

Supported bit-versions

A 64-bit version of IBM Installation Manager V 1.8.2 is provided with the Sterling B2B Integrator installation package. However, you can also install with a 32-bit version of Installation Manager.

Before you start the installation, consider the following options:
* If you are a new customer, use the version of Installation Manager that is provided with the Sterling B2B Integrator installation package and install Sterling B2B Integrator.
* If you have an earlier version of Installation Manager, you can update it to V1.8.2 using the Installation Manager that is provided with the installation package, then install Sterling B2B Integrator .
* If you are a current customer who did not use Installation Manager earlier, install the version of Installation Manager that is provided with the installation package, then upgrade your Sterling B2B Integrator installation.
* If you have a 32-bit Installation Manager installed, you must download the 32-bit Installation Manager V1.8.2 from Fix Central or IBM Passport Advantage, upgrade it, then proceed with the installation of Sterling B2B Integrator. Ensure you have the required libraries that support screen presentation of the text.

Checking for updates

To check for Installation Manager updates, select **Search for Installation Manager updates** on the **File > Preferences > Updates** page. When the check box is selected, Installation Manager searches for updates when any one of the following pages are opened from the Installation Manager start page:
* Install Packages
* Modify Packages
* Update Packages

Installation Manager also searches for updates when you click the Check for Other Versions, Fixes, and Extensions button on the Install Packages page.

Starting Installation Manager

You should start the Installation Manager (and also install Sterling B2B Integrator) as a non-administrator user.

How you start Installation Manager depends on whether you are using the Installation Manager agent that is provided with Sterling B2B Integrator or if you have an Installation Manager instance that is installed on your system. It also depends on whether you have 32-bit or 64-bit Installation Manager.

Open a command prompt and do one of the following tasks to start the Installation Manager in GUI mode:

* Go to the `IM_<operating_system>` directory and type **./userinst** or **userinst.exe** (Windows) for the following scenario:
  - If you do not have Installation Manager installed and are using the Installation Manager agent that is provided with the Sterling B2B Integrator media.
  - If you have a 64-bit Installation Manager installed.
  - If you have Installation Manager installed on a platform that has only one download available for Installation Manager. For example, AIX, Solaris, HP, zLinux.
* Go to `<installation directory>/Installation Manager/eclipse` (for Windows system, replace / with \) and type **./IBMIM** or **IBMIM.exe** if you have 32-bit Installation Manager installed on a Linux or Windows system.

For information on starting Installation Manager in command mode for silent installation, see the Installing or updating with a response file.

For information on starting Installation Manager in command mode to record a response file, see Recording a response file.

Additional heap memory parameters

The heap memory parameters specify the amount of memory Installation Manager can use during the installation process. The heap memory pool sizes that are used by Installation Manager are hardcoded defaults. If these defaults are not sufficient for your environment, you can specify different values by adding parameters to the Installation Manager`config.ini` file.

Important: These additional parameters are required only if you are experiencing `Out Of Memory` errors during the installation process.

The following parameters can be added:
* `memoryMin=user.sb.INSTALL_<OS>_INIT_HEAP.<amount_of_memory>`
* `memoryMax=user.sb.INSTALL_<OS>_MAX_HEAP.<amount_of_memory>`

Where *<OS>* is your operating system and *<amount_of_memory>* is the specified amount of memory.

Operating System	Parameter	Example Entry
Sun-Solaris	Initial Heap Size **INSTALL_SUN_INIT_HEAP**	memoryMin=user.sb.INSTALL_SUN_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_SUN_MAX_HEAP**	memoryMax=user.sb.INSTALL_SUN_MAX_HEAP.3072m
Linux	Initial Heap Size **INSTALL_LINUX_INIT_HEAP**	memoryMin=user.sb.INSTALL_LINUX_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_LINUX_MAX_HEAP**	memoryMax=user.sb.INSTALL_LINUX_MAX_HEAP.3072m
AIX	Initial Heap Size **INSTALL_AIX_INIT_HEAP**	memoryMin=user.sb.INSTALL_AIX_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_AIX_MAX_HEAP**	memoryMax=user.sb.INSTALL_AIX_MAX_HEAP.3072m
HP-UX	Initial Heap Size **INSTALL_HPUX_INIT_HEAP**	memoryMin=user.sb.INSTALL_HPUX_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_HPUX_MAX_HEAP**	memoryMax=user.sb.INSTALL_HPUX_MAX_HEAP.3072m
Windows	Initial Heap Size **INSTALL_WIN_INIT_HEAP**	memoryMin=user.sb.INSTALL_WIN_INIT_HEAP.3072m
	Maximum Heap Size **INSTALL_WIN_MAX_HEAP**	memoryMax=user.sb.INSTALL_WIN_MAX_HEAP.3072m

Guidelines for IPv6 addresses:

The use of IPv6 addresses in an installation of Sterling B2B Integrator requires certain guidelines.

Before you use an IPv6 address during an installation, see the *IPv6 Capabilities* section in *System Requirements*.

Consider the following IPv6 address information when you plan the installation:
- If you use an IPv6 address, use a fully qualified address that includes square brackets around the address, and a zero (0) between colons where there are no other numbers. For example, use [fe80:0:0:0:213:72ff:fe3c:21bf] instead of fe80::213:72ff:fe3c:21bf.
- If you are installing with an IPv6 address, comment out the host name mapping to the IPv4 address and retain the mapping to the IPv6 address in the host file in the /etc/sysconfig/networking/profiles/default/hosts directory.
- You must install with a host name, not an IPv6 address, otherwise the Lightweight JDBC adapter and Graphical Process Modeler (GPM) do not work.
- If you are using an Oracle database, do not use an IPv6 address for the host name.

- If you are using an IPv6 address and are going to configure Sterling B2B Integrator as a dual stack host, after you complete the installation, you need to add the IPv6 address (as the `admin_host.3` property) to the `noapp.properties_platform_ifcresources_ext .in` file.

Installing or updating with a response file (V5.2.6 or later):

You can install or update (apply fix pack or interim fix) Sterling B2B Integrator with silent mode by using the sample response files or converting your existing response file to the required format.

Upgrading in a UNIX/Linux non-cluster environment with the IBM Installation Manager in GUI mode:

You can upgrade Sterling B2B Integrator in a UNIX/Linux non-cluster environment with the IBM Installation Manager in a graphical user interface (GUI) mode. Use the X Window System for this installation.

Before you begin
- Ensure that your system is ready for the upgrade. See "Prepare Your System for the Upgrade" on page 332.

  Attention: Failure to properly prepare your system can cause the upgrade to fail.
- Complete the "Information Gathering Checklist for Upgrade (UNIX/Linux Non-Cluster)" on page 536.
- Install an X Window windowing system (for example Cygwin or Xming) for UNIX/Linux operating systems on your PC.
- Install and configure a Telnet client (for example PuTTY) for use with the X Window System. The following parameters must be set:
  - X-11 forwarding must be enabled.
  - X display location must be set to localhost.
- If you are using the Standards Processing Engine (SPE) application with Sterling B2B Integrator, you must upgrade SPE before you upgrade Sterling B2B Integrator.
- If you are using the EBICS Banking Server application with Sterling B2B Integrator, the data encryption for storage within the installation location is not supported.
- Set the ulimit and language as follows:
  - ulimit -n 4096
  - ulimit -u 16000
  - export LANG=en_US

About this task

This upgrade changes the administrative password to the default password. After the upgrade, change the password back to the administrative password to minimize security risks. This password is the Admin password for logging in to the user interface (/dashboard or /ws).

Important: Following is a list of changes related to installing or upgrading to Sterling B2B Integrator V5.2.6:
- You can install and upgrade through the user interface or silent installation mode (response files). Console mode installation and upgrade is not supported.

- Sterling B2B Integrator JAR file is included in the repository. Therefore it is not required to manually select the JAR file when installing or upgrading.
- You must use Installation Manager V1.8.2 to install or upgrade Sterling B2B Integrator. `InstallService` is disabled, and cannot be used. You can use `InstallService`, only for a specific scenario related to Sterling File Gateway. For more information, see step 14.

Procedure

1. Start the X Window System client on your PC.

   Minimize the window after it opens.

2. Open a console window and log on to the UNIX/Linux host server where Sterling B2B Integrator is upgraded.

3. From the installation media, copy the compressed update package to a UNIX/Linux directory on the host where Sterling B2B Integrator is installed.

4. Decompress the upgrade package on the host server.

5. Open the `InstallationManager` folder in the directory structure that is created when the installation package is decompressed. Several `IM_OperatingSystem.zip` files are displayed.

6. decompress the file for your operating system.
   - `IM_AIX.zip` (for AIX)
   - `IM_HPIA.zip` (for HP-UX Itanium)
   - `IM_Linux.zip` (for Linux)
   - `IM_LinuxPPC.zip` (for Linux)
   - `IM_Solaris.zip` (for Solaris)
   - `IM_Win.zip` (for Solaris)
   - `IM_zLinux.zip` (for Linux for System z)

   This action creates a new `IM_<OperatingSystem>` folder.

   Important: Installation Manager V1.8.2 is required to upgrade to Sterling B2B Integrator V5.2.6. If Installation Manager was not used to install your current Sterling B2B Integrator instance, the installation process installs the Installation Manager when you start the upgrade to Sterling B2B Integrator V5.2.6. After successful installation, restart the Installation Manager, and proceed with upgrading to Sterling B2B Integrator V5.2.6.

7. Decompress the `Common_Repo.zip` from the installation package. The action creates two new folders `b2birepo` and `gmrepo`. The `IM_OperatingSystem`, `b2birepo`, and `gmrepo` folders must be at the same level in a directory.

   Important: `gmrepo` contains the repository file required to install Global Mailbox. For information about Global Mailbox, see Global Mailbox overview.

8. Open a command prompt and do one of the following tasks to start the Installation Manager:

   a. Go to the `IM_<operating_system>` directory and type **./userinst** for the following scenarios:
      - If you do not have the Installation Manager installed and are using the Installation Manager agent provided with V5.2.6.
      - If you have a 64-bit Installation Manager installed.
      - If you have the Installation Manager installed on a platform that has only one download available for Installation Manager. For example, AIX, Solaris, HP, zLinux.

b. Go to `<installation directory>/Installation Manager/eclipse` and type `./IBMIM`, if you have 32-bit Installation Manager installed on your Linux system.

9. On the Installation Manager home page, click **Install**.

   Important: If `IM_<operating_system>` and `b2birepo` directories are not in the same directory or if you already have Installation Manager installed, then you get a message saying that there no packages to install or Installation Manager could not connect to the repositories. You must add the Sterling B2B Integrator repository files to the Installation Manager repository. For more information about adding repository files, see Repository preferences.

10. On the Install Packages screen, select **IBM Sterling B2B Integrator**. This action selects the versions also. Click **Next**.

11. Review the license agreement and select the option **I accept the terms in the license agreements** to continue.

    If you do not accept the agreement, the upgrade process is canceled.

12. Select a location for the Shared Resources directory and a location for the Installation Manager:

    a. Specify a **Shared Resources Directory**.

    b. (Optional if previously installed) Specify an **Installation Manager Directory**.

       Important: The Shared Resources directory cannot be a subdirectory of the Installation Manager installation.

       The specified Shared Resources and Installation Manager directories must be empty.

13. Choose **Create a new package group** and specify the path to Sterling B2B Integrator installation directory.

14. Select the required features to upgrade. The available options are:

    * **IBM Sterling B2B Integrator**
    * **IBM Sterling File Gateway**

      Important: If your current installation includes Sterling File Gateway, then Sterling File Gateway is also updated to V 2.2.6 when upgrading to Sterling B2B Integrator V5.2.6. If Sterling File Gateway was not installed, it is not installed when upgrading to Sterling B2B Integrator V5.2.6, when you select the **IBM Sterling File Gateway** option. In this case, to install Sterling File Gateway when upgrading, you must do one of the following tasks:

      – When upgrading Sterling B2B Integrator, if you are installing Sterling B2B Integrator to a fresh directory, and pointing to the previous database, then you can install Sterling File Gateway V2.2.6.

      – Use `InstallService` to install Sterling File Gateway. For information about installing Sterling File Gateway by using `InstallService`, see Installing Sterling File Gateway (V2.2.6 or later).

    * **FIPS Module**
    * **AS2 Edition Module**
    * **Financial Services Module**
    * **EBICS Banking Server Module**
    * **B2B Advanced Communications Integration Module**

Important: When upgrading to Sterling B2B Integrator V5.2.6, select **B2B Advanced Communications Integration Module** to install Sterling B2B Integrator bridge. Sterling B2B Integrator bridge is required for communication between Sterling B2B Integrator and B2B Advanced Communications. If you are installing Global Mailbox and Sterling B2B Integrator, then **B2B Advanced Communications Integration Module** (Sterling B2B Integrator bridge) is installed by default, because Global Mailbox uses the storage module of B2B Advanced Communications. However, you must configure the adapter containers and adapters for Sterling B2B Integrator bridge after upgrading.

Important:

Sterling B2B Integrator is selected by default. Select only the licenses and features that were defined by your IBM contract. If you are unsure which to select, the installation can proceed without a selection and complete successfully. Startup and operation of the software, however, requires one of the licenses to be selected. See "License modifications" on page 58 to apply licenses after the installation.

Features that are not part of your current Sterling B2B Integrator installation are disabled and you cannot select them when upgrading or applying a fix pack. To include them in your Sterling B2B Integrator setup, you must first upgrade to the current version, and then install them separately. If the fix pack or upgrade JAR includes updates to features that are part of your current Sterling B2B Integrator installation, the features are upgraded regardless of whether you select the them or not.

Important: If you are upgrading from a previous V5.2.x release, you must manually install the EBICS client. For more information about installing the EBICS Client manually, see the *EBICS Client User Guide.*

15. Enter the full path to your **JDK directory**.
16. Specify the configuration for the features to upgrade and click **Next**.
    - **FIPS Compliance Mode (Must enable FIPS Module)**
    - **NIST 800-131a Compliance Mode**
      - **off** (default value)
      - **strict**
    - **SPE Integration Module (Requires pre-install of SPE, WTX optional)**

      If you select the SPE option, you are prompted for the following information:
      - SPE installation directory
      - (Optional) WebSphere Transformation Extender (WTX) installation directory
      - SPE UI port

      For more information, see the documentation for the integration of Sterling B2B Integrator and SPE.
17. Enter the full path to your **JCE jar file**.
18. Enter your **Installation panel properties** information:
    a. Enter the explicit IP address for the server or use the default value of localhost.
    b. Enter the Initial Port number or use the default value of 8080.
19. Enter your **System Passphrase** information:

a. Enter a passphrase.

b. Confirm the passphrase.

20. Enter you **E-Mail Information**:

    a. Enter the email address to which you want system alert messages sent.

    b. Enter the SMTP mail server (IP address or host name) that you want to use for system alert messages and other administrative notices.

21. Specify if you want to **Enable FIPS** (Federal Information Processing Standards) mode. To enable FIPS, select the check box.

    The default is FIPS mode is disabled.

22. Select the database vendor you want to use:

    - Oracle
    - Microsoft SQL Server
    - DB2
    - MySQL

23. Select all options that apply to this installation:

Choices:	Action
This installation is for a cluster node 2 or higher (Not applicable for MySQL)	Do not select this option.
Apply database schema automatically? (Not applicable for MySQL)	If yes, no action is required. The default is to automatically apply the DDL statements. If you want to manually create the database schema, then clear the **Apply database schema automatically** check box and continue with the remaining installation steps. **Important:** After the upgrade starts, it runs for a short time and stops without error. When the upgrade stops, you must perform additional actions as given in Step 31 of this procedure.

24. Enter the **Database Information**.

    - Database user name.
    - Database password (and confirmation).
    - Database catalog name.
    - Database host name.
    - Database port.
    - (Oracle, Microsoft SQL Server, and MySQL only) Absolute path and file name for one JDBC driver file.
    - (DB2 only) Absolute paths and file names for two JDBC driver files. Use the Type-4 JDBC driver. This type of driver converts JDBC calls into the network protocol that is used directly by DB2, allowing a direct call from the system to the DB2 server.

25. Click **Add** to browse to the file location for the appropriate JDBC driver.

26. Click **Test** next to the database driver path.

    Important: The Installation Manager must successfully validate the connection to the database before you can continue with the installation. If there is a validation failure, you can view the system log to determine more information about the failure.

27. Determine what **Other options** apply to this installation. Select the applicable options:

- **Verbose install**
- **This installation is an upgrade from a prior version** - Select this option.

  Important: After you select the upgrade option, an additional option is displayed.
- **Would you like to run upgrade pre-check?** - To run the pre-check, click **Test**.

28. Specify the **Performance configuration** that applies to this installation. Select the applicable options:

- **Number of Processor Cores** - Accept the default value or enter the appropriate value.
- **Physical Memory (MB) allocated to Sterling B2B Integrator** - Accept default value or enter the appropriate value.

29. Specify if you want to generate an installation response file:

30. Review the installation package summary information. Click **Install** to continue.

    Important: If you did not select the option to the **Apply database schema automatically** field, the upgrade stops and you must perform these additional steps to complete the upgrade with manual DDL statements:

    a. Open your installation directory.

    b. Locate the `InstallSI.log` file and open it with a file editor.

    c. Search the file for these error messages:

    - `<SI_Install>/repository/scripts/EFrame_IndexAdds.sql must be applied to the database.`
    - `<SI_Install>/repository/scripts/EFrame_Sequence.sql must be applied to the database.`
    - `<SI_Install>/repository/scripts/EFrame_TableChanges.sql must be applied to the database. Exiting installation..."`

    Important: If you do not find these error messages in the log file, the installation failed because of another reason and you must resolve that error and attempt the installation again. If you did find these messages, continue with the remaining steps.

    d. Edit each `.sql` script to make changes appropriate for your database. These changes might include changing the SQL delimiter or adding tablespace options.

    e. Log in to your database as the DB schema user.

    f. Run the SQL files manually in this order:

    Important: When you are running the scripts, it is important to run the SQL scripts in the specified order.

    1) `EFrame_IndexDrops.sql`
    2) `EFrame_TableChanges.sql`
    3) `EFrame_IndexAdds.sql`
    4) `EFrame_TextIndexAdds.sql`
    5) `EFrame_Sequence.sql`
    6) `EFrame_TextIndexModify.sql`

7) `EFrame_TextIndexUpdates.sql`

8) `EFrame_TextIndexUpgrade.sql`

9) `EFrame_Static.sql`

Important: ActiveMQ uses dynamically generated table names based on the name of the installation node. Table generation is not included in these scripts, but is performed automatically during the initial start of Sterling B2B Integrator or when a new cluster node is added. Table generation might fail if security restrictions reduced the Sterling B2B Integrator database user permissions. To avoid this issue, ensure that the DBADM role permissions are enabled during the initial startup. If further issues arise, contact IBM customer support for guidance.

g. Exit from the database.

h. Open the parent directory of the *install_dir* directory.

i. Unisntall the Sterling B2B Integrator offering to clear out the Installation Manager metadata about the installation, and the delete (or rename as a backup) the Sterling B2B Integrator installation directory.

j. Restart the installation wizard and provide the same installation options that you provided before you cleared the **Apply database schema automatically** check box. If you have recorded a response file (as suggested in step 9), you can use the response file to install Sterling B2B Integrator.

The **Installation Progress** screen indicates which component of the installation is in process.

A status bar below the **Repository Information** heading displays the progress of component installation. When the installation completes, a large green circle with a check mark displays with the message `The packages are installed`. A link is provided to view the installation log file.

The installation completes automatically. When the installation is finished, the system displays a dialog box with the message `The install completed successfully.`

Installation information is in the `InstallSI.log` file.

31. Click **Finish**. The Installation Manager closes.

Check the `InstallSI.log` to verify all of the components were installed properly.

32. Determine whether you need to apply a fix pack or interim fix to the installation. For information about fix pack or interim fix installation, see "Applying a Fix Pack (V5.2.6 or later)" on page 625 and "Applying an interim fix (V5.2.6 or later)" on page 635.

Validate the Upgrade

Validate the Upgrade Checklist: As part of the upgrade, you need to run the following tests to ensure that the software upgrade was successful. Complete the following tasks:

Number	Validate Installation Task	Completed
1	Start Sterling B2B Integrator.	
2	Access Sterling B2B Integrator.	
3	Validate the Installation.	
4	Stop Sterling B2B Integrator.	

Starting Sterling B2B Integrator in a UNIX/Linux noncluster environment:

After you run the upgrade software, you can start Sterling B2B Integrator.

Before you begin

If you are starting Sterling B2B Integrator after upgrading the application from version 5.1.0.4 to 5.2.5, change the values of the following properties in the `centralops.properties` file to 600. This action prevents the **run.sh** command from timing out before Sterling B2B Integrator starts. The `centralops.properties` file is in the *install_dir*/install/properties directory.

- **OpsServer.commandTimeout**
- **PassPhrase.urlTimeout**

Procedure

1. Open the /*install_dir*/install/bin directory.
2. Enter `./run.sh`.
3. Enter your passphrase. The final startup processes run, concluding with the following message:

   Open your Web browser to http://*host:port*/dashboard

   Where *host:port* is the IP address and port number where Sterling B2B Integrator is located on your system. Depending on system load, it might take several minutes for the UI to be ready.
4. Record the URL address so that you can access Sterling B2B Integrator.

Accessing Sterling B2B Integrator:

You can access Sterling B2B Integrator through a web browser.

Procedure

1. Open a browser window and enter the address that is displayed at the end of the start.
2. On the login page, enter the default user ID and password. The default login is at an administrative level. One of your first tasks as an administrator is to change the administrative password and to register other users with other levels of permission.

Validating the installation with a sample business process:

You can validate the installation by testing a sample business process.

Procedure

1. From the **Administration Menu**, click **Business Process** > **Manager**.
2. In the **Process Name** field, type `Validation_Sample_BPML` and click **Go!**
3. Click **execution manager**.
4. Click **execute**.
5. Click **Go!** The `Status: Success` message is displayed on the upper left side of the page.

Stop Sterling B2B Integrator (Hard Stop):

About this task

A hard stop halts the system without waiting for business processes to finish. Hard stops may result in loss of data in unfinished processes.

To run a hard stop:

Procedure

1. Navigate to */install_dir*/install/bin.
2. Enter `./hardstop.sh`.
3. Enter your passphrase.

Stopping Sterling B2B Integrator (Soft Stop):

A soft stop of Sterling B2B Integrator halts the system after all the business processes finish running.

About this task

- In the user interface, click **Operations** > **System** > **Troubleshooter**and then click **Soft Stop**.
- You can soft stop Sterling B2B Integrator from the command-line interface.

For more information about the softstop user interface and command line options, see the performance management documentation.

Procedure

1. To soft stop from the command-line interface, navigate to the */install_dir*/install/bin directory.
2. Enter the following command:

   `./softstop.sh`
3. Enter your passphrase.

Post Upgrade Configuration

Post upgrade configuration checklist:

After the upgrade software finishes running, you must perform some post upgrade procedures.

Review all of the procedures in the checklist. Some procedures may not be required.

Task number	Task	Your notes
1	Upon upgrade, all default user accounts are reset to their default value. For security purposes, the system administrator should update all default user account passwords immediately after upgrade is completed. See "Changing default user account passwords" on page 40.	
2	"Determine if You Need to Apply a Fix Pack in UNIX/Linux Environment" on page 555	
3	"Disable Services" on page 366	
4	"Download of the Sterling B2B Integrator tools" on page 43	

Task number	Task	Your notes
5	"Changes to Network Interface Bindings" on page 492	
6	"Enable Business Processes" on page 367	
7	"Property files configuration in a UNIX environment" on page 183	
8	"Add cdinterop Files" on page 367	
9	"Updating the sandbox.cfg file with a new JCE file" on page 494	
10	"Review the EDI Sequence Check Queue" on page 368	
11	"Configure Document File Systems" on page 369	
12	"Add Third-Party Libraries" on page 368	
13	"Configure Services and Adapters" on page 369	
14	"Configure JDBC Adapter and Lightweight JDBC Adapter" on page 369	
15	"Configure File System Adapter and Command Line2 Adapters" on page 370	
16	"Configure Odette FTP Adapter" on page 370	
17	"Add Advanced File Transfer Tab" on page 373	
18	"Restore Performance Tuning Configuration" on page 373	
19	"Reconfigure Archive Settings" on page 373	
20	"Correct Missing Manager IDs" on page 374	
21	"Configure JVM Containers" on page 378	

Changing default user account passwords:

When you install Sterling B2B Integrator, several default user accounts are automatically created to get you started. One of the first actions you must take after installation is to update these accounts with unique passwords, because the default ones can be known by all Sterling B2B Integrator customers.

About this task

Default user account passwords are preset at installation. For security purposes, the system administrator should update all default user account passwords immediately after installation is completed.

Default user accounts are listed below in the same order as they appear in the UI under **Accounts > User Accounts > List All**. You can use this table to track the user accounts you want to update.

User Account Name	Update password
MBX_daemon	
admin (*)	
aft_user (*)	
anon	
as2_user	

User Account Name	Update password
commandlineuser	
dash_oper (*)	
dash_part (*)	
dash_prtspon (*)	
dash_sponsor (*)	
fg_architect	
fg_operator	
fg_provisioner	
fg_sysadmin (*)	
gmbx_user	
ja_turbine	
jane	
jane_doe	
joe_employee	
joe_manager	
joe_supplier	
john	
sd_buyer	
sd_supplier	
turbine	
ws_buyer	
ws_director	
ws_employee	
ws_finance	
ws_hr	
ws_manager	
ws_purchaser	
ws_supplier	

(*) denotes a super user

To change the password for a user account, perform the following tasks.

Procedure

1. Log into Sterling B2B Integrator using ID = `admin` and password = `password`.
2. Go to **Accounts > User Accounts**. Under the List section click **Go!** All default user account names are listed.
3. Click **Edit** next to the user account name you want to update the password for.
4. In the New Password and Confirm New Password fields, enter a new, secure password for this User ID.

   Note: Passwords must be at least six characters long.
5. Click **Save** and **Finish**.

What to do next

Repeat steps 3 - 5 for all user account names you want to update.

Determine if You Need to Apply a Fix Pack in UNIX/Linux Environment:

Fix packs contain cumulative fixes for a specific version of Sterling B2B Integrator. Fix packs are available from the IBM Fix Central web site.

About this task

Because each fix pack contains the fixes from previous fix packs, you only need to install the most recent fix pack.

Information about a fix pack is located in a PDF file with a similar name.

Before you install the fix pack, review the following items:
- Preserve your custom changes to system resources.
- The fix pack installation may use one or more property override files. These files will be named *propertyFile_patch*.properties. Do not alter these files.
- Property changes made directly in *.properties or *.properties.in files may be overwritten when applying the fix pack. Properties overridden using the customer_overrides.properties file are not affected. IBM recommends that you maintain property file changes using (when possible) the customer_overrides.properties file. For more information about this file, refer to the property file documentation.
- If you edited any of the cdinterop files, you must back them up before applying the fix pack. The cdinterop files do not have initialization (*.in) files. After applying the fix pack, use the backup version of the files in your upgraded installation. These files include the following files: cdinterop-proxy-records.properties; cdinterop-spoe-auth.properties; cdinterop-spoe-policy.properties; and cdinterop-user-records.properties.
- Information about the fix pack installation is automatically logged to /*install_dir*/install/logs/InstallService.log.
- If you would need to roll back a fix pack, see the *Fix Pack Changes Report*.
- When installing a fix pack, the dbVerify utility compares the list of standard indexes with those present in the database and drops the custom indexes. You should recreate the custom indexes after the installation is complete.

Disable Services:
About this task

The upgrade process enables services that might have been disabled before the upgrade. If you want to disable these services again, you must disable them in after the upgrade process.

Download of the Sterling B2B Integrator tools:

After you install Sterling B2B Integrator, you can install tools like the Map Editor and the Graphical Process Modeler (GPM).

Sterling B2B Integrator includes tools that run on a desktop or personal computer. After you install Sterling B2B Integrator, you can install the following tools:
- Map Editor and associated standards

Note: The Map Editor requires a 32-bit JDK. This JDK is not provided with the product download or media. For more information, see *System Requirements*.

- Graphical Process Modeler (GPM)
- Web Template Designer
- (If licensed) MESA Developer Studio plug-ins, including MESA Developer Studio Software Development Kit (SDK) and MESA Developer Studio Skin Editor
- (If licensed) Reporting Services, which require MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports

Attention: Conflicting IP addresses can cause problems when you download a desktop tool.

Changes to Network Interface Bindings: To increase the security of the Administrator Console User Interface, the system only binds to specific network interfaces. After installing, if the URL returns the error message **Page cannot be displayed**, you can adjust property settings to correct the problem.

Update Property File for Network Interface Binding Changes:
About this task

On the server where the system resides, edit the noapp.properties_platform_ifcresources_ext.in file.

Procedure

1. Locate the **admin_host** parameter. The default settings are: *hostname1* is the name of primary network interface, the one given highest priority by the system. *localhost* is the name of the network interface on the server where the system resides. Default entries: admin_host.1 = hostname1 and admin_host.2 = localhost
2. Correct the parameters as necessary.
3. If no interface is being displayed, edit *hostname1* so that it correctly identifies the primary network interface that accesses the system.
4. If an additional network interface needs to access the system, add an additional *admin_host* entries. For example: admin_host.3 = hostname2
5. Stop Sterling B2B Integrator.
6. Navigate to the *install_dir*.
7. Navigate to the bin directory.
8. Run the setupfiles.sh (UNIX) or setup.cmd (Windows).
9. Start Sterling B2B Integrator.

Update Dashboard for Network Interface Binding Changes:
About this task

For the Dashboard user interface, the system provides unrestricted binding to network interfaces through the perimeter server. To restrict access to the Dashboard user interface, you can adjust property settings so that only one network interface accesses the system.

On the server where the system resides, edit the perimeter.properties.in file.

Procedure

1. Locate the localmode.interface parameter. The default setting is unrestricted. Unrestricted Setting (Default) localmode.interface=*
2. To restrict access to the Dashboard, enter the network interface that you want to support. Restricted Setting localmode.interface=hostname1
3. Stop Sterling B2B Integrator.
4. Navigate to the *install_dir*.
5. Navigate to the bin directory.
6. Run the setupfiles.sh (UNIX) or setup.cmd (Windows).
7. Start Sterling B2B Integrator.

Enable Business Processes:
About this task

During the upgrade process, your customized business processes are preserved, but they may not be the default business process. Review the business processes and enable the customized versions.

Property files configuration in a UNIX environment: Property files contain properties that control the operation of Sterling B2B Integrator. For example, the REINIT_DB property in the sandbox.cfg file controls whether or not a database is initialized when you install Sterling B2B Integrator.

By modifying the values of these properties, you can customize Sterling B2B Integrator to suit your business and technical needs. Most property files are in the:
- For UNIX, /*install_dir*/install/properties directory
- For Windows, *install_dir*\install\properties directory

After installing Sterling B2B Integrator, most property files and scripts do not need any further configuration for basic operation. However, if you want to customize any specific operations, for example setting a different logging level - you will need to edit (or in some cases, create) certain property or .xml files.

Before changing any property files, refer to Working with Property Files documentation for general information about how to work with Property Files.

Areas where you might need to make specific property files changes after an installation include:
- LDAP user authentication
- Prevention of cross-site script vulnerabilities
- Logging configuration
- Process-specific property file settings

Add cdinterop Files:
About this task

During the upgrade, the cdinteropt files were replaced. Copy the customized version into the upgrade.

Updating the sandbox.cfg file with a new JCE file:

If you upgrade from Sterling B2B Integrator release 5.2.4.2 to 5.2.5 and you change the JDK from Sun to IBM, you must manually update the Java Cryptography Extension (JCE) policy file information in the sandbox.cfg file.

Procedure
1. Open the *install_dir*/install/properties directory.
2. Open the sandbox.cfg file.
3. Change the **JCE_DIST_FILE** property to the path to the JCE file that you specified during the upgrade.
4. Save and close the sandbox.cfg file.
5. Open the *install_dir*/install/bin directory.
6. Enter the setupfile.sh command to update your installation with the new **JCE_DIST_FILE** property value.

Review the EDI Sequence Check Queue:
About this task

The EDI Sequence Check Queue is used for X12 and EDIFACT sequence and duplicate checking. You can check the contents of the queue through the UI (**Trading Partner > Document Envelopes > EDI Sequence Check Queue**). Any interchanges that are in the queue will not be able to be processed after upgrade because the EDI compliance report serialized format has changed.

The EDI Post Processor displays the following error:

```
The compliance report for interchange <interchange document ID> could not be
deserialized because the format has changed. The entry for this interchange
should be manually removed from the EDI Sequence Check Queue through the UI,
and the inbound deenvelope workflow should be rerun (WF ID <wfid>).
```

If you receive this error, you should follow the instructions in the error message to correct the situation.

Configure Document File Systems:
About this task

If you use a File System as your document storage method, determine and record the path to the File System.

You will need the File System path structure so that after the upgrade, you can copy/mount the documents to the new installation directory. The directory structure (path to the File System) must be the same in the current and in the upgraded system.

Add Third-Party Libraries:
About this task

If you added third-party libraries to configure adapters for the previous release, you need to add each of the libraries again after you complete the upgrade. See the documentation for each third party adapter you use.

Configure Services and Adapters:

About this task

You may need to reconfigure services and adapters after an upgrade. During an upgrade, packages for services and adapters are reprocessed to update the service configurations.

After an upgrade, the configurations of default adapters and services are re-set to their default configurations. This includes directory paths, which are restored to their default paths. You need to reconfigure those adapters and services, which include, but are not limited to:
- All default FTP adapters
- All default SFTP adapters
- Connect:Enterprise UNIX Server Adapter
- OdetteFTP Adapter
- SAP Suite Adapter
- SWIFTNet Client Service
- SWIFTNet Server Adapter

If you modified the standard configuration for a service or adapter, you may need to reconfigure or reactivate the service or adapter following an upgrade. You may also need to reconfigure adapters that used directories or scripts in the installation directory of your previous release.

Examples of services and adapters that commonly need to be reconfigured following an upgrade include:
- FTP adapter
- System services such as the Alert service and the BP Fault Log adapter

The following adapters need special consideration following an upgrade:
- JDBC Adapter and Lightweight JDBC Adapter
- File System Adapter and Command Line2 Adapters
- Odette FTP Adapter

**Configure JDBC Adapter and Lightweight JDBC Adapter:
About this task**

Storage locations of the database pool properties that allow the JDBC adapter and the Lightweight JDBC adapter to communicate with your external database have been streamlined. The poolManager.properties file has been eliminated and some of its pool properties are now included in the jdbc.properties file, along with some new properties. You will need to manually update your existing jdbc_customer.properties.in file to add some new database pool properties. If you do not have a jdbc_customer.properties.in file, create one since customer.properties are not affected by product updates.

**Configure File System Adapter and Command Line2 Adapters:
About this task**

You must configure your File System and Command Line2 adapters before you remove the previous release directory. Reconfigure any File System and Command Line2 adapters that were configured to use directories or scripts in the installation directory for the previous release. Ensure that you create new directories and save

scripts outside of the current installation directory and edit each configuration to use the appropriate directories and scripts.

Consider the following:

- If you are using the Command Line2 adapter and have located the CLA2Client.jar file anywhere other than the default location, you must replace it with the new version. For information about the default location and how to start the Command Line2 adapter, see the *Command Line2 adapter*.

- If you are upgrading to this version of Sterling B2B Integrator from a version lower than 4.0.1 and are using the Command Line2 adapter, you must update the version of the CLA2Client.jar file with the CLA2Client.jar located in the */install_dir*/install/client/cmdline2 UNIX directory or in the *install_dir*\install\client\cmdline2 for Windows. If you installed the CLA2Client.jar file anywhere other than the default location, you must replace each copy of the file with the new version. If you only installed it in the default location, the update occurs automatically during the upgrade process.

- If you are upgrading to this version of Sterling B2B Integrator from a version prior to 4.0 and are using the Command Line adapter, you must update the version of the CLAClient.jar file with the CLA2Client.jar located in the */install_dir*/install/client/cmdline2 UNIX directory or in the *install_dir*\install\client\cmdline2 for Windows. If you installed the CLAClient.jar file anywhere other than the default location, you must replace each copy of the file with the new version. If you only installed it in the default location, the update occurs automatically during the upgrade process.

The CLA instances are now pointing to the CLA2 Service definition. After importing old service instances of CLA onto Sterling B2B Integrator, you need to reconfigure the imported CLA services to re-set the Remote Name and Remote Port service configuration parameters. For more information, refer to the documentation for the Command Line Adapter and Command Line2 Adapter.

Configure Odette FTP Adapter:
About this task

If you use the Odette FTP Adapter and are using the Partner Profile XML file version 2.00 used in Sterling Gentran Integration Suite 4.3, you must modify it to match the new Partner Profile version 3.00. To modify the XML file, refer to the following table:

Section	Name of Structure or Field	Action	Comment
Partner Profiles	<GeneralParameters> <PartnerProfileVersion>3.00 </PartnerProfileVersion> </GeneralParameters>	Use correct version label of the Partner Profile.	New Version label: 3.00
Physical Partner	Description	Add field and description content	Mandatory in OFTP Partner database
Physical Partner	SubMailbox	Add field, if used.	Optional

Section	Name of Structure or Field	Action	Comment

Physical Partner	`<AuthenticationCertificate`
	
	`type ="...">`
	
	`<Subject>string</Subject>`
	
	`<Issuer>string</Issuer>`
	
	`<Serial> Bignumber_string`
	
	`</Subject>`
	
	`</AuthenticationCertificate>`
		Add Structure, if used.	OFTP 2.0: Mandatory for security only. Structure may be repeated.

Physical Partner	`<AuthenticationCertificate`
	
	`type ="Private Key">`
	
	`<Subject>string</Subject>`
	
	`<Issuer>string</Issuer>`
	
	`<Serial>Bignumber_string`
	
	`</Subject>`
	
	`</AuthenticationCertificate>`
		Add Stucture, if used.	OFTP 2.0: Mandatory for security only.

Physical Partner/ CAPI	DWindowSize	Delete field	
Physical Partner/ IP	IPFilter		Uses IPv4 or IPv6 addresses.
Physical Partner IP	SSL	Add field, if used.	OFTP 2.0: Mandatory for security only.
Physical Partner IP	CipherStrength	Add field, if used.	OFTP 2.0: Mandatory for security only.

Physical Partner IP	`<SSLCertificate`
	
	`type ="...">`
	
	`<Subject>string</Subject>`
	
	`<Issuer>string</Issuer>`
	
	`<Serial> Bignumber_string`
	
	`</Subject>`
	
	`</SSLCertificate>`
		Add structure, if used.	OFTP 2.0: Mandatory for security, only. Structure may be repeated.

Physical Partner Contract	Description	Add field and description content.	Mandatory in OFTP Partner database.
Physical Partner Contract	MultipleLoginSessions		Now used.
Physical Partner Contract	DuplicateFilePeriod	Rename DuplicateFileProcessingTestings To DuplicateFilePeriod	
Physical Partner Contract	SessionLogLevel	Add fields.	Optional
Physical Partner Contract	GroupNameList	Add fields, if used.	Optional

Section	Name of Structure or Field	Action	Comment
Physical Partner Contract	SecureAuthentication	Add fields.	OFTP 2.0: Mandatory
Physical Partner Contract	<TimeScheduleTable> ... <TimeScheduleTable>	Delete structure and create schedules in the Scheduler.	Initiator Business Process and Business Process user fields are still used.
Physical Partner Contract	OdetteFTPAPILevel	Rename OdetteAPILevel to OdetteFTPAPILevel	
Logical Partner	Description	Add field and description content.	Mandatory in OFTP Partner database.
Logical Partner	<FileServiceCertificate type ="..."> <Subject>string</Subject> <Issuer>string</Issuer> <Serial>string</Subject> </FileServiceCertificate>	Add structure, if used.	OFTP 2.0: Mandatory for security, only. Structure may be repeated.
Logical Partner Contract	Description	Add field and description content.	Mandatory in OFTP Partner database.
Logical Partner Contract	FileTransmissionRetries	Rename FileTransmitRetries to FileTransmissionRetries	
Logical Partner Contract	SignedEERPRequest	Add field, if used.	
Logical Partner Contract	EERP/NERPSignatureCheck	Add field, if used.	
Logical Partner Contract	File Signing	Add field, if used.	
Logical Partner Contract	File Encryption	Add field, if used.	
Logical Partner Contract	CipherSuite	Add field, if used.	
Logical Partner Contract	File Compression	Add field, if used.	
Logical Partner Contract	CharEncoding	Add field, if used.	
Logical Partner Contract	Receive VitualFilenamePattern	Add field, if used.	
Logical Partner Contract	EERPTimeout	Rename WaitForEERP to EERPTimeout	
Logical Partner Contract	FileScheduleTimeout	Add field, if used.	
Logical Partner Contract	InboundBusinessProcess	Add field, if used.	Optional
Logical Partner Contract	InboundBusinessProcessUser	Add field, if used.	Optional, if no Inbound business process is specified.

After changing the Partner Profile for version 3.00, import the Partner Profile into the new Odette FTP Partner Profile database. For additional information, see Odette FTP Partner Profile.

Add Advanced File Transfer Tab:
About this task

The Advanced File Transfer tab will not be enabled by default after an upgrade. If you have a license for Advanced File Transfer, perform the following steps to add the Advanced File Transfer tab:

Procedure
 1. Log in as **Admin**.
 2. Click **Manage Layout**.
 3. Click **Add Pane**.
 4. Enter the following name: `Advanced File Transfer`
 5. Click **Apply**.
 6. Click the **customize** icon for the new **Advanced File Transfer** tab.
 7. Click **Add Portlet**.
 8. Select the Add box for **Advanced File Transfer Management**.
 9. Click **Apply**.
10. Select **Clear Borders and Title** from the Decoration menu.
11. Click **Save and Apply**.

Restore Performance Tuning Configuration:
About this task

Before you begin this procedure, you need to add the Advanced File Transfer Tab.

To restore the performance tuning configuration:

Procedure
1. From the **Administration Menu**, select **Operations** > **System** > **Performance** > **Tuning**.
2. Next to **Edit Performance Configuration**, click **Go!**
3. Click **Edit settings**.

Reconfigure Archive Settings:
About this task

The upgrade does not automatically reconfigure the archive configuration. You must reconfigure the Backup Directory setting in Archive Manager after an upgrade.

To reconfigure your Archive settings, use the following procedure:

Procedure
1. From the **Administration Menu**, select **Operations** > **Archive Manager**.
2. Next to **Configure Archive Settings**, click **Go!**
3. If a message displays about the UI Lock, click **OK** to continue.
4. Click **Next**.

5. Update the Backup Directory field with the correct path information:
6. Click **Save**.
7. Confirm the settings and click **Finish**.

Correct Missing Manager IDs:
About this task

If you created a Manager ID with no corresponding User ID in your previous version, the Manager ID may be missing after upgrading. If this occurs, create a user in the system with a User ID that matches the missing Manager ID.

Configure JVM Containers:
About this task

After you have upgraded the system, you will need to reconfigure the JVM containers.

Before you reconfigure the JVM containers, you need to know the container numbers from the previous installation.

For example, if you configured the container using the command, setupContainer.sh (or cmd) 1, then the container number is 1.

Use one of the following tasks to reconfigure your containers:
• *Set Up Adapter Container - iSeries*
• *Set Up Adapter Container - UNIX/Linux*
• *Set Up Adapter Container - Windows*

System Maintenance

From time to time, you may need to perform system maintenance activities. These activities might include any or all of the following:
• Performing a checksum
• Modifying the license files

DB Checksum tool:

A checksum is a simple redundancy check used to detect errors in data.

In Sterling B2B Integrator, a verification process compares the checksum between the existing default resource and the resource that was added after applying a fix pack or upgrading. The DB Checksum tool, a resource difference tool generates a granular report of the changes in the system that was not permitted to be set as defaults.

The DB Checksum tool generates the difference in resource checksum between the default resource and the latest system resource from the database.

Performing a checksum:

Use a command to run the DB Checksum tool.

Procedure

To run the DB Checksum tool:

1. Open the */install_dir*/install/bin directory.
2. Enter the following command:

   ```
   ./db_checksum_tool.sh [-d] [-i [1 | 2 | 3 | 4 | 5]]
   [-r [wfd | map | schema | sii | template]] [-o <output file>] [-g]
   ```

   Where:

   - **-d** is the mode to dump the difference of resource checksum between the default resource and latest system resource.
   - **-i** is the resource type integer (optional).
   - **1** is WFD.
   - **2** is MAP.
   - **3** is SCHEMA.
   - **4** is SII.
   - **5** is TEMPLATE.
   - **-r** is the resource name (optional). For example, wfd, map, schema, sii, or template.
   - **-o** is the file name to output all the messages (optional).
   - **-g** is the file name that lists all the ignored resources (optional).
   - **-h** is the help screen.

   The DB Checksum tool performs the relevant checksum operation that is based on the command options and generates the output message.

License modifications:

After the installation finishes, you can modify the software licenses that you loaded with the **AddLicenseSet** command.

The **AddLicenseSet** command is in the bin directory of your UNIX or Windows installation. After the initial installation, the license files are in the following directories:

- UNIX - */install_dir*/install/properties/licensefiles
- Windows - *install_dir*\install\properties\licensefiles
- iSeries - */install_dir*/properties/licensefiles

You can add licenses or review the license list from the UI. On the Administration Menu, click **System** > **B2B Console** > **Operations** > **System** > **Licenses**.

AddLicenseSet Command Parameters

Use the **AddLicenseSet** command to modify a single license file or the entire license file directory.

To use the **AddLicenseSet** command, you must do the following:

- Open the bin directory
- Include the absolute path to the license file directory or to a license file

The **AddLicenseSet** command has the following parameters:

AddLicenseSet Parameter	Description
-reload	Use this parameter to reload the license files. This parameter deletes all of the license files from the database before the new files are loaded. The old license files are saved to the following locations: • UNIX - /*install_dir*/install/logs/security/ old_licenses • Windows - *install_dir*\install\logs\security\ old_licenses • iSeries - /*install_dir*/logs/security/old_licenses
-upgrade	Use this parameter during an upgrade only. This parameter deletes all of the old license files from the database and installs the new license files. The old license files are saved to the following locations: • UNIX - /*install_dir*/install/logs/security/upgrade • Windows -*install_dir*\install\logs\security\upgrade • iSeries -/*install_dir*/logs/security/old_licenses

The **AddLicenseSet** command will check if Sterling B2B Integrator is running. If it is running, the command will call the Ops server to refresh the license from the database. If you have any problems with your licenses after running the **AddLicenseSet** command, stop and restart Sterling B2B Integrator.

License Modification: Examples:

There are several different ways you can use the **AddLicenseSet** command to modify your licenses.

UNIX Examples

From the *install_dir*/bin directory:

Scenario	Command usage (UNIX example)
Reload a single license file	./AddLicenseSet.sh /*install_dir*/install/properties/ licensefiles/SI_SFG_License.xml -reload
Reload all of the license files in the directory	./AddLicenseSet.sh /*install_dir*/install/properties/ licensefiles/ -reload
Upgrade a single license file	./AddLicenseSet.sh /*install_dir*/install/properties/ licensefiles/SI_SFG_License.xml -upgrade
Upgrade all of the license files in the directory	./AddLicenseSet.sh /*install_dir*/install/properties/ licensefiles/ -upgrade

Windows Examples

From the *install_dir*\bin directory:

Scenario	Command usage (Windows example)
Reload a single license file	AddLicenseSet.cmd*install_dir*\install\properties\ licensefiles\SI_SFG_License.xml -reload

Scenario	Command usage (Windows example)
Reload all of the license files in the directory	`AddLicenseSet.cmd\`*`install_dir`*`\install\properties\licensefiles\ -reload`
Upgrade a single license file	`AddLicenseSet.cmd\`*`install_dir`*`\install\properties\licensefiles\SI_SFG_License.xml -upgrade`
Upgrade all of the license files in the directory	`AddLicenseSet.cmd\`*`install_dir`*`\install\properties\licensefiles\ -upgrade`

Uninstall Sterling B2B Integrator
Before you begin

If you have installed Sterling B2B Integrator software using IIM, then perform these steps to unregister Sterling B2B Integrator packages from the IIM registry:

- Launch IIM.
- Click **Uninstall** and select the required Sterling B2B Integrator package (Media, FixPack, or Interim Fix).
- Confirm and click **Uninstall**.

About this task

To uninstall Sterling B2B Integrator from a UNIX or Linux environment:

Procedure

1. Stop Sterling B2B Integrator and wait for shutdown to complete. If you begin removing files before all business processes and Sterling B2B Integrator are stopped, you may be unable to remove Sterling B2B Integrator successfully.
2. Back up the file system and database.

   This step is optional. However, by backing up the file system and database, you are ensured that Sterling B2B Integrator is completely recoverable.
3. Remove the installation directory by entering the following command in the parent directory of your installation directory: `rm -rf` *`install_dir`*
4. If you use an Oracle, Microsoft SQL Server, or DB2 database, these remain intact even after you remove the Sterling B2B Integrator from the server. If you no longer want to reference the data, contact your database administrator about removing unwanted tables and recovering the database space where Sterling B2B Integrator used to reside.
5. Manually remove the JDK:
   a. Navigate into the _uninst subdirectory of your JDK installation directory
   b. Enter `./uninstall.sh`
6. After you remove Sterling B2B Integrator from the server, you can remove Eclipse, and any tools that were downloaded to the desktop, including the following:
   - Map Editor and associated standards

     Refer to the *Map Editor Guide* for information about removing the Map Editor.
   - Graphical Process Modeler

     Refer to the *Graphical Process Modeler Guide* for information about removing the Graphical Process Modeler.
   - Web Template Designer

Refer to the *Web Extensions Guide* for information about removing the Web Template Designer.
- (If licensed) MESA Developer Studio plug-ins, including:
  - MESA Developer Studio Software Development Kit (SDK)
  - MESA Developer Studio Skin Editor

  Refer to the *MESA Developer Studio* guide for information about removing MESA Developer Studio.
- (If licensed) Reporting Services, which requires MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports.

  Refer to the *MESA Developer Studio* guide for information about removing Reporting Services.

User Documentation

The user documentation is available from an online documentation site on the web.

Providing the documentation in an online environment allows for frequent updates of content that is based on user feedback and usability.

If you need a printed copy of the documentation, you can print topics of information through your Internet browser, or you can download documents in PDF format, after you add it to a collection on IBM Knowledge Center.

To access the documentation site from within Sterling B2B Integrator or one of its tools, select the help icon. The system must reside on a computer that supports Internet access and an Internet browser.

Improving your access to online documentation:

You can improve your access to online documentation by using several methods.

About this task

After you access the IBM Knowledge Center, you can perform the following tasks:
- Enter a word or phrase and search the entire library for information.
- Move through a hierarchy of contents pages to identify the topic you want to read or print.
- Print topics by using your browser's Print function.
- Add documents to your collection and download them in PDF format.

Troubleshooting Tips: UNIX/Linux Non-Cluster Environment

Situation	Message or Symptom	Explanation/Resolution
Installing	You encounter errors or problems during installation.	**Explanation** The installation creates several log files that you can use to diagnose problems like the failure of an installation. **Resolution** Examine the log files generated during installation: • ant.install.log (in the *install_dir* directory) • *install_dir*/PreInstallSI.log

Situation	Message or Symptom	Explanation/Resolution
Installing	When you entered an absolute path during installation, a message indicated that the command was not found.	**Explanation** You entered an incorrect path. Check the information entered. **Resolution** Enter the correct path.
Installing a desktop tool or resource	Cannot download any of the following: • Map Editor and associated standards • Graphical Process Modeler • Web Template Designer • (If licensed) MESA Developer Studio plug-ins, including: – MESA Developer Studio Software Development Kit (SDK) – MESA Developer Studio Skin Editor • (If licensed) Reporting Services, which requires MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports.	**Explanation** When you install Sterling B2B Integrator, system files are created that contain an internal IP address. If you install Sterling B2B Integrator behind a firewall, and your firewall is configured to accept an external IP address from a client computer, you may not be able to download the desktop tools and resources. The firewall will reject the internal IP address from a client residing outside of the firewall. **Resolution** Modify the system files that contain the invalid IP address. Follow these steps: 1. Navigate to */install_dir*/install/bin. 2. Stop Sterling B2B Integrator. 3. Enter the following command followed by the external IP address: `./patchJNLP.sh external_IP_address` 4. Restart Sterling B2B Integrator.
Installing	Memory and ulimit errors.	**Explanation** The installation fails with memory and ulimit errors. **Resolution** • Refer to the *Viewing and Editing Performance Configuration Settings* in the *Performance Management* documentation. Modify your memory setting accordingly. • Refer to the *Operating System Configuration Checklist* and tune the ulimit settings.

Situation	Message or Symptom	Explanation/Resolution
Installing (HP-UX 11.31)	When entering your email address the @ key is not recognized.	**Explanation** The @ key is being mapped to kill or eol, it needs to be mapped to another character. **Resolution** This resolution only applies to HP-UX 11.31. Map the @ key to another character. Note: If you need want to see what the key is mapped to, use the stty -a command.
e-Invoice Upgrade: Oracle Add Constraint Error	When you upgrade Sterling e-Invoicing and are using an Oracle database, if the upgrade fails with the error message `name is already used by an existing object`, this occurs because the default behavior for the "drop constraint" command changed in Oracle 10.	**Explanation** The index that is used to support the constraint is now only removed if the index was generated by the `create constraint` command. The indexes for Sterling e-Invoicing are always generated from constraints during an install. If you receive this error during a Sterling e-Invoicing upgrade, it is because of how the database was restored, the version of Oracle you are using, and because the Oracle `imp` command exported the indexes and constraints separately. There is no way to determine when the `imp` command will not add a create index command to the export file if it was generated by a constraint – but if it does add the command, the database restore process loses the association of the constraint and its underlying index. The database script that runs during a Sterling e-Invoicing upgrade executes two steps: 1. First, it drops the unique constraint so the next step can redefine it using additional columns. However, the drop constraint command does not remove the underlying index if the association with its index was lost. 2. The next command that redefines this constraint requires a different index definition, but in this scenario the name of the index the constraint wants to use already exists, which causes the `name is already used by an existing object` error. **Resolution** If you receive this error message, the solution for this problem is to drop the index and rerun the Sterling e-Invoicing upgrade. The drop index command you should use is: `drop index UNQ_EINV_CANON`
Apply a fix pack or Upgrade	The `/install_dir/install/installed_data` directory is created (if clustered, on each node) during an upgrade or when applying a fix pack. This directory can become very large and take up needed space on the file system.	**Explanation** The information in this directory is used when applying a fix pack or upgrading, but is not required afterward. The deployment/cleanup tasks for the upgrade or fix pack do not remove this directory. **Resolution** The directory can be manually removed to increase the available space for the file system: 1. Navigate to `/install_dir/install` 2. Enter `rm -r installed_data`

iSeries Upgrade (V5.2.6 or later)

You can upgrade the Sterling B2B Integrator software in an iSeries environment.

These instructions include the pre-upgrade and post-upgrade processes. They also include information for using the DB2 database with Sterling B2B Integrator.

It is important to remember that upgrading involves a full installation of Sterling B2B Integrator. You need to prepare for an upgrade the same way that you would prepare for an installation.

This upgrade does not overwrite your current Sterling B2B Integrator directory structure on disk. Instead, it creates a new installation of Sterling B2B Integrator and uses a copy of your original instance's database to upgrade to the new version. After the upgrade, both instances will be operational.

For new installations, use the *Sterling B2B Integrator iSeries Installation Guide*.

Before You Begin the Upgrade

Before You Begin the iSeries Upgrade: Before you begin the upgrade, review the following checklist.

#	Before You Begin Checklist	Your Notes
1	You must have a new license file to use the new licensed features of your upgraded installation.	
2	Read through this entire document so that you have a clear understanding of what the upgrade requires.	
3	Download the following documents from the online Documentation Library: • Release notes • System Requirements - With each release, IBM introduces leading edge technology to improve and enhance its software. Review the System Requirements to confirm that your system and databases meet the requirements, and also to manage any necessary upgrades or changes before upgrading.	
4	Archive and purge any unneeded data before upgrading. Archived data can only be restored from the same version and fix pack of Sterling B2B Integrator from which it was archived. If you need to restore archived data that was archived prior to performing the upgrade, then you must have a running instance of Sterling B2B Integrator that matches the version and fix pack from which the archive was taken.	
5	Back up your database. Export your business processes, trading partners, maps, etc.	
6	Review and note the adapters, business processes, and other configurations in your current version. This will help identify any need for updating transport messages, third-party adapters, or configurations to adapters, such as the File System and Command Line Adapters.	

#	Before You Begin Checklist	Your Notes
7	If you have edited a pre-defined business process, be aware that the upgrade process overwrites pre-defined business processes. Your customized business process is preserved in the system, but it is no longer the default process.	
8	If you have edited any property files (.properties or .properties.in), be aware that the upgrade process overwrites these property files, unless these changes were made using the customer_overrides.properties file. Your previous property file edits might not be applicable in this release.	
9	If you edited any of the following cdinterop files, you must back them up before upgrading. The cdinterop files do not have initialization (*.in) files. After the upgrade, use the backup version of the files in your upgraded installation. • cdinterop-proxy-records.properties • cdinterop-spoe-auth.properties • cdinterop-spoe-policy.properties • cdinterop-user-records.properties	
10	You should not upgrade Sterling B2B Integrator on an interim fix. Apply the latest fix pack prior to upgrading Sterling B2B Integrator.	
11	Always install and test your upgrade in a non-production environment before upgrading your production environment.	

Special Tasks and Considerations (iSeries): Before you begin upgrading, be aware of the following special tasks and considerations, depending on your type of upgrade:

• If you have LDAP (Lightweight Directory Access Protocol) configuration information in the security.properties file, this information will automatically be moved to the authentication_policy.properties file.

• If your version of Sterling B2B Integrator is integrated with the JBoss™, WebLogic®, or WebSphere® application server,

Sterling B2B Integrator can be installed without integration to an application server and does not require an application server for installation or at runtime. (However, Sterling B2B Integrator still supports integration with JBoss, WebLogic, and WebSphere.) After you upgrade, you can restore integration with your application server if desired. To do so, use the Sterling B2B Integrator EJB Adapter. For more information, refer to the documentation for the *EJB Adapter*.

Upgrade Impacts
This documentation provides information on how system behavior has changed based on upgrading your instance. You should review this information before you begin your upgrade. Depending on which version you are upgrading to, you will need to review one or more topics listed. The upgrade impacts listed for each subsequent version are specific to that version. There is not a cumulative list.

Upgrade Impacts for V5.2.0:

Before you begin an upgrade, you should review and understand any impacts of the upgrade.

Features/Services Not Supported

The following features/services are no longer supported:
- Channels portlet
- Federated Systems
- Community Management (AFT Communities are still available)
- Sterling Community Management (SCM) Integration
- Archive Commandline Service
- Sync Engine Data Clean Manager Service
- Sync Engine Task Manager Service

If you need more information, please contact your IBM sales representative.

Memory Requirement Change

Sterling B2B Integrator now requires at least 4 GB (8 GB recommended) of dedicated memory in a private (non-shared) pool.

Port Allocation Changes in 5.2.0

If you are upgrading to 5.2.0, and have configured the CLA2 or the SWIFTNet HTTP Server Adapter, the remote port numbers have changed for 5.2.0. The port numbers are as follows:

Table 5. Remote Port Numbers

Adapter Name	Version 5.2.0 Base Port	Version 5.2.1 Base Port	Version 5.2.2 Base Port	Version 5.2.3 Base Port
CLA2	+51	+52	+53	+54
SWIFTNet HTTP Server	+52	+53	+54	+55

After upgrading to 5.2.x, you need to change any references to the old remote port numbers. For example, if you have any business processes that use the CLA2 adapter, you will need to update the remote ports in the business process.

Database Table Sizes

While upgrading if you encounter any database table size issues, you may have to manually adjust the database tables and restart the upgrade process. An upgrade using the production database in a test environment can be used to help you determine what tables need to be manually adjusted.

Resource Tags

If you are using resource tags in your current version, you should check all of your existing resource tags before you start the upgrade process. The resource tags you should check are:
- Adapter Policies

- Agreements
- Sterling Connect:Direct Netmaps
- Proxy Servers
- Security Tokens
- SSH Resources
- SWIFTNet Copy Service Profiles
- SWIFTNet Service Profiles

You can check the resource tags by running the following SQL query from the SQL Manager page (**Operations > Support Tools**):

```
SELECT * FROM TAG_RESOURCE_ASSOC WHERE TYPE=41 OR TYPE=42 OR TYPE=43 OR TYPE=44 OR
                                   TYPE=45 OR TYPE=52 OR TYPE=53
```

The TAG_NAME column in the SQL results will contain the names of any resource tags that need to be edited or deleted.

If any of the resource tags contain tagged resources using the types listed, remove those resources from the resource tags or delete the resource tags that contain these resource types.

Silent Installation Parameters

The following parameters are new or have an updated definition:

What has changed	parameter	Definition
Parameter definition has changed	LICENSE_FILE_PATH	(Required) Full path to Core_License.xml.
New parameter	LICENSE_FILE_# (where # is a number between 1 and 99)	(Required) This is required for each license you install. You must add an entry for each license file to the silent install file. The LICENSE_FILE numbering (#) does not need to be sequential. For example: LICENSE_FILE_1= SI_SFG_License.xml LICENSE_FILE_2= Fin_Serv_License.xml LICENSE_FILE_3= SI_SFG_FIPS_License.xml LICENSE_FILE_4= AS2_License_.xml LICENSE_FILE_5= EBICS_License_.xml

Channels and Community Management Tabs (Optional)

The Dashboard PSML files are not updated during an upgrade. The PSML file impacts any custom tabs you may have configured, such as Channels or Operator. The Channels and Community Management tabs appear in your browser but are no longer operational.

To remove the Channels and Community Management tabs:

Warning: The psmlRestore command gets the 5200 psml file which resets ALL of the custom tabs from the previous release.

1. Navigate to the installation directory.
2. Navigate to the bin directory.
3. Enter this command: `./psmlRestore.sh admin`

Custom BI Fact Models Need to be Upgraded

Scripts named recreateBITablePKs.cmd.in (Windows) and recreateBITablePKs.sh.in (UNIX) are now provided which allow you to upgrade any custom BI fact models tied to a separate BI repository.

BI fact models need to be upgraded to continue to work with the Entity Framework, which replaced Hibernate usage in the BI framework in version 5.2.0.

Backups Are Not Generated During Install, Upgrade, or When Applying a Fix Pack or Interim Fix: Before you begin an upgrade, review the following backup information.

Some of the standard resources installed during install or upgrade use the import mechanism available to customers to load the standard resources into the database. The standard import mechanism by default creates a backup of the table containing the resource prior to importing to provide the ability to restore to the previous state if later it was decided that the import should not have been performed. This table backup was also being performed by default during the basic installation processes. And, since the import mechanism was sometimes used multiple times during the installation processes, some of the tables were backed up several times. Depending on the size of the table, this could add a very large amount of time to the installation process. Since it is recommended that a backup is completed prior to beginning any of these installation processes, the default behavior has changed to not perform the backup by default. If you would like backups to be performed, then `SKIPIMPORTBACKUP=false` should be added to the **sandbox.cfg** file.

Capitalization Insensitivity for Header Value:
About this task

Before you begin an upgrade, review the following AS3 information.

For AS3, when searching for a header value in a multipart/report, you do not need to consider whether the header value contains any capitalization. The search has been enhanced to be capitalization insensitive.

For example, the following searches will result in a match:
* Multipart/Report
* Multipart/report
* multipart/Report
* multipart/report

The search would not find the following as a match:
* MulTiPart/RePorT

CA Certificates Impacts: Before you upgrade, review the following information on CA certificates.

Users may add multiple copies of the same certificates to the database. Having multiple copies of the same certificate in the database is not, in principle, a problem for the system except for the minor amount of wasted storage. Each copy has a different object ID in the database and is a separate database object.

The specific changes in this release is the ability to easily populate the product database with the set of authority root certificates distributed with the JVM.

Retry Logic Added to WebSphereMQ Suite Adapter PUT Service:
About this task

Before you begin an upgrade, review the following WebSphereMQ Suite Adapter PUT Service information.

Retry logic has been added to the WebSphereMQ Suite. To accommodate this new functionality, you need to configure two new parameters for the PUT service:
* wsmq_send_retryCount
* wsmq_send_retrySleepInterval

To configure the new parameters:

Procedure
1. Log into Sterling B2B Integrator.
2. From the **Admin Console Home**, you need to start the Graphical Process Model (GPM).
3. Log into the GPM. You will need a **User ID** and **Password**.
4. In the GPM, select **View > Stencil > Services**.
5. Select **File > New**.
6. Drag the **WebSphereMQ Suite Put Message Service** from the **All Services** pane into the center pane.
7. Double click the **WebSphereMQ Suite Put Message Service**.
8. Select the configuration from the **Config** dropdown.
9. Enter the number of retries in to the **wsmq_send_retryCount** value.
10. Enter the sleep interval in seconds in to the **wsmq_send_retrySleepInterval** value.
11. Save the changes to the service configuration.
12. Exit from the GPM.

Services and Adapters - Show Advance State Button: Before you begin an upgrade, review the following Show Advance State button information.

The Show Advanced State check box has been removed from the Services Configuration search screen. Instead, the default has been changed to always show the advanced state without needing to check a checkbox on the search screen to display it.

Some Certificate Fields Are Optional:
About this task

Before you begin an upgrade, review the following certificate field information.

When generating certificate keys, the following fields may have been missing in the release you are upgrading from, but the entries are now optional:

- alt.name.dns
- alt.name.IP

Support for Multiple AS2 Organizations: Before you begin an upgrade, review the following AS2 schema information.

Sterling B2B Integrator now supports multiple sponsoring organizations and multiple partners for AS2. During upgrade, the single organization will be flagged as the default organization.

Once you have upgraded to this version, a prefix designation is used to differentiate between an AS2 organization (AS2_ORG_) and an AS2 partner (AS2_PART_). Each of these will require the full configuration of a trading partner to allow for a partner to trade with multiple organizations as well as an organization that trades with multiple partners.

The AS2_TRADEPART_INFO and AS2_EMAIL_INFO tables have been modified and the AS2_PROFILE table is newly introduced. Updates to these tables will occur during the SI in-place upgrade process in the following manner:
- Identify the default organization and populates the AS2_PROFILE table with organization information. A default organization is an AS2 organization profile named "profile_ORGANIZATION" present in the system before upgrade.
- Identify partner records and populates the AS2_PROFILE table with partner information.
- Populate the new columns of table AS2_TRADEPART_INFO with the default organization information.
- Populate the new PROFILE_ID column in the AS2_EMAIL_INFO table with the profile id of the AS2 organization profile present in the system.

Web Services: Before you begin an upgrade, review the following Web Services information.

Many of the Web Services configuration settings that were generated from the WebServices Provider Configuration UI have moved from the property files into database tables. This change was made to allow a single location of these settings in cluster environments and to ensure that these settings would not be reset during a fix pack installation.

After you have completed your upgrade, you should run the convertWSSoaProperties script found in the installation bin folder. This script reads the settings from the property file and places them into the proper database tables. You can then review the results in the WebServices Provider Configuration UI.

Upgrade impacts for V5.2.5:

Upgrading to Sterling B2B Integrator 5.2.5 has unique impacts.

JDK 7 does not support the TLS_RSA_WITH_3DES_EDE_CBC_MD5 cipher

If you are using JDK 7 with Sterling B2B Integrator V5.2.5, and you want to use a cipher to secure the Sterling B2B Integrator dashboard, you must set one of the following values in the **dashboardCipherSuite** parameter in the `security.properties_platform_asi_ext.in` property file or in `customer_overrides`:
- *JDK* (includes all strong ciphers except the one not supported by JDK 7)

- *Weak*

Do not use *Strong* or *All* with JDK 7 or Sterling B2B Integrator will not start.

Reconciliation of HIPAA Level 5 code lists

When you upgrade to Sterling B2B Integrator V5.2.5, customized HIPAA Level 5 code lists from the previous version are preserved in the system where they were entered, but they are not the default code lists after the upgrade. After the upgrade, you must manually make any customized code lists the default code lists.

For example, you customized the ICD9 or HCPCSCPT code list in the previous version of Sterling B2B Integrator. After the upgrade to version 5.2.5, you must replace the default ICD9 or HCPCSCPT code list with the customized ICD9 or HCPCSCPT code list.

Properties file change to prevent timeout during start (V5.1.0.4 to 5.2.5 upgrade)

Before you start Sterling B2B Integrator after you upgrade the application from V5.1.0.4 to 5.2.5, you must change the values of the following properties in the `centralops.properties` file to 600. This action prevents the start command from timing out before Sterling B2B Integrator starts. The `centralops.properties` file is in the `properties` subdirectory of the installation directory.
- `OpsServer.commandTimeout`
- `PassPhrase.urlTimeout`

jGroups upgrade in V5.2.5 prevents Sterling B2B Integrator from starting for some customers

jGroups is upgraded with V5.2.5. Some of the properties defined in jgroups_cluster.properties have changed. If you modified these files or added custom changes for them to customer_overrides.properties, the upgrade changes are not applied and Sterling B2B Integrator will not start.

This issue is fixed in V5.2.5, Interim Fix 1, where all necessary properties files are changed for you. You can also disable this fix if desired. See APAR IT06654 for more information.

Note: The original and modified properties are output to the noapp.log file. This allows you to see how your properties were modified. Search the log using the value "Initializing jgroups_cluster.property_string" to see the new and changed values for the two affected startup properties. The jgroups_cluster.lock.protocolStack property is also modified with this fix, but is only written to the log when it is used, not at startup.

If you want to manually fix your installation without applying V5.2.5, Interim Fix 1, complete the following steps:
1. Delete the following options (if they exist) from customer_overrides.properties for the jgroups.cluster property file. These occur in the jgroups_cluster.property_sting, jgroups_cluster.distributed_property_string, and jgroups_cluster.lock.protocolStack files:
   - gc_lag
   - up_thread
   - down_thread

- join_retry_timeout
- max_xmit_size
- shun

2. Remove the protocol parameter **VIEW_SYNC** and all of its attributes.

3. In the jgroups_cluster.property_string, replace 'start_port' with 'bind_port'.

4. In the jgroups_cluster.distributed_property_string and jgroups_cluster.lock.protocolStack properties, add the following items:

   - In distribution_property_string the attribute **thread_pool_rejection_policy=run** should be added to the protocol 'TCP'. For example,

     `TCP(bind_port=22261;`**`thread_pool_rejection_policy=run`**`)`

   - In lock.protocolStack: the protocol and attribute **CENTAL_LOCK(num_backups=2)** should be added to the end of the property. For example,

     `lock.protocolStack=UDP(bind_addr=&HOST_ADDR;;bind_port=`
     `&MULTICAST_NODE_PORT3;;mcast_addr=239.255.166.17;<other`

     `protocol parameters here>pbcast.GMS(join_timeout=5000;print_local_`

     `addr=true)`**`:CENTRAL_LOCK(num_backups=2)`**

Upgrade impacts for V5.2.6:

Upgrading to Sterling B2B Integrator 5.2.6 has unique impacts.

Support for SSLV3 has been removed - TLS 1.2 is the new default

Due to security concerns, Sterling B2B Integrator no longer supports the use of SSLV3. You should be aware of the following changes as you upgrade your system to this version:

- Several properties have been updated to use TLS 1.2 as the default. If your mail server cannot use TLS 1.2, you can change your SMTP and B2B Mail Client adapters to use TLS 1.0 or 1.1 instead.

- If any of your 3rd party programs do not support the use of TLS 1.2, you can change Sterling B2B Integrator to use TLS 1.0 or TLS 1.1.

- In all cases, requests to use "SSLV3" in Sterling B2B Integrator will use instead TLS 1.0, TLS1.1, or TLS1.2.

- TLS 1.2 is used as the default protocol in secure communications. This change applies to any system that is upgraded to V5.2.6.

- If your GPM, or WebSphere MQ or OFTP adapters are configured to use older, non-supported cipher suites (non-TLS 1.2), they will continue to work. However, if you edit them, only TLS 1.2 will be available to select.

JDK 7 is the only supported JDK version for V5.2.6

There are several impacts due to this change:

- If you are not already using JDK 7, you must upgrade your JDK before attempting to upgrade Sterling B2B Integrator to V5.2.6. If you currently have V5.2.4.1 or higher installed, there is a **upgradeJDK** script available to assist you. See *bin Directory Files* for more information.

- Only ciphers that are supported by JDK 7 can be used in Sterling B2B Integrator V5.2.6. You can update your cipher suites in `security.properties`.

- Previously defined ciphers in `customer_overrides.properties` are not changed upon upgrade to V5.2.6.

- **DefaultCipherSuite** contains a list of JDK 7 ciphers in V5.2.6 that can be used when others are not available.

Prepare Your iSeries for the Upgrade

To run Sterling B2B Integrator V5.2.6 on iSeries, you must have a V7R1 or V7R2 iSeries operating system with JDK 1.7 installed.

To verify system compatibility and prepare for the upgrade, perform the following tasks:

1. Review the Sterling B2B Integrator *System Requirements* document. Your system must meet the minimum requirements that are documented, while your database and JDBC driver versions must match the documented requirements. Complete any necessary upgrades or changes in preparation for the upgrade.
2. Collect information on any third-party libraries used for adapter configuration that were added to your current release. You must add each of these libraries later in the upgrade process.
3. Locate any configuration file changes for the JDBC adapter or the Lightweight JDBC adapter in your current release. Later in the upgrade process, you will copy these changes to this release.
4. Record your performance tuning configuration. You will restore these settings later in the upgrade process.
5. Back up Sterling B2B Integrator and your current database

CAUTION:
If there are problems with your upgraded system, the only way to ensure that you can roll back to your previous version is to back up Sterling B2B Integrator and your database.

After you successfully back up Sterling B2B Integrator and your database, you are ready to upgrade the software. Before you begin, see the *Release Notes*.

Checklist for iSeries Pre-Upgrade:

Use this checklist to upgrade Sterling B2B Integrator in an iSeries environment.

The checklist contains:
- Brief descriptions for tasks (detailed procedures are provided after the checklist)
- Information you need to gather to complete the installation

Note: When creating a name, such as an account name, permissions name, profile name, or database name, follow these conventions:
- The first character must be alphabetic
- The remaining characters may be alphanumeric, but it's best to avoid special characters
- Do not use spaces or apostrophes

You may want to make a copy of the following checklist and use it to record the information you collect.

Step	iSeries Installation Checklist	Your Notes
1	Use the system requirements to verify that your system hardware and software meet the requirements specified for this release.

Ensure that you have the correct license file and JCE file.
Important: Do not remove the existing license file or JCE file from your system. The files specified by the **LICPATH** and **JCEPATH** parameters in the sandbox.cfg file must be present during the upgrade, or the upgrade will fail. | |
| 2 | For systems with multiple IP addresses, verify that the IP address on which Sterling B2B Integrator resides is accessible by any client computer that is running a browser interface.

Caution: If you do not verify the IP address, your system may not operate properly after installing Sterling B2B Integrator. A good test is to ping the IP address from your iSeries command line. | |
3	If you are using a non-English environment, confirm that you are using the appropriate character set.	
4	Configure the system to view Sterling B2B Integrator files using Windows Explorer.	
5	Map a network drive to your working directory.	
6	Specify the QCCSID (Coded Character Set) for this installation.	
7	Record the collection name for the database.	
8	Record the system passphrase.	
9	Record the administrative email address.

This address is where system alerts messages are sent. | |
| 10 | Record the SMTP Server IP address.

This address is where alert messages are sent. | |
| 11 | Record the Initial Port Number. | |
| 12 | Record the Hostname (catalog name) on which you plan to install the software. | |
| 13 | Determine the Host IP address for Sterling B2B Integrator.

This is required even if you only have one IP address for your system. | |
| 14 | Create the Sterling B2B Integrator user profile and the associated password.

Be sure to record the user password so you can enter it during installation. | |

Step	iSeries Installation Checklist	Your Notes
15	Set the JDK for your User Profile. Create a `.profile` file in the /home directory for your user profile. Verify that your user profile points to the correct JDK.	
16	Verify that your user profile is pointing to a job queue in a subsystem.	
17	Record the path to the Sterling B2B Integrator jar file. The jar file can reside in any directory on your system. During installation, you use this directory, but this is not the final directory where Sterling B2B Integrator resides.	
18	Record the Directory Name where you plan to install the software. The Sterling B2B Integrator installation directory must be a new directory and cannot already exist. A large subdirectory tree will be created under this directory. During installation, this directory is referred to as *install_dir*.	
19	Record the path to the Core License file (`Core_License.xml`).	
20	Download the JCE distribution file.	
21	Identify the JDK that will be used for Sterling B2B Integrator.	
22	Install the Sterling B2B Integrator software.	

The Sterling B2B Integrator installation program will automatically set the umask to 002 during the installation. However, iSeries system administrators should consider placing an appropriate umask command such as umask 002 in their global or user login script because the default of 000 could allow many IFS files to be world-writable. Please consult the IBM iSeries Information Center for more information on umask and customizing your Qshell environment.

Verification of the system requirements:

Before you begin the installation, verify that your system meets the hardware and software requirements that are specified for this release.

The hardware requirements that are listed in the *System Requirements* are the minimum requirements. Your system requirements might exceed these requirements if you are running other applications on the same machine as Sterling B2B Integrator.

The installation strictly enforces the following system requirements:
- Operating system version must match requirement exactly.
- The minimum patch level for the operating system is enforced, but you can apply higher patch levels.
- JDK version must match requirement exactly.

- The disk space is a minimum for the installation. The system must be separately sized to handle whatever load is going to be put on the system.
- Database version must match exactly.
- JDBC driver version supports exact matches and wildcard matches.

If any of these requirements are not met, the installation fails. If the installation fails, review the installation log for a list of non-compliant items.

Downloading the JCE distribution file:

The Java Cryptography Extension (JCE) is a set of Java packages from IBM that provides a framework and implementations for encryption, key generation and key agreement, and Message Authentication Code (MAC) algorithms.

About this task

If you are installing Sterling B2B Integrator outside of the United States, check to see if you can get the JCE unlimited strength jurisdiction policy files. The unlimited strength jurisdiction policy files can be exported only to countries to which the United States permits the export of higher-level encryption.

Procedure

To obtain the JCE distribution file:
1. Browse to the Unrestricted SDK JCE policy files website.
2. Enter your IBM ID and password. If you do not have an IBM ID, follow the IBM registration instructions.
3. Click **Sign in**.
4. Select the **Files for Java 5.0 SR16, Java 6 SR13, Java 6 SR5 (J9 VM2.6), Java 7 SR4, and all later releases** check box and click **Continue**.
5. Review your personal information and the license agreement.
6. Select the **I agree** check box and click **I confirm** to continue.
7. Click **Download now**.
8. Save the `unrestricted.zip` file to your system.
9. Record the directory and the `.zip` file name. You need this information during the installation process.

Determination of port numbers (iSeries):

During installation, you are prompted to specify the initial port number.

Use the following port number guidelines:
- A range of 200 consecutive open ports between 10000 - 65535 are required for this installation.
- The initial port number represents the beginning port number in the range.
- Make sure that port numbers in the port range are not used by any other applications on your system.

After your installation, refer to the *install_dir*/install/properties/sandbox.cfg file for all of the port assignments.

In an iSeries environment, you can also view the port numbers currently in use on your system by using one of these methods:

- Select from the **iSeries Navigator Network** > **TCP/IP Configuration >**
  Connections.
-

  Enter `WRKTCPSTS` on an iSeries command line and select `Option 3 (Work with`
  `TCP/IP connection status)`. Press F14 to sort the port numbers in numerical
  sequence.
-

  Enter `NETSTAT *CNN` on an iSeries command line and press Enter. Press F14 to
  sort the port numbers in numerical sequence.

Configure the System to View Files:

In the iSeries environment, you must configure your system to view Sterling B2B
Integrator files using Windows Explorer.

Use the NetServer component of IBM i to set up file shares that are accessible
through Windows networking. You must set up a file share to a working directory
in your iSeries Integrated File System (IFS).

Map a Network Drive (iSeries):   In the iSeries environment, you must map a
network drive to the working directory for Sterling B2B Integrator. For more
information, refer to the documentation on the IBM Web site.

Specifying the QCCSID (iSeries):

In the iSeries environment, you must specify the QCCSID (Coded Character Set)
for Sterling B2B Integrator.

About this task

Refer to the IBM National Language Support Guide for valid coded character sets.
It is recommended that you use the coded character set 037 for the United States
English system.

Procedure

To specify the QCCSID:
1. From an iSeries command line, enter `DSPSYSVAL SYSVAL(QCCSID)`.
2. Determine if the QCCSID set to 65535.
3. If the QCCSID value is set to 65535, then perform one of the following actions:
   - Change the CCSID to a specific coded character set.
     Enter `CHGSYSVAL SYSVAL(QCCSID) VALUE(xxx)`, where xxx represents your
     coded character set and then IPL your iSeries.
   - Keep the QCCSID at 65535 and specify a specific CCSID other than 65535
     when you create your Sterling B2B Integrator user profile.
4. If the QCCSID value is not set to 65535, continue with the next installation or
   upgrade task.

Creating a user profile (iSeries):

In the iSeries environment, you must create a user profile for accessing the Sterling
B2B Integrator databases. You use this user profile when you enter the installation
command.

About this task

If your system value **QCCSID** is set to 65535, then set the **CCSID** parameter to a
specific coded character set other than 65535 on the **CRTUSRPRF** command. See the
IBM National Language Support Guide for valid coded character sets. For more
information about creating user profiles, see the operating system documentation .

The job description that is assigned to the user profile must have a job queue
defined that allows at least 10 active jobs. If the maximum number of active jobs is
less than 10, Sterling B2B Integrator does not install correctly. This guideline also
applies to starting Sterling B2B Integrator after the installation.

License information:

A separate license is required for each Sterling B2B Integrator feature that you
purchased. During installation, you must choose the license files according to what
you purchased. Product licenses do not require an activation key.

IBM assumes customers will only install and use the products they purchased. IBM
reserves the right to inspect installs for compliance at any time.

After the installation finishes, if you determine that you need to modify licenses
files, see "License modifications" on page 58.

Product Licenses for Sterling B2B Integrator

Sterling B2B Integrator Standard and Enterprise Edition includes:
* MESA Studio
* eInvoicing
* Report Services
* all services and adapters not listed below

Sterling B2B Integrator Standard and Enterprise Financial Edition includes
everything listed above plus:
* CHIPS
* SWIFTNet
* NACHA ACH CTX adapter
* FEDWIRE
* Fin Serv XML standard
* FIPS Mode
* Image Cash Letter service
* EBICS

Prepare the Database (iSeries):

In an iSeries environment, Sterling B2B Integrator uses the DB2 database that is
included in IBM i.

The installation process creates a new collection for Sterling B2B Integrator. Before
you install, you must determine and record the collection name and the catalog
name.

- The collection name is the name of the collection (or library) that contains the database, journal, and journal receiver for your Sterling B2B Integrator system. This collection must not already exist.
- The catalog name is the database name of your iSeries system, as defined by the WRKRDBDIRE command. Generally, this value is the name of your system.

All database files are required to be journaled when being used by the translator in Sterling B2B Integrator. If your application files are not currently journaled, and you plan to access these files through Sterling B2B Integrator, refer to the IBM manuals for instructions on journaling physical files.

Setting the JDK for your user profile:

To set the JDK for your user profile, you must create a `.profile` file in the `/home` directory for the user.

Sterling B2B Integrator V5.2.6 or later on iSeries requires the J9 JDK 1.7. Create the `.profile` file to set the JDK to J9 JDK 1.7.

Creating a .profile File:

A `.profile` file includes a pointer to the J9 JDK 1.7 directory that you can use in Sterling B2B Integrator.

Procedure

To create a `.profile` file in an iSeries environment:
1. Log on with the Sterling B2B Integrator user profile.
2. Create a home directory for the Sterling B2B Integrator user profile. From an iSeries command line, enter MKDIR /home/*appuser*, where *appuser* represents the Sterling B2B Integrator user profile.
3. Type EDTF and press F4.
4. Type /home/*appuser*/.profile and press Enter. An edit session is displayed.
5. On the first line, type the following command:

   export JAVA_HOME=/QOpenSys/QIBM/ProdData/JavaVM/jdk70/64bit

   Important: Make sure that there is not a space in the first position of this line. If there is a space, the system does not recognize the proper JDK and the installation might fail.
6. Press F2.
7. Press F3.
8. Enter WRKUSRPRF to verify that the Sterling B2B Integrator user profile home directory is pointing to the /home/*appuser* directory.
9. Verify that the user id is pointing to the correct JDK:
   a. From an iSeries command line, type qsh to enter Qsh mode.
   b. Type java –version.
   c. Press Enter.

   Verify that the information listed reflects the JDK that you are using.

Upgrading Sterling B2B Integrator in an iSeries environment
To upgrade Sterling B2B Integrator, follow the steps in the *Run the Upgrade Installation Program in iSeries* topic. These steps include special instructions for

upgrading. Before running the upgrade program, refer to the *Before You Begin the Upgrade* section. After running the upgrade program, refer to the *Post Upgrade Validation* and *Post Upgrade Configuration* sections.

In the iSeries environment, you must map a network drive to the working directory for Sterling B2B Integrator. For more information, refer to the documentation on the IBM Web site.

When running the installation program (see *Run the Upgrade Installation Program in iSeries*), enter the following information exactly the same as your existing installation:
- Collection name – The name of your copied database
- IP address
- Passphrase

This upgrade changes the administrative password to the default password. After the upgrade, change the password back to the administrative password to minimize security risks. This is the Admin password for logging into the UI (/dashboard or /ws). You also need to change all other default passwords.

Untar the Sterling B2B Integrator Jar File:
About this task

The following procedure describes how to untar the Sterling B2B Integrator jar file. During the upgrade, you will reference this procedure.

Procedure
1. After the Sterling B2B Integrator jar file has been downloaded, key in `qsh` from an iSeries command line and press **Enter**.
2. Key in `set` and press the **Enter** key.

   This will list variables on the screen. Look for the QIBM_CCSID variable. It will look like QIBM_CCSID=0. Write down what it is set to.
3. Key in `export QIBM_CCSID=819` and press **Enter**.
4. Navigate to the directory where the tar file is located.
5. Key in `set` to verify that the QIBM_CCSID is set to 819.
6. Key in `tar -xvf name.of.tarfile.tar` and press **Enter**.
7. After it has performed the untar, you need to set the CCSID back.
8. Key in `export QIBM_CCSID=0` and press **Enter**, where the 0 represents the value in step 2.
9. Key in `set` and press **Enter** to verify that QIBM_CCSID is set to what it was in step 2.
10. You need to verify that the untar was successful. At this point you will still be in the directory where the SI.jar was untarred to. Key in `jar -tf SI.jar` and press **Enter**. If you get file names to scroll up on the screen, the untar worked. If you get the $ prompt back with no additional information, then the untar was not successful and you will have to untar again. You are now ready to continue with the install.

Upgrading in an iSeries environment:

You can upgrade Sterling B2B Integrator in an iSeries environment.

Before you begin

Ensure that your system is ready for the upgrade. See "Prepare Your iSeries for the Upgrade" on page 580.

Attention: Failure to properly prepare your system can cause the upgrade to fail.

If you are using the EBICS Banking Server application with Sterling B2B Integrator, the data encryption for storage within the installation location is not supported.

About this task

These instructions assume that you have downloaded Sterling B2B Integrator or a Service Pack (SP) and uncompressed the downloaded file to an empty directory. Use this directory wherever there is a reference to the installation source directory in the following instructions.

Note: To uncompress the files, see *Untar the Sterling B2B Integrator File*.

To upgrade Sterling B2B Integrator in an iSeries environment, you run an installation program. Refer to the information you recorded in the checklist and follow the steps below.

Before your upgrade installation, shut down your base installation. This will free up the port number that you used in your base installation.

Procedure
 1. Go to the installation source directory.
 2. Depending on the location of the installation source directory, choose one method. Be sure to record the absolute path that you use.
    * If the installation source directory is on your PC, copy or FTP the file SI_<*build_number*>.jar from that directory to the *absolutePath* in the IFS root or QOpenSys file system.
    * If the installation source directory is in iSeries, enter the following command on the command line: cp /qopt/SI_<build_number>.jar absolutePath/SI_<build_number>.jar
 3. Copy the file instsijar.savf from the iSeries directory to the mapped network drive. Steps 4 through 6 will download the installation programs required for the upgrade.
 4. Answer the question Is there a save file called INSTSIJAR in QGPL on your iSeries?
    * If YES, clear the save file by entering CLRSAVF FILE(QGPL/INSTSIJAR).
    * If NO, enter CRTSAVF FILE(QGPL/INSTSIJAR) to create a save file on your iSeries.
 5. Copy the instsijar.savf file that you copied in step 3 to the save file created in QGPL by entering: CPYFRMSTMF FROMSTMF('/directory/filename of the savf/) TOMBR('/QSYS.LIB/QGPL.LIB/INSTSIJAR.FILE') MBROPT(*REPLACE) CVTDTA(*NONE)
 6. Enter the following command to restore the installation objects:
    RSTLIB SAVLIB(INSTSIJAR) DEV(*SAVF) SAVF(QGPL/INSTSIJAR) MBROPT(*ALL) ALWOBJDIF(*ALL)
 7. Log in to your iSeries using the user profile you created during preinstallation.

8. Copy (back up and restore) the DB2 database for your previous version of Sterling B2B Integrator for iSeries into this version of Sterling B2B Integrator, using the following steps.

The following procedure uses Sterling B2B Integrator 5.0 as an example. Change the commands as necessary for your version of Sterling B2B Integrator.

- Ensure that no one is using Sterling B2B Integrator 5.0 or this version of the Sterling B2B Integrator database.
- The save and restore procedure must be done by the iSeries System Security Officer (QSECOFR) or by a user with *SECADM authority. To create a save file to hold your Sterling B2B Integrator 5.0 database, type:

  `CRTSAVF FILE(QGPL/SAVE50DB)`

  If the save file already exists, type in:

  `CLRSAVF FILE(QGPL/SAVE50DB)`
- Save your Sterling B2B Integrator 5.0 database into the new save file using the following command:

  `SAVLIB LIB(SI50DB) DEV(*SAVF) SAVF(QGPL/SAVE50DB)`

  SI50DB represents your Sterling B2B Integrator 5.0 database (collection).
- Create the collection again that will hold this version of the Sterling B2B Integrator database, by first signing on to your iSeries using the user profile that you will use to run Sterling B2B Integrator.
- From an iSeries command line, type STRSQL to get to an interactive SQL session.
- Type `create collection SIxxDB`.

  SIxx1DB represents this version of the Sterling B2B Integrator database.

  The create collection command creates a collection (library), called SIxxDB, that contains a journal, journal receiver, and several logical views.
- After the create command finishes, exit your SQL interactive session without saving.
- To restore your Sterling B2B Integrator 5.0 database to the same collection (library name) that you just created in step f from above, type:

  `RSTLIB SAVLIB(SI50DB) DEV(*SAVF) SAVF(QGPL/SAVE50DB) RSTLIB(SIxxDB)`

  SI50DB represents your Sterling Integrator 5.0 database.

  SIxxDB represents this version of the Sterling B2B Integrator database.

  You should receive a message similar to the following message, `### objects restored. 20 not restored to SIxxDB`.

  Note: The 20 objects that are not restored are the journal and journal receiver files. This is expected.
9. Enter `ADDLIBLE LIB(INSTSIJAR)` from an iSeries command line to add the installation programs to your library list.
10. Journaling needs to be set up appropriately on the newly copied database. To accomplish this, enter `FIXJRNS` and press **F4**. You will be prompted for old collection and new collection information, as follows:

    - If the old collection exists on the same iSeries machine as the new collection, when the restore took place, the newly restored files were journaled to the old collection. By running this command, it will un-journal the files from the old collection and journal them to the new collection.
    - If the old collection exists on a different iSeries machine and it was transferred and restored onto the iSeries box where you will be performing

the upgrade, none of the files were journaled. This command will journal the files to the new collection. When running this command, enter *NONE for the Old Collection parameter and enter the new collection in the New Collection parameter.

Based on the information above, fill in the appropriate answer for the Old Collection parameter. Key in the collection name for the new Sterling B2B Integrator system and press **Enter**. This will run interactively and correctly journal all of your physical files that have just been restored into your newly created collection that will be used in your upgrade process.

11. Enter INSTSIJAR and press **F4** to prompt the command. The system displays the list of configuration parameters needed to install Sterling B2B Integrator.

12. For each configuration parameter listed, enter the value you want to use. Refer to your notes in the preinstallation checklist.
   - Collection Name - This collection name must be the newly created collection to which you restored your old database in step 8.
   - Upgrade from the prior Sterling B2B Integrator version (*YES or *NO) - Answer *YES to this parameter to upgrade your previous version of Sterling B2B Integrator to this version of Sterling B2B Integrator. When you answer *YES to this prompt, it will convert your older copied database to this version of the database structure.
   - Sterling B2B Integrator System Passphrase - Enter this information exactly the same as in your existing installation.
   - Verify Sterling B2B Integrator System Passphrase.
   - Administrative e-mail address - It is recommended that you not change the Administrative e-mail address during an upgrade. If you change this address, you will have to update adapters, business processes and other items that include this information.
   - IP Address for SMTP Server - Enter this information exactly the same as in your existing installation.
   - TCP/IP Port Number
   - Catalog Name
   - Host IP Address
   - Sterling B2B Integrator User Profile
   - Sterling B2B Integrator User Password
   - Full Path to Sterling B2B Integrator Jar File

13. Press **Page Down** for the remaining parameters:
   - Sterling B2B Integrator install directory. Be sure to enter a complete path name.
   - Full license path name. Be sure to enter a complete path and file name.
   - JCE distribution file. Be sure to enter a complete path and file name.

14. Select License/Features, enter YES to select:
   - Sterling B2B Integrator, Sterling File Gateway, or both
   - NIST 800-131a Compliance Mode (choose ***OFF** or ***STRICT**)
   - FIPS Module
   - AS2 Edition Module
   - Financial Services Module
   - EBICS Banking Server Module

Note: Select only the licenses/features that have been defined by your IBM contract. If you are unsure which to select, the installation can proceed without making a selection and will complete successfully. Start up and operation of the software, however, requires one of the licenses to be selected. See License Modification to apply licenses post-install.

Note: Sterling File Gateway requires additional installation steps. See the *Sterling File Gateway Installation Guide* for more information

15. Verify the parameters you entered and press **Enter**.

   The installation process takes between two and three hours to complete. The installation time depends upon the size of your iSeries. Monitor the installation process to verify that no JAVA exception errors are generated.

   The install runs in batch mode. To monitor the progress of the install, use the WRKLNK command display function to view the log file (gisinstall.log). This file resides in the same directory where you placed the SI.jar file. In addition to the job you submitted, various BCI jobs, command shells, and JVMs appear and disappear in your batch subsystem. This processing is normal.

16. (Optional, but recommended) Check IBM Fix Central to see if further fix packs or interim fixes are available. If so, download and install as needed. See "Installing a fix pack or interim fix" on page 307 for instructions.

Post Upgrade Validation

Post Upgrade Validation Checklist for iSeries:

#	Post Upgrade Validation Checklist for iSeries	Your Notes
1	Start Sterling B2B Integrator (iSeries).	
2	Access Sterling B2B Integrator.	
3	Validate the Installation.	
4	Stop Sterling B2B Integrator (iSeries).	

Starting Sterling B2B Integrator (iSeries):

The startup of Sterling B2B Integrator after installation requires several steps.

Before you begin

If you are starting Sterling B2B Integrator after upgrading from version 5.1.0.4, change the values of the following properties in the `centralops.properties` file to 600. This action prevents the start command from timing out before Sterling B2B Integrator starts. The `centralops.properties` file is in the *install_dir*/install/ properties directory.

* **OpsServer.commandTimeout**
* **PassPhrase.urlTimeout**

Procedure

To start Sterling B2B Integrator in an iSeries environment:

1. Sign onto iSeries with your Sterling B2B Integrator user profile.
2. Submit a batch job by entering the following command:

   `SBMJOB CMD(QSH CMD('umask 002 ; cd install_dir/bin ; ./run.sh'))JOB(SIMAIN)`

The job queue to which you submit the command must allow at least 10 active jobs. If the maximum number of active jobs is less than 10, Sterling B2B Integrator does not start completely.

To reduce keying errors at startup, create a command language (CL) program similar to the following example:

```
PGM
SBMJOB CMD(QSH CMD('umask 002 ; cd install_dir/bin ; ./run.sh')) +
JOB(SIMAIN)
ENDPGM
```

3. Wait for the startup to complete. This process takes 10 - 15 minutes.

   Startup creates a spool file. When the startup is finished, open the QPRINT spool file and check the end of the file for a message about how to connect to Sterling B2B Integrator. For example, you might see the following type of message:

   `Open your Web browser to http://host:port/dashboard`

   where *host:port* is the IP address and port number where Sterling B2B Integrator exists on your system.

   Make a note of the address so you can access Sterling B2B Integrator later. It might take several minutes for Sterling B2B Integrator to be available from the web browser, even after the URL message is displayed.

4. Optional: To verify that Sterling B2B Integrator started normally and completely, view the system by using the WRKACTJOB command.

   Verify that the SIMAIN job ended and there are at least four QP0ZSPWP jobs (of yours) left running in your Sterling B2B Integrator batch subsystem.

5. Prepare your browser to log in to Sterling B2B Integrator. Configure your browser so that there is direct connection between the web browser and iSeries. Do not configure the browser to use any proxy server between you and iSeries (unless it is a requirement of your network).

Accessing Sterling B2B Integrator:

You can access Sterling B2B Integrator through a web browser.

Procedure

1. Open a browser window and enter the address that is displayed at the end of the start.
2. On the login page, enter the default user ID and password. The default login is at an administrative level. One of your first tasks as an administrator is to change the administrative password and to register other users with other levels of permission.

Validating the installation with a sample business process:

You can validate the installation by testing a sample business process.

Procedure

1. From the **Administration Menu**, click **Business Process** > **Manager**.
2. In the **Process Name** field, type `Validation_Sample_BPML` and click **Go!**
3. Click **execution manager**.
4. Click **execute**.
5. Click **Go!** The `Status: Success` message is displayed on the upper left side of the page.

Stopping Sterling B2B Integrator (iSeries):

Stopping Sterling B2B Integrator on iSeries requires several steps.

Procedure

To stop Sterling B2B Integrator in an iSeries environment:
1. Sign on to iSeries with your Sterling B2B Integrator user profile.
2. Enter the following commands:
   ```
   QSH
   cd /install_dir/bin
   ./hardstop.sh
   ```
   To reduce keying errors at shutdown, create a command language (CL) program similar to the following example:
   ```
   PGM
   QSH CMD('cd /install_dir/bin ; ./hardstop.sh')
   ENDPGM
   ```
3. Wait for shutdown to complete.

   The length of this process is determined by how many temporary objects must be cleaned up and how many spool files must be created.

   To ensure that you do not restart Sterling B2B Integrator before shutdown is complete, monitor shutdown through either the `ps` command in Qshell or the `WRKACTJOB` display. Verify that the five QP0ZSPWP jobs are complete and disappear.
4. Enter the `./stopDAVServer.sh` command to stop the WebDAV server.

Post Upgrade Configuration

Post Upgrade Configuration Checklist for iSeries:

#	Post Upgrade Configuration Checklist for iSeries	Your Notes
1	Upon upgrade, all default user accounts are reset to their default value. For security purposes, the system administrator should update all default user account passwords immediately after upgrade is completed. See "Changing default user account passwords" on page 40.	
2	"Download of the Sterling B2B Integrator tools" on page 43	
3	"Properties files configuration in an iSeries environment" on page 304	
4	"Performing Initial Administrative Setups in Sterling B2B Integrator" on page 596	
5	Add Third-Party Libraries	
6	Configure Services and Adapters	
7	JDBC Adapter and Lightweight JDBC Adapter	
8	File System Adapter and Command Line2 Adapters	
9	Odette FTP Adapter	
10	Restore Performance Tuning Configuration	
11	Change the Network Interface Bindings	

#	Post Upgrade Configuration Checklist for iSeries	Your Notes
12	Advanced File Transfer Tab	
13	Reconfigure Archive Settings	
14	Correct Missing Manager IDs	

Changing default user account passwords:

When you install Sterling B2B Integrator, several default user accounts are automatically created to get you started. One of the first actions you must take after installation is to update these accounts with unique passwords, because the default ones can be known by all Sterling B2B Integrator customers.

About this task

Default user account passwords are preset at installation. For security purposes, the system administrator should update all default user account passwords immediately after installation is completed.

Default user accounts are listed below in the same order as they appear in the UI under **Accounts > User Accounts > List All**. You can use this table to track the user accounts you want to update.

User Account Name	Update password
MBX_daemon	
admin (*)	
aft_user (*)	
anon	
as2_user	
commandlineuser	
dash_oper (*)	
dash_part (*)	
dash_prtspon (*)	
dash_sponsor (*)	
fg_architect	
fg_operator	
fg_provisioner	
fg_sysadmin (*)	
gmbx_user	
ja_turbine	
jane	
jane_doe	
joe_employee	
joe_manager	
joe_supplier	
john	
sd_buyer	

User Account Name	Update password
sd_supplier	
turbine	
ws_buyer	
ws_director	
ws_employee	
ws_finance	
ws_hr	
ws_manager	
ws_purchaser	
ws_supplier	

(*) denotes a super user

To change the password for a user account, perform the following tasks.

Procedure
1. Log into Sterling B2B Integrator using ID = `admin` and password = `password`.
2. Go to **Accounts > User Accounts**. Under the List section click **Go!** All default user account names are listed.
3. Click **Edit** next to the user account name you want to update the password for.
4. In the New Password and Confirm New Password fields, enter a new, secure password for this User ID.

   Note: Passwords must be at least six characters long.
5. Click **Save** and **Finish**.

What to do next

Repeat steps 3 - 5 for all user account names you want to update.

Download of the Sterling B2B Integrator tools:

After you install Sterling B2B Integrator, you can install tools like the Map Editor and the Graphical Process Modeler (GPM).

Sterling B2B Integrator includes tools that run on a desktop or personal computer. After you install Sterling B2B Integrator, you can install the following tools:
- Map Editor and associated standards

  Note: The Map Editor requires a 32-bit JDK. This JDK is not provided with the product download or media. For more information, see *System Requirements*.
- Graphical Process Modeler (GPM)
- Web Template Designer
- (If licensed) MESA Developer Studio plug-ins, including MESA Developer Studio Software Development Kit (SDK) and MESA Developer Studio Skin Editor
- (If licensed) Reporting Services, which require MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports

Attention: Conflicting IP addresses can cause problems when you download a desktop tool.

Properties files configuration in an iSeries environment:

Properties files contain properties that control the operation of Sterling B2B Integrator.

For example, the **REINIT_DB** property in the `sandbox.cfg` file controls whether a database is initialized when you install Sterling B2B Integrator.

By modifying the values of these properties, you can customize Sterling B2B Integrator to suit your business and technical needs. Most properties files are in the *install_dir*/`install/properties` directory.

After you install Sterling B2B Integrator, most properties files and scripts do not need any further configuration for basic operation. However, if you want to customize any specific operations, for example a different logging level, you need to edit (or in some cases, create) certain property or `.xml` files.

Before you change any property files, see the properties file documentation for general information about how to edit properties files.

You might need to make specific properties files changes after an installation in the following areas:
- LDAP user authentication
- Prevention of cross-site script vulnerabilities
- Logging configuration
- Process-specific property file settings

Performing Initial Administrative Setups in Sterling B2B Integrator: If you are installing Sterling B2B Integrator for the first time, you need to perform some initial administrative setups before users can use the application. For example, the system administrator for Sterling B2B Integrator must register users, grant permissions, and run several performance reports so that benchmarks are established for tuning the system in the future.

Add Third-Party Libraries:
About this task

If you added third-party libraries to configure adapters for the previous release, you need to add each of the libraries again after you complete the upgrade. See the documentation for each third party adapter you use.

Configure Services and Adapters:
About this task

You may need to reconfigure services and adapters after an upgrade. During an upgrade, packages for services and adapters are reprocessed to update the service configurations.

After an upgrade, the configurations of default adapters and services are re-set to their default configurations. This includes directory paths, which are restored to their default paths. You need to reconfigure those adapters and services, which include, but are not limited to:

- All default FTP adapters
- All default SFTP adapters
- Connect:Enterprise UNIX Server Adapter
- OdetteFTP Adapter
- SAP Suite Adapter
- SWIFTNet Client Service
- SWIFTNet Server Adapter

If you modified the standard configuration for a service or adapter, you may need to reconfigure or reactivate the service or adapter following an upgrade. You may also need to reconfigure adapters that used directories or scripts in the installation directory of your previous release.

Examples of services and adapters that commonly need to be reconfigured following an upgrade include:
- FTP adapter
- System services such as the Alert service and the BP Fault Log adapter

The following adapters need special consideration following an upgrade:
- JDBC Adapter and Lightweight JDBC Adapter
- File System Adapter and Command Line2 Adapters
- Odette FTP Adapter

Configure JDBC Adapter and Lightweight JDBC Adapter:
About this task

Storage locations of the database pool properties that allow the JDBC adapter and the Lightweight JDBC adapter to communicate with your external database have been streamlined. The poolManager.properties file has been eliminated and some of its pool properties are now included in the jdbc.properties file, along with some new properties. You will need to manually update your existing jdbc_customer.properties.in file to add some new database pool properties. If you do not have a jdbc_customer.properties.in file, create one since customer.properties are not affected by product updates.

Configure File System Adapter and Command Line2 Adapters:
About this task

You must configure your File System and Command Line2 adapters before you remove the previous release directory. Reconfigure any File System and Command Line2 adapters that were configured to use directories or scripts in the installation directory for the previous release. Ensure that you create new directories and save scripts outside of the current installation directory and edit each configuration to use the appropriate directories and scripts.

Consider the following:
- If you are using the Command Line2 adapter and have located the CLA2Client.jar file anywhere other than the default location, you must replace it with the new version. For information about the default location and how to start the Command Line2 adapter, see the *Command Line2 adapter*.
- If you are upgrading to this version of Sterling B2B Integrator from a version lower than 4.0.1 and are using the Command Line2 adapter, you must update the version of the CLA2Client.jar file with the CLA2Client.jar located in the

/install_dir/install/client/cmdline2 UNIX directory or in the
install_dir\install\client\cmdline2 for Windows. If you installed the
CLA2Client.jar file anywhere other than the default location, you must replace
each copy of the file with the new version. If you only installed it in the default
location, the update occurs automatically during the upgrade process.

- If you are upgrading to this version of Sterling B2B Integrator from a version
  prior to 4.0 and are using the Command Line adapter, you must update the
  version of the CLAClient.jar file with the CLA2Client.jar located in the
  /install_dir/install/client/cmdline2 UNIX directory or in the
  install_dir\install\client\cmdline2 for Windows. If you installed the
  CLAClient.jar file anywhere other than the default location, you must replace
  each copy of the file with the new version. If you only installed it in the default
  location, the update occurs automatically during the upgrade process.

The CLA instances are now pointing to the CLA2 Service definition. After
importing old service instances of CLA onto Sterling B2B Integrator, you need to
reconfigure the imported CLA services to re-set the Remote Name and Remote
Port service configuration parameters. For more information, refer to the
documentation for the Command Line Adapter and Command Line2 Adapter.

Configure Odette FTP Adapter:
About this task

If you use the Odette FTP Adapter and are using the Partner Profile XML file
version 2.00 used in Sterling Gentran Integration Suite 4.3, you must modify it to
match the new Partner Profile version 3.00. To modify the XML file, refer to the
following table:

Section	Name of Structure or Field	Action	Comment
Partner Profiles	<GeneralParameters> <PartnerProfileVersion>3.00 </PartnerProfileVersion> </GeneralParameters>	Use correct version label of the Partner Profile.	New Version label: 3.00
Physical Partner	Description	Add field and description content	Mandatory in OFTP Partner database
Physical Partner	SubMailbox	Add field, if used.	Optional
Physical Partner	<AuthenticationCertificate type ="..."> <Subject>string</Subject> <Issuer>string</Issuer> <Serial> Bignumber_string </Subject> </AuthenticationCertificate>	Add Structure, if used.	OFTP 2.0: Mandatory for security only. Structure may be repeated.

Section	Name of Structure or Field	Action	Comment
Physical Partner	<AuthenticationCertificate type ="Private Key"> <Subject>string</Subject> <Issuer>string</Issuer> <Serial>Bignumber_string </Subject> </AuthenticationCertificate>	Add Stucture, if used.	OFTP 2.0: Mandatory for security only.
Physical Partner/ CAPI	DWindowSize	Delete field	
Physical Partner/ IP	IPFilter		Uses IPv4 or IPv6 addresses.
Physical Partner IP	SSL	Add field, if used.	OFTP 2.0: Mandatory for security only.
Physical Partner IP	CipherStrength	Add field, if used.	OFTP 2.0: Mandatory for security only.
Physical Partner IP	<SSLCertificate type ="..."> <Subject>string</Subject> <Issuer>string</Issuer> <Serial> Bignumber_string </Subject> </SSLCertificate>	Add structure, if used.	OFTP 2.0: Mandatory for security, only. Structure may be repeated.
Physical Partner Contract	Description	Add field and description content.	Mandatory in OFTP Partner database.
Physical Partner Contract	MultipleLoginSessions		Now used.
Physical Partner Contract	DuplicateFilePeriod	Rename DuplicateFileProcessingTestings To DuplicateFilePeriod	
Physical Partner Contract	SessionLogLevel	Add fields.	Optional
Physical Partner Contract	GroupNameList	Add fields, if used.	Optional
Physical Partner Contract	SecureAuthentication	Add fields.	OFTP 2.0: Mandatory
Physical Partner Contract	<TimeScheduleTable> ... <TimeScheduleTable>	Delete structure and create schedules in the Scheduler.	Initiator Business Process and Business Process user fields are still used.
Physical Partner Contract	OdetteFTPAPILevel	Rename OdetteAPILevel to OdetteFTPAPILevel	

Section	Name of Structure or Field	Action	Comment
Logical Partner	Description	Add field and description content.	Mandatory in OFTP Partner database.
Logical Partner	<FileServiceCertificate type ="...">` <Subject>string</Subject> <Issuer>string</Issuer> <Serial>string</Subject> </FileServiceCertificate>	Add structure, if used.	OFTP 2.0: Mandatory for security, only. Structure may be repeated.
Logical Partner Contract	Description	Add field and description content.	Mandatory in OFTP Partner database.
Logical Partner Contract	FileTransmissionRetries	Rename FileTransmitRetries to FileTransmissionRetries	
Logical Partner Contract	SignedEERPRequest	Add field, if used.	
Logical Partner Contract	EERP/NERPSignatureCheck	Add field, if used.	
Logical Partner Contract	File Signing	Add field, if used.	
Logical Partner Contract	File Encryption	Add field, if used.	
Logical Partner Contract	CipherSuite	Add field, if used.	
Logical Partner Contract	File Compression	Add field, if used.	
Logical Partner Contract	CharEncoding	Add field, if used.	
Logical Partner Contract	Receive VitualFilenamePattern	Add field, if used.	
Logical Partner Contract	EERPTimeout	Rename WaitForEERP to EERPTimeout	
Logical Partner Contract	FileScheduleTimeout	Add field, if used.	
Logical Partner Contract	InboundBusinessProcess	Add field, if used.	Optional
Logical Partner Contract	InboundBusinessProcessUser	Add field, if used.	Optional, if no Inbound business process is specified.

After changing the Partner Profile for version 3.00, import the Partner Profile into the new Odette FTP Partner Profile database. For additional information, see Odette FTP Partner Profile.

Restore Performance Tuning Configuration (iSeries):
About this task

To restore your original performance tuning configuration to the new release, use the Performance Tuning Wizard. You use the wizard to re-enter the settings you saved earlier.

To restore the performance tuning configuration:

Procedure

1. From the **Administration Menu**, select **Operations > System > Performance >Tuning**.
2. Under **Edit**, click **Go!**
3. Click **Edit settings**.
4. Complete the Performance Tuning Wizard, using the settings you obtained from the previous release.

Changing the network interface bindings:

To increase the security of the Administrator Console user interface, Sterling B2B Integrator binds only to specific network interfaces.

About this task

After installing, if the URL returns the error message `Page cannot be displayed`, you can adjust the property settings to correct the problem.

Procedure

To change the network interface bindings:
1. On the server where Sterling B2B Integrator resides, edit the `noapp.properties_platform_ifcresources_ext.in` file.
2. Locate the **admin_host** parameter:
   - Where *hostname1* is the name of primary network interface, which is the one given highest priority by Sterling B2B Integrator.
   - Where *localhost* is the name of the network interface on the server where Sterling B2B Integrator resides.

   `admin_host.1 = hostname1`

   `admin_host.2 = localhost`
3. If no interface is being displayed, edit *hostname1* so that it correctly identifies the primary network interface that accesses Sterling B2B Integrator.
4. If an additional network interface needs to access Sterling B2B Integrator, add an additional `admin_host` entry. For example:
   - `admin_host.1 = hostname1`
   - `admin_host.2 = localhost`
   - `admin_host.3 = hostname2`
5. Stop Sterling B2B Integrator.
6. Open the *install_dir*/install/bin directory.
7. Enter the `setupfiles.sh` command.
8. Restart Sterling B2B Integrator.

Add Advanced File Transfer Tab:
About this task

The Advanced File Transfer tab will not be enabled by default after an upgrade. If you have a license for Advanced File Transfer, perform the following steps to add the Advanced File Transfer tab:

Procedure
1. Log in as **Admin**.
2. Click **Manage Layout**.
3. Click **Add Pane**.
4. Enter the following name: `Advanced File Transfer`
5. Click **Apply**.
6. Click the **customize** icon for the new **Advanced File Transfer** tab.
7. Click **Add Portlet**.
8. Select the Add box for **Advanced File Transfer Management**.
9. Click **Apply**.
10. Select **Clear Borders and Title** from the Decoration menu.
11. Click **Save and Apply**.

Reconfigure Archive Settings:
About this task

The upgrade does not automatically reconfigure the archive configuration. You must reconfigure the Backup Directory setting in Archive Manager after an upgrade.

To reconfigure your Archive settings, use the following procedure:

Procedure
1. From the **Administration Menu**, select **Operations** > **Archive Manager**.
2. Next to **Configure Archive Settings**, click **Go!**
3. If a message displays about the UI Lock, click **OK** to continue.
4. Click **Next**.
5. Update the Backup Directory field with the correct path information:
6. Click **Save**.
7. Confirm the settings and click **Finish**.

Correct Missing Manager IDs:
About this task

If you created a Manager ID with no corresponding User ID in your previous version, the Manager ID may be missing after upgrading. If this occurs, create a user in the system with a User ID that matches the missing Manager ID.

Installation Maintenance

Determining the need for a fix pack in an iSeries environment:

Fix packs contain cumulative fixes for a specific version of Sterling B2B Integrator.

About this task

Fix packs are available on IBM Fix Central. Because each fix pack contains the fixes from previous fix packs, you need to install only the most recent fix pack.

Information about a fix pack is in a PDF file with a similar name to the fix pack, and is available for download with the fix pack JAR file.

Before you install the fix pack, review the following items:

- Preserve your custom changes to system resources.
- The fix pack installation might use one or more fix pack property override files. Do not alter these files.
- Property changes made directly in `.properties` or `.properties.in` files might be overwritten during the fix pack installation. Properties that are overridden by the `customer_overrides.properties` file are not affected. IBM recommends that you maintain property file changes by using (when possible) the `customer_overrides.properties` file. For more information, see the documentation for using the `customer_overrides.properties` file.
- If you edited any of the `cdinterop` files, you must back them up before you apply the fix pack. The `cdinterop` files do not have initialization (`.in`) files. After you apply the fix pack, use the backup version of the files in your upgraded installation. These files include the following files:
  - `cdinterop-proxy-records.properties`
  - `cdinterop-spoe-auth.properties`
  - `cdinterop-spoe-policy.properties`
  - `cdinterop-user-records.properties`
- Information about the upgraded installation is automatically logged to the `/install_dir/install/logs/InstallService.log` file.
- If you need to roll back a fix pack, see "Fix Pack Changes Report" on page 309.
- During fix pack installation, the **dbVerify** utility compares the list of standard indexes with the indexes that are present in the database and drops the custom indexes. Recreate the custom indexes after the fix pack installation is complete.

Installing a fix pack or interim fix:

When available, you should install fix packs or interim fixes for Sterling B2B Integrator in iSeries to keep your system current.

Procedure

To install the latest fix pack or interim fix for Sterling B2B Integrator in an iSeries environment:

1. Open the IBM Fix Central website.
2. Download the most recent fix pack or interim fix for your version of Sterling B2B Integrator and record the absolute path to the downloaded file. Do not rename the file. If you use FTP, you must use Binary mode.
3. Log in to the server where Sterling B2B Integrator is installed with the user ID and password that was used for the installation.
4. Stop Sterling B2B Integrator.
5. Perform a full backup of the Sterling B2B Integrator installation directory, including all subdirectories.
6. Perform a backup of the database.
7. If you edited any property files, ensure that the associated `.properties.in` files have the most current changes. Property files are overwritten with the contents of the associated `.properties.in` files during the installation.
8. Sign on with your Sterling B2B Integrator user profile and enter into the QSH (Qshell) mode.
9. In QSH, navigate to the `/install_dir/bin` directory where `install_dir` is the Sterling B2B Integrator installation directory.

10. Enter:

    `./InstallService.sh <path>/<file_name>`

    Where:

    > `<path>` is the fully qualified path to the fix pack or interim fix file

    > `<file_name>` is the name of the fix pack or interim fix file

    If the fix pack or interim fix attempts to modify the database schema and the modification fails, you receive an error message about the failure. The message provides the error message code from the database and the SQL command that failed. The failure information is also logged to the `system.log` file (in the `/install_dir/install` directory) and to the fix `pack.log` file.

    Attention: Running **InstallService.sh** removes any previously installed interim fix to prevent conflicts with what is being installed.

11. Press **Enter** to continue.

    Information about the fix pack or interim fix is displayed. After the fix pack or interim fix is applied, the following message is displayed:

    `Deployment to application server successful`

    When the **$** is displayed, the process completes.

12. Start Sterling B2B Integrator.

Preserving custom changes for system resources:

When you update Sterling B2B Integrator, you can preserve your custom changes to system resources like workflow definitions and maps.

About this task

During updates, the system can identify when you make a custom change to Sterling B2B Integrator versus a change through an upgrade or fix pack.

When a fix pack, installation or upgrade is performed, a baseline record of system resources is created. This baseline is not affected by any subsequent customer changes. When another fix pack is installed, the resources in this baseline are compared to the resources in the existing system. If a baseline and existing resource are not the same, that means that the existing resource was customized and was not overwritten by the fix pack.

During an update, the baseline is updated with new system resource information, but not with custom changes to resources.

DB Checksum tool:

A checksum is a simple redundancy check used to detect errors in data.

In Sterling B2B Integrator, a verification process compares the checksum between the existing default resource and the resource that was added after applying a fix pack or upgrading. The DB Checksum tool, a resource difference tool generates a granular report of the changes in the system that was not permitted to be set as defaults.

The DB Checksum tool generates the difference in resource checksum between the default resource and the latest system resource from the database.

Performing a checksum:

Use a command to run the DB Checksum tool.

Procedure

To run the DB Checksum tool:
1. Open the */install_dir*/install/bin directory.
2. Enter the following command:
   ```
   ./db_checksum_tool.sh [-d] [-i [1 | 2 | 3 | 4 | 5]]
   [-r [wfd | map | schema | sii | template]] [-o <output file>] [-g]
   ```
   Where:
   - -d is the mode to dump the difference of resource checksum between the default resource and latest system resource.
   - -i is the resource type integer (optional).
   - 1 is WFD.
   - 2 is MAP.
   - 3 is SCHEMA.
   - 4 is SII.
   - 5 is TEMPLATE.
   - -r is the resource name (optional). For example, wfd, map, schema, sii, or template.
   - -o is the file name to output all the messages (optional).
   - -g is the file name that lists all the ignored resources (optional).
   - -h is the help screen.

   The DB Checksum tool performs the relevant checksum operation that is based on the command options and generates the output message.

Fix Pack Changes Report:

The Fix Pack Changes Report is used to obtain information if you need to roll back a fix pack.

The fix pack report can be found in the installation directory fix pack_reports folder. The report contains the following fix pack information:
- Fix pack ID
- Fix pack changes
- Number of files deleted
- Number of JAR files removed
- Number of JAR files added
- Number of files added
- Number of files changed
- Number of properties added
- Number of business processes added
- Number of service instances added
- Number of service definitions added
- Number of templates added
- Number of reports added
- Number of maps added

- Number of schemas added
- Number of business rules added

For example, the installation directory `fix pack_reports` folder contains the `fix pack_Report.html` file. When you open this file, you can view the fix pack information.

Example: Fix Pack Changes Report:

The Fix Pack Changes Report includes both summary and detailed report information.

The following is an example of a Fix Pack Changes Report:

```
Summary of Changes
Fix Pack ID: Platform_2.0
Fix Pack Changes: 1287
Number of Files Deleted: 0
Number of JARs Removed: 2
Number of JARs Added: 0
Number of Files Added: 3
Number of Files Changed: 3
Number of Properties Added: 4
Number of BPs Added: 4
Number of Service Instances Added: 2
Number of Service Definitions Added: 3
Number of Templates Added: 0
Number of Reports Added: 0
Number of Maps Added: 3
Number of Schemas Added: 3
Number of Business Rules Added: 0
_____
List of JARs Removed:
JAR Removed: /SAMPLE_INSTALL_1/jar/jaf/1_0_2/activation.jar
Time: Wed May 13 15:23:08 EDT 2009
JAR Removed: /SAMPLE_INSTALL_1/jar/commons_logging/1_0_3/commons-logging-api.jar
Time: Wed May 13 15:23:08 EDT 2009
_____
List of Files Added:
File Added: /SAMPLE_INSTALL_1/bin/sql/fix_db2_schema.sql
Time: Wed May 13 15:21:30 EDT 2009
File Added: /SAMPLE_INSTALL_1/bin/sql/fix_db2iseries_schema.sql
Time: Wed May 13 15:21:30 EDT 2009
File Added: /SAMPLE_INSTALL_1/bin/errorQueueManager.sh.in
Time: Wed May 13 15:21:30 EDT 2009
_____
List of Files Changed:
File Changed: /SAMPLE_INSTALL_1/properties/lang/en/Reports_en.properties
File Changed: /SAMPLE_INSTALL_1/properties/lang/es/Reports_es.properties
File Changed: /SAMPLE_INSTALL_1/properties/lang/fr/Reports_fr.properties
_____
List of Properties Added:
Property Added: /SAMPLE_INSTALL_1/properties/filesToRemove.txt
Property Added: /SAMPLE_INSTALL_1/properties/filesToRemove.txt.in
Property Added: /SAMPLE_INSTALL_1/properties/csr.properties.sample
Property Added: /SAMPLE_INSTALL_1/properties/csr.properties.sample.in
_____
List of BPs Added:
BP Added: Schedule_AssociateBPsToDocs.bpml version: 4
Time: Wed May 13 15:23:07 EDT 2009
BP Added: Recovery.bpml version: 17
Time: Wed May 13 15:23:07 EDT 2009
BP Added: Schedule_AutoTerminateService.bpml version: 10
Time: Wed May 13 15:23:07 EDT 2009
BP Added: Schedule_DBMonitorService.bpml version: 1
```

```
Time: Wed May 13 15:23:08 EDT 2009
_____
List of Service Instances Added:
Service Instance Added: RetentionProcessor version: 2
Time: Wed May 13 15:23:28 EDT 2009
Service Instance Added: MESAHttpServerAdapter version: 1
Time: Wed May 13 15:25:11 EDT 2009
_____
List of Service Definitions Added:
Service Definition Added: LockServiceType
Time: Wed May 13 15:22:58 EDT 2009
Service Definition Added: XAPIServiceType
Time: Wed May 13 15:22:59 EDT 2009
Service Definition Added: CleanLockServiceType
Time: Wed May 13 15:22:59 EDT 2009
_____
List of Templates Added:
Template Added: Normalize
Time: Wed May 13 15:23:26 EDT 2009
Template Added: Derive
Time: Wed May 13 15:23:26 EDT 2009
_____
List of Maps Added:
Map Added: IBMPutResponseToXML
Time: Wed May 13 15:24:05 EDT 2009
Map Added: http_headers
Time: Wed May 13 15:24:36 EDT 2009
Map Added: OracleHttpHeaders
Time: Wed May 13 15:24:51 EDT 2009
_____
List of Schemas Added:
Schema Added: E5_V20_Acknowledge_Result.dtd from file: E5_V20_Acknowledge_Result
Time: Wed May 13 15:24:36 EDT 2009
Schema Added: E5_V20_Acknowledge_Submit.dtd from file: E5_V20_Acknowledge_Submit
Time: Wed May 13 15:24:36 EDT 2009
Schema Added: E5_V20_APIs_Result.dtd from file: E5_V20_APIs_Result
Time: Wed May 13 15:24:36 EDT 2009
```

License modifications:

After the installation finishes, you can modify the software licenses that you
loaded with the **AddLicenseSet** command.

The **AddLicenseSet** command is in the `bin` directory of your UNIX or Windows
installation. After the initial installation, the license files are in the following
directories:

- UNIX - /*install_dir*/install/properties/licensefiles
- Windows - *install_dir*\install\properties\licensefiles
- iSeries - /*install_dir*/properties/licensefiles

You can add licenses or review the license list from the UI. On the Administration
Menu, click **System** > **B2B Console** > **Operations** > **System** > **Licenses**.

AddLicenseSet Command Parameters

Use the **AddLicenseSet** command to modify a single license file or the entire license
file directory.

To use the **AddLicenseSet** command, you must do the following:
- Open the `bin` directory
- Include the absolute path to the license file directory or to a license file

The **AddLicenseSet** command has the following parameters:

AddLicenseSet Parameter	Description

`-reload`	Use this parameter to reload the license files.
	
	This parameter deletes all of the license files from the database before the new files are loaded. The old license files are saved to the following locations:
	• UNIX - */install_dir*/install/logs/security/
	  old_licenses
	• Windows - *install_dir*\install\logs\security\\
	  old_licenses
	• iSeries - */install_dir*/logs/security/old_licenses

`-upgrade`	Use this parameter during an upgrade only. This parameter deletes all of the old license files from the database and installs the new license files. The old license files are saved to the following locations: • UNIX - */install_dir*/install/logs/security/upgrade • Windows -*install_dir*\install\logs\security\upgrade • iSeries -/*install_dir*/logs/security/old_licenses

The **AddLicenseSet** command will check if Sterling B2B Integrator is running. If it is running, the command will call the Ops server to refresh the license from the database. If you have any problems with your licenses after running the **AddLicenseSet** command, stop and restart Sterling B2B Integrator.

License Modification: Examples:

There are several different ways you can use the **AddLicenseSet** command to modify your licenses.

UNIX Examples

From the *install_dir*/bin directory:

Scenario	Command usage (UNIX example)
Reload a single license file	`./AddLicenseSet.sh /install_dir/install/properties/` `licensefiles/SI_SFG_License.xml -reload`
Reload all of the license files in the directory	`./AddLicenseSet.sh /install_dir/install/properties/` `licensefiles/ -reload`
Upgrade a single license file	`./AddLicenseSet.sh /install_dir/install/properties/` `licensefiles/SI_SFG_License.xml -upgrade`
Upgrade all of the license files in the directory	`./AddLicenseSet.sh /install_dir/install/properties/` `licensefiles/ -upgrade`

Windows Examples

From the *install_dir*\bin directory:

Scenario	Command usage (Windows example)
Reload a single license file	`AddLicenseSet.cmd\install_dir\install\properties\` `licensefiles\SI_SFG_License.xml -reload`

Scenario	Command usage (Windows example)
Reload all of the license files in the directory	`AddLicenseSet.cmd\`*`install_dir`*`\install\properties\` `licensefiles\ -reload`
Upgrade a single license file	`AddLicenseSet.cmd\`*`install_dir`*`\install\properties\` `licensefiles\SI_SFG_License.xml -upgrade`
Upgrade all of the license files in the directory	`AddLicenseSet.cmd\`*`install_dir`*`\install\properties\` `licensefiles\ -upgrade`

Updating your JDK on iSeries

Sometimes you need to update the JDK used by Sterling B2B Integrator.

To update from the classic JDK 1.6 to J9 JDK 1.6 or from J9 JDK 1.6 to J9 JDK 1.7, begin by stopping Sterling B2B Integrator.

To stop Sterling B2B Integrator on iSeries, in QSH, run the command: **`./hardstop.sh`**.

Then perform the following steps as needed:
1. "Preparing the user profile for the new JDK" on page 313
2. "Downloading the JDK Update Files" on page 314
3. "Running the Update JDK Program" on page 314

Preparing the user profile for the new JDK:

The Sterling B2B Integrator user profile must be set up to point to the correct JDK.

About this task

Perform the following steps if you are going from the Classic JDK 1.6 to the J9 JDK 1.6 or to J9 JDK 1.7. This will point your Sterling B2B Integrator user profile to the appropriate JDK:

Procedure
1. Log on to the Sterling B2B Integrator user profile.
2. Create a home directory for the Sterling B2B Integrator user profile.
   a. From an iSeries command line, enter: `MKDIR /home/`*`appuser`*, where *appuser* represents theSterling B2B Integrator user profile.

      If the home directory for your Sterling B2B Integrator user profile already exists, ignore this step.
   b. Enter `EDTF` and press **F4**.
   c. Enter `/home/`*`appuser`*`/.profile` and press **Enter**. An edit session is displayed.
   d. If you are converting to J9 JDK 1.6, enter the following on the first line:
      `export JAVA_HOME=/QOpenSys/QIBM/ProdData/JavaVM/jdk60/64bit`
   e. If you are converting to J9 JDK 1.7, enter the following on the first line:
      `export JAVA_HOME=/QOpenSys/QIBM/ProdData/JavaVM/jdk70/64bit`
   f. Press **F2**, then **F3** to save and exit.
3. Log off and then log back on.

Results

The Sterling B2B Integrator user profile should now be pointing to the correct JDK.
To verify, perform the following steps:

1. At the iSeries command line, key in `qsh` and press **Enter**.
2. Key in `java –version` to verify that it displays the correct JDK version.

Downloading the JDK Update Files:

You will need to download some files to update your Sterling B2B Integrator JDK
on iSeries.

About this task

To download the upgrade files necessary for upgrading your Sterling B2B
Integrator JDK:

Procedure

1. Is there a saved file named `UPDJDKSAVF` in QGPL on your iSeries?
   - **Yes** - Enter `CLRSAVF FILE(QGPL/UPDJDKSAVF)` to clear the save file from your
     iSeries.
   - **No** - Enter `CRTSAVF FILE(QGPL/UPDJDKSAVF)` to create a save file on your
     iSeries.
2. Copy the `UPDJDKSAVF` file from *Sterling B2B Integrator Installation
   Directory*/bin/updjdksavf to the save file created in QGPL by entering:
   CPYFRMSTMF FROMSTMF(`*Sterling B2B Integrator Installation
   Directory*/bin/updjdksavf') TOMBR(`/QSYS.LIB/QGPL.LIB/
   UPDJDKSAVF.FILE') MBROPT(*REPLACE) CVTDTA(*NONE)
3. To restore the upgrade objects, enter: `RSTLIB SAVLIB(UPDATEJDK) DEV(*SAVF)`
   `SAVF(QGPL/UPDJDKSAVF)`
4. To add the installation programs to your library list, enter: `ADDLIBLE`
   `LIB(UPDATEJDK)`

Running the Update JDK Program:

Run the Update JDK program to update your Sterling B2B Integrator JDK on
iSeries.

About this task

To run the Update JDK program in iSeries:

Procedure

1. Key in `UPDATEJDK` from an iSeries command line and press **F4**.
2. For the SI Installation Directory parameter, enter your Sterling B2B Integrator
   installation directory.
3. For the JDK switching from parameter:, enter:
   - 1 - If you are currently using the Classic JDK 1.6
   - 2 - If you are currently using the J9 JDK 1.6
4. For the New JDK parameter:, enter:
   - 1 - If you are upgrading to the J9 JDK 1.6
   - 2 - If you are upgrading to the J9 JDK 1.7

5. Press **Enter**
6. From an iSeries command line, enter `qsh` to enter into the qshell mode.
7. Change to your Sterling B2B Integrator *installdir*/bin directory.
8. Enter `./setupfiles.sh`. This changes the preliminary files to the new JDK.
9. Key in `./deployer.sh` and press **Enter**. This will change the remaining property files and point Sterling B2B Integrator to the new JDK location.

Results

Your JDK is now updated and you are ready to start Sterling B2B Integrator.

Moving Sterling B2B Integrator to another iSeries
You can move Sterling B2B Integrator from one iSeries to another.

About this task

To move Sterling B2B Integrator to a different iSeries:

Procedure
1. On the old iSeries, perform the following steps:
   a. Ensure that Sterling B2B Integrator has been stopped.
   b. Create a save file to hold the database using the following command: `CRTSAVF` *mylib*/SIDBASE
   c. Create a save file to hold the install directory using the following command: `CRTSAVF` *mylib*/INSTALLDIR
   d. Save the database with the following command: `SAVLIB LIB(`*dbname*`) DEV(*SAVF) SAVF(`*mylib*`/SIDBASE)`, replacing *dbname* with the collection name of the production Sterling B2B Integrator instance.
   e. Save the install directory using the following command: `SAV DEV('/QSYS.LIB/`*mylib*`.LIB/INSTALLDIR.FILE') OBJ(('/`*installdir*`'))`, replacing installdir with the installation directory of production Sterling B2B Integrator instance.
2. On the new iSeries, create a Sterling B2B Integrator user profile that matches the user profile from your old iSeries. Set up the correct JDK for this new profile.
3. On the new iSeries, sign on with your Sterling B2B Integrator user id and password. Then perform the following steps:
   a. Create a save file to hold the database using the following command: `CRTSAVF` *mylib*/SIDBASE
   b. Create a save file to hold the install directory using the following command: `CRTSAVF` *mylib*/INSTALLDIR
   c. Create a collection for the new database.
      1) Key in `STRSQL` and press **Enter**.
      2) On the interactive sql line, key in `CREATE COLLECTION` *newcoll* , replacing *newcoll* with the name of the collection from your old Sterling B2B Integrator database collection.
      3) Press **Enter**.
      4) Once created, press **F3** and select option **1** to exit.
   d. FTP the two save files from the old iSeries to the new iSeries box to the target box For example:
      • `Get` *mylib*/SIDBASE *mylib*/SIDBASE

- Get *mylib*/INSTALLDIR *mylib*/INSTALLDIR

e. Restore the database into the new collection with the following command:
    RSTLIB SAVLIB(*dbname*) DEV(*SAVF) SAVF(*mylib*/SIDBASE) RSTLIB(*newcoll*)

f. Restore the production Sterling B2B Integrator instance into a new location
    with the following command: RST DEV('/QSYS.LIB/*mylib*.lib/
    INSTALLDIR.FILE') OBJ(('/*installdir*')) replacing *installdir* with the
    installation directory where the production instance of Sterling B2B
    Integrator resided on the old iSeries.

g. Once the installation directory has been restored, update the following in
    the *installdir*/properties/sandbox.cfg file, if applicable.
    - IP address
    - Host name
    - User ID and Password

h. If you are not updating the jdk at this point, from QSH:
    1) Change to your Sterling B2B Integrator *installdir*/bin directory.
    2) Key in ./setupfiles.sh

Results

This completes the process of moving your Sterling B2B Integrator instance.

Setting up a new iSeries for Sterling B2B Integrator

You may set up Sterling B2B Integrator on a new iSeries.

About this task

To set up Sterling B2B Integrator on a new iSeries:

Procedure

1. Setting up the domain is very important. From an iSeries command line, key in:
    GO CFGTCP You will then need to set up three different option screens.

2. Option 1 - Work with TCP/IP interfaces. On this screen, you need to have the
    IP address for the box as well as a loopback entry. Here is an example screen:

    ```
    Work with TCP/IP Interfaces        System:   NOGO
    Type options, press Enter.
      1=Add   2=Change   4=Remove   5=Display 9=Start   10=End
        Internet        Subnet          Line            Line
    Opt  Address         Mask            Description     Type
        xx.xx.xxx.xx    xxx.xxx.xxx.x   ETHLINE01       *ELAN
        xxx.x.x.x       xxx.x.x.x       *LOOPBACK       *NONE
    ```

3. Option 10 - Work with TCP/IP Host Table Entries You also need to set up your
    IP address and loop back entry here. This is where you put in the host name.
    Here is a sample of an iSeries box with the name of NOGO. You may also have
    a few extra entries for other boxes as well.

    ```
    Work with TCP/IP Host Table Entries   System:   NOGO
    Type options, press Enter.
      1=Add    2=Change   4=Remove    5=Display  7=Rename
        Internet        Host
    Opt  Address         Name
        xx.xx.xxx.xxx   hostname.xxx.mysite.com
                                hostname
        xx.xx.xxx.xx    OTHERBOX5
        xx.xx.xxx.xxx   hostname-old
        xxx.x.x.x       LOOPBACK
                                LOCALHOST
    ```

4. The last one to set up is option 12 - Change TCP/IP Domain. Here you identify the host name and the domain name. Here is an example of this screen:

```
                 Change TCP/IP Domain (CHGTCPDMN)
Type choices, press Enter.
 Host name  . . . . . . . . . .    'hostname'
 Domain name  . . . . . . . . .    'domain.MYSITE.COM'
 Domain search list . . . . . .    'domain.mysite.com workstn-qa.local
                                    sci.localdomain.mysite.com'
 Host name search priority  . . .   *LOCAL *REMOTE, *LOCAL, *SAME
 Domain name server:
   Internet address . . . . . . .   'xxx.xx.xxx.xx'
```

This screen has caused issues in the past with the Domain name server (Internet address). If the DNS server is old and doesn't recognize IPv6, then having IP addresses in this field can cause serious issues and your Sterling B2B Integrator instance will not start up. If this occurs, remove the IP addresses from the domain name server internet address field.

Uninstall the Software

Uninstalling Sterling B2B Integrator from an iSeries Environment:

When you uninstall Sterling B2B Integrator, the software is automatically removed from the server.

Procedure

To uninstall the software from an iSeries environment:
1. Stop Sterling B2B Integrator and wait for the shutdown to complete.
2. Sign onto iSeries with your Sterling B2B Integrator user profile.
3. In QSH, change to the directory above the installation directory. For example, if the installation directory is /product/SI_Install, then change to the /product directory.
4. Remove the installation directory by entering the following command:

   rm -rf *install_dir*
5. Wait for the command line to return.
6. Select **F3 exit from Qshell**.
7. Enter DLTLIB *<collection name>*. For example, DLTLIB (Sterling B2B Integrator)DB. The following kind of messages are displayed:

   Receiver QSQJRN0001 in (Sterling B2B Integrator)DB never fully saved. (I C).
8. Enter I to one or more of these messages until the library is deleted.
9. After you remove the software from the server, you can remove Eclipse and any tools that were downloaded to the desktop, including the following tools:
   - Map Editor and associated standards. Refer to the *Map Editor Guide* for information about removing the Map Editor.
   - Graphical Process Modeler. Refer to the *Graphical Process Modeler Guide* for information about removing the Graphical Process Modeler.
   - Web Template Designer. Refer to the *Web Extensions Guide* for information about removing the Web Template Designer.
   - (If licensed) MESA Developer Studio plug-ins, including the following tools:
     – MESA Developer Studio Software Development Kit (SDK).
     – MESA Developer Studio Skin Editor.

     Refer to the *MESA Developer Studio* guide for information about removing MESA Developer Studio.

- (If licensed) Reporting Services, which require MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports. Refer to the *MESA Developer Studio* guide for information about removing Reporting Services.

User Documentation

User Documentation:

The user documentation is available from an online documentation site on the web.

Providing the documentation in an online environment allows for frequent updates of content that is based on user feedback and usability.

If you need a printed copy of the documentation, you can print topics of information through your Internet browser, or you can download documents in PDF format, after you add it to a collection on IBM Knowledge Center.

To access the documentation site from within Sterling B2B Integrator or one of its tools, select the help ⊚ icon. The system must reside on a computer that supports Internet access and an Internet browser.

Improving your access to online documentation:

You can improve your access to online documentation by using several methods.

About this task

After you access the IBM Knowledge Center, you can perform the following tasks:
- Enter a word or phrase and search the entire library for information.
- Move through a hierarchy of contents pages to identify the topic you want to read or print.
- Print topics by using your browser's Print function.
- Add documents to your collection and download them in PDF format.

Troubleshooting Tips

Installation and upgrade troubleshooting tips: iSeries environment:

If you have trouble while installing or upgrading Sterling B2B Integrator on iSeries, different troubleshooting techniques are available.

Situation	Message or Symptom	Explanation/Resolution
Installing a desktop tool or resource	Cannot download any of the following tools: **Note:** MESA Developer Studio and Reporting Services are optional features that are purchased separately from Sterling B2B Integrator. These features each require a separate license in addition to your license for Sterling B2B Integrator. • Map Editor and associated standards • Graphical Process Modeler • Web Template Designer • (If licensed) MESA Developer Studio plug-ins (Software Development Kit (SDK), Skin Editor) • (If licensed) Reporting Services, which require MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports	**Explanation** When you install Sterling B2B Integrator, system files are created that contain an internal IP address. If you install Sterling B2B Integrator behind a firewall, and your firewall is configured to accept an external IP address from a client computer, you might not be able to download the desktop tools and resources. The firewall rejects the IP address from a client that exists outside of the firewall. **Resolution** Modify the system files that contain the invalid IP address: 1. Open the */install_dir*/bin directory. 2. Stop Sterling B2B Integrator. 3. Enter the following command followed by the external IP address: `patchJNLP.sh external_IP address` 4. Restart Sterling B2B Integrator.
Accessing	Attempts to access the URL for Sterling B2B Integrator display the message: Page cannot be displayed.	**Resolution** Change the Network Interface Bindings.

Situation	Message or Symptom	Explanation/Resolution
Stopping	Ending jobs from Sterling B2B Integrator when a hardstop is not successful.	**Explanation** There was a problem during the installation process or the subsystem was not defined correctly. **Resolution** 1. Enter `WRKACTJOB` and locate the job that did not end successfully. 2. Press F11 twice to obtain the job number that you want to end. 3. Press F3 to end the WRKACTJOB panel. 4. Enter `QSH` to enter Qshell mode. 5. Enter `ps` and press Enter. 6. Locate the pid number that corresponds to job number from the WRKACTJOB panel. 7. Enter `kill -kill <pid number>` `kill -kill <pid number>`. 8. Review the installation log to determine the error and resolution. 9. If the error is due to a problem with the installation, then delete the installation directory and install the software again. 10. If the error is due to the job queue having 1 as the maximum number of active jobs in the subsystem, then either change the subsystem that you start Sterling B2B Integrator in, or change the number of maximum active jobs.

Situation	Message or Symptom	Explanation/Resolution
e-Invoice Upgrade: Oracle Add Constraint Error	When you upgrade Sterling e-Invoicing and are using an Oracle database, the upgrade fails with the error message name is already used by an existing object. This error occurs because the default behavior for the **drop constraint** command changed in Oracle 10. The index that is used to support the constraint is only removed if the index was generated by the **create constraint** command. The indexes for Sterling e-Invoicing are always generated from constraints during an installation. If you receive this error during a Sterling e-Invoicing upgrade, it is because of how the database was restored, the version of Oracle you are using, and because the Oracle **imp** command exported the indexes and constraints separately. There is no way to determine when the **imp** command does not add a **create index** command to the export file if it was generated by a constraint. But if it does add the command, the database restore process loses the association of the constraint and its underlying index. The database script that runs during a Sterling e-Invoicing upgrade runs two steps: 1. The script drops the unique constraint so the next step can redefine it using additional columns. However, the drop constraint command does not remove the underlying index if the association with its index was lost. 2. The next command that redefines this constraint requires a different index definition, but in this scenario the name of the index the constraint wants to use exists, which causes the error name is already used by an existing object.	**Resolution** If you receive this error message, the solution for this problem is to drop the index and rerun the Sterling e-Invoicing upgrade. The drop index command that you should use is: drop index UNQ_EINV_CANON

Installing or updating with a response file (V5.2.6 or later)

You can install or update (apply fix pack or interim fix) Sterling B2B Integrator with silent mode by using the sample response files or converting your existing response file to the required format.

Sample response files (V5.2.6 or later)

Sample response files are provided with Sterling B2B Integrator. The response file is an XML file that can be modified and used to install Sterling B2B Integrator and its features.

You must edit the provided sample response files with information specific to your installation environment. Follow the instructions in the sample response file to replace values that are designated within $$<variable>$$. You can then use the file to install initial and additional Sterling B2B Integrator nodes.

You can also record a response file using the GUI install mode and use the file to install initial and additional nodes. While recording the response file, you can use the skipInstall option to skip actual installation and record the file. For more information, see "Recording a response file (V5.2.6 or later)" on page 621.

Response files can be used in either silent or GUI installation modes. In GUI mode, the user interface is prepopulated with the data from the response file.

The following sample response files are packaged with Sterling B2B Integrator:

responseFile_GM_Prereqs_V526.xml
> This file is Global Mailbox specific and must be used to install Cassandra and ZooKeeper.

responseFile_B2Bi_GM_V526.xml

> Use this file to install Sterling B2B Integrator. It can also be used to install Global Mailbox.

responseFile_update_B2Bi.xml
> Use this file to upgrade from Sterling B2B Integrator V5.2.x and to apply fix packs.

Additionally, the following sample response files can be used to install an interim fix:
* responseFile_iFix_GM.xml
* responseFile_iFix_B2Bi_GM.xml
* responseFile_iFix_B2Bi.xml

Sample response files for interim fix installation are located in the ResponseFiles/SampleResponseFiles directory of the interim fix package.

When using the sample response files or files that you might have recorded, you must modify values for parameters specific to your installation environment and also based on whether you are installing initial or additional Sterling B2B Integrator nodes.

The following table provides details about parameters that must be modified based on your installation scenario:

Remember: You must also modify the variables enclosed in *$$<variable>$$* within the response file.

Installation scenario	Parameters that must be modified	Must be modified to what?	Why the parameter must be modified?
Installing first Sterling B2B Integrator node.	• `user.sb.CLUSTER` • `user.CLUSTER_NODE_NUM` Sample response file - `responseFile_B2Bi_GM _V526.xml`	Set `user.sb.CLUSTER` to `false` and do not specify any value for `user.CLUSTER_NODE_NUM`.	Setting `user.sb.CLUSTER` to `false` indicates that the node is not yet clustered and not specifying value for `user.CLUSTER_NODE_NUM` indicates that the node is a single or first node.
Installing second and subsequent Sterling B2B Integrator nodes.	• `user.sb.CLUSTER` • `user.CLUSTER_NODE_NUM` • `features` Sample response file - `responseFile_B2Bi_GM _V526.xml`	Set the following values for the parameters: • `user.sb.CLUSTER='true'` • `user.CLUSTER_NODE_NUM` - Specify the node number in the cluster (2 or higher)	Setting `user.sb.CLUSTER` to `true` indicates that the node is part of a cluster. The value set for `user.CLUSTER_NODE_NUM` indicates the node number in the cluster.
Installing the following optional Sterling B2B Integrator features: • Sterling File Gateway • FIPS Module • AS2 Edition Module • Financial Services Module • EBICS Banking Server Module • B2B Advanced Communications Integration Module	`features` Sample response file - `responseFile_B2Bi_GM _V526.xml`	You must add the feature name to the `features` parameter. For example, `features='main.feature, initial.external .ds.feature, filegateway.feature, fips.feature, as2.feature, financial.feature, ebics.features, meigIntegration.feature'`	To install optional Sterling B2B Integrator features.
Installing two nodes of a cluster installation on the same server.	`user.sb.PORT1` Sample response file - `responseFile_B2Bi_GM _V526.xml`	NA	The difference between the value of `user.sb.PORT1` on any two nodes of a cluster installation on the same machine must be at least 200.

Installation scenario	Parameters that must be modified	Must be modified to what?	Why the parameter must be modified?
Database connection information in different data centers when installing initial and additional Sterling B2B Integrator nodes.	• user.sb.DB_CREATE_SCHEMA • user.sb.DB_USER • user.sb.DB_PASS • user.dbconfirmPassword • user.sb.DB_DATA • user.sb.DB_HOST • user.sb.DB_PORT • user.sb.DB_DRIVERS • user.sb.USE_SERVICE_NAME • user.sb.ORACLE_JDBC_URL Sample response file - responseFile_B2Bi_GM_V526.xml	NA	Modify database connection information to point to the database specific to the data center, where you are installing Sterling B2B Integrator nodes. Set the user.sb.DB_CREATE_SCHEMA parameter to true for the first node in a cluster. For subsequent nodes, set it to false.
Installing on a Sterling B2B Integrator node that uses a non-DB2 database.	user.sb.DB_VENDOR	Set to the type of database. • DB2 (Default) • Oracle • MSSQL2005 (Use for both SQL Server 2005 and SQL Server 2008) • MSSQL2012	The user.sb.DB_VENDOR parameter specifies the type of database used by the Sterling B2B Integrator node.

Upgrading from Sterling B2B Integrator V5.2.x

When you upgrade from Sterling B2B Integrator V5.2.x, you can use the sample response file, responseFile_update_B2Bi.xml for reference. You can also use the sample file for reference when installing fix packs.

You must begin by changing your current installation properties file to the XML format response file. For more information about changing your installation properties file to XML format response file, see "Converting Sterling B2B Integrator .txt silent file to XML (V5.2.6 or later)" on page 623.

Encrypting passwords

You must encrypt values for the following properties by using the imutilsc utility in the <IIM install_dir>/eclipse/tools directory:

• user.RestAuthPass
• user.RestAuthPassConfirm
• user.sb.DB_PASS
• user.dbconfirmPassword

To encrypt you must go to the <IIM install_dir>/eclipse/tools directory, type the **imutilsc encryptString <string to encrypt>** command, and then paste the output as the property value. For example, to encrypt storage passphrase type **imutilsc encryptString <passphrase of storage>**.

Recording a response file (V5.2.6 or later)

A response file is an XML file with configuration information required for installing or upgrading. You can record a response file when installing and updating Sterling B2B Integrator and use the response files to install or update additional nodes.

About this task

A response file is an XML file with configuration information from a previous installation. It provides the input that is required for installation or upgrade. Most of the configuration details and other information that is required for installing and updating Sterling B2B Integrator nodes are recorded in the response file. However, you must modify values for some parameters based on whether you are installing or updating initial or additional nodes or clustered and non-clustered environments.

To record a response file:

Procedure

To start the Installation Manager and provide the command to record a response file, do one of the following tasks, based on your operating system and Installation Manager setup:

- Go to the `IM_<operating_system>` folder and use one of the following commands, if you do not have the Installation Manager installed and you are using the Installation Manager agent provided with V5.2.6, if you have installed a 64-bit Installation Manager, or if you have the Installation Manager installed on a platform that has only one download available for Installation Manager. For example, AIX, Solaris, HP, zLinux, or Windows:
  - **./userinst -record /response_files/<response_filename>.xml** (AIX, Solaris, HP, zLinux)
  - **userinst.exe -record c:\response_files\<response_filename>.xml** (Windows)

  For example, on an AIX system, to record a response file `test_response.xml` and save it in the /response_files directory, type **./userinst -record /response_files/test_response.xml**

- Go to the `<installation directory>/Installation Manager/eclipse` folder (for Windows systems, change / to \), and use one of the following commands based on your operating system, if you have a 32-bit Installation Manager installed on a Linux or Windows system:
  - **./IBMIM -record /response_files/<response_filename>.xml** (Linux)
  - **IBMIM.exe -record c:\response_files\<response_filename>.xml** (Windows)

  For example, on a Linux system, to record a response file `test_response.xml` and save it in the /response_files directory, type **./IBMIM -record /response_files/test_response.xml**

Installing or updating with a response file (V5.2.6 or later)

You can use the response files that are recorded when installing or updating Sterling B2B Integrator. You can also use the sample response files that are provided with Sterling B2B Integrator V5.2.6.

Before you begin

Ensure that you have the appropriate response file to use for installing or updating (applying fix pack or interim fix) Sterling B2B Integrator and the databases installed and configured.

Ensure that IBM Installation Manager is installed. If the **userinstc** command is run without IBM Installation Manager installed, it does not install or update Sterling B2B Integrator, but installs IBM Installation Manager instead.

About this task

A response file is an XML file with configuration information that can be used for installing or updating Sterling B2B Integrator. Most of the configuration details and other information that is required for installing and updating Sterling B2B Integrator nodes are recorded in the response file. However, you must modify values for some parameters based on whether you are installing or updating initial or additional nodes or clustered and non-clustered environments. For more information about parameters that must be modified, see "Sample response files (V5.2.6 or later)" on page 618.

Silent installations minimize the requirement to reenter the same information or potential errors while keying in the configuration information. Nevertheless, you must change values of some parameters because the server and the environment where you install the additional nodes might differ.

Important: Because the silent mode allows reuse of most of the configuration and reduces mistakes when manually keying in information on the user interface, using the appropriate response file to install Sterling B2B Integrator is the preferred method, over using the user interface.

To install or update (fix pack or interim fix) Sterling B2B Integrator node using a response file:

Tip: You can record a response file when updating your current installation and use the file to update additional nodes.

Procedure

To start the Installation Manager and provide the command to install using a response file, do one of the following tasks, based on your operating system and Installation Manager setup:

- Go to the `IM_<operating_system>` folder and use one of the following commands, if Installation Manager is not installed and you are using the Installation Manager agent provided with V5.2.6, if you installed a 64-bit Installation Manager, or if you have the Installation Manager installed on a platform that has only one download available for Installation Manager. For example, AIX, Solaris, HP, zLinux, or Windows:
  - **./userinstc input <response_file> -acceptLicense -log <log_file>** (AIX, Solaris, HP, zLinux)
  - **userinstc.exe input <response_file> -acceptLicense -log <log_file>** (Windows)

  For example, on an AIX system, if the response file is located at `/response_files` and if you want to save the log file in `/mylog`, type **./userinstc input /response_files/install.xml -acceptLicense -log /mylog/install_log.xml**

- Go to the `<installation directory>/Installation Manager/eclipse/tools` (for Windows systems, change / to \), and use one of the following commands based on your operating system, if you have a 32-bit Installation Manager installed on a Linux or Windows system:
  - `./imcl input response_file -acceptLicense -log log_file` (Linux)
  - `imcl.exe input response_file -acceptLicense -log log_file` (Windows)

  For example, on a Linux system, if the response file is located at /response_files and if you want to save the log file in /mylog, type **./imcl input /response_files/install.xml -acceptLicense -log /mylog/ install_log.xml**

Converting Sterling B2B Integrator `.txt` silent file to XML (V5.2.6 or later)

You must convert your `.txt` silent file to XML file in a format that can be used for installing with Installation Manager, to install or upgrade to Sterling B2B Integrator using the response file method if you want to reuse the contents of the `.txt` silent file.

Before you begin

You must have the silent file that was used to install your current Sterling B2B Integrator.

About this task

You can install or upgrade to Sterling B2B Integrator V5.2.6 using the user interface or the response file method. To install using a response file, the file must be in an XML format that can be used for installing with Installation Manager. You cannot use the `.txt` silent files, as the Installation Manager does not support it. Instead of re-creating the silent file in XML file, you can convert your existing `.txt` silent file to XML file, by using the `SilentFileToXml` utility. The utility is packaged with Sterling B2B Integrator.

To convert a `.txt` silent file to an XML file by using the `SilentFileToXml` utility:

Procedure

1. Go to the folder where you downloaded the latest version of Sterling B2B Integrator.
2. Extract the compressed media file.
3. Open the `ResponseFiles > SilentInstallationFileConverter` folder and the extract the `SilentFileToXml.zip` file. The following contents are extracted:

   plugins
   > A folder which contains libraries that are required by the utility.

   SilentFileToXml.jar
   > The utility JAR file.

   SilentFileToXml_README.txt
   > A readme file with information and details about the utility.

   Important: The `plugins` folder and the JAR file must be in the same directory, at the same level.
4. Open a command prompt.
5. Type the following command to run the JAR file in the following format:

```
java -jar SilentFileToXml.jar <input-properties-file> <output-xml-file>
```
- `<input-properties-file>` is the file to be converted from the `.txt` format to XML.
- `<output-xml-file>` is the new file in the XML format

For more information, see the examples.

Example

```
java -jar SilentFileToXml.jar silent525install.txt silent526install.xml
```

```
java -jar SilentFileToXml.jar /home/user/installationFiles/
silent5242install.properties /home/user/installDirectory/
silent526install.xml
```

What to do next

After running the utility, the XML file that is created might not have all the entries that are required to upgrade Sterling B2B Integrator to the latest version. Therefore, you must manually add the new entries to the XML file.

Following is a list of the entries that must be added or modified in the XML file:

repository location
> Set this to the absolute path of the Sterling B2B Integrator repository that is extracted from `Common_Repo.zip`.

Variable `sharedLocation`
> Set this to the absolute path of the `IBMIMShared` directory. It typically is in a path of the following form: `/home/your-username/IBM/IBMIMShared/`

Data key `user.CLUSTER_NODE_NUM`
> If you are installing node 2 or higher of a clustered Sterling B2B Integrator system, enter in the cluster node number to this property. If you are not, this value can be left blank.

Data keys `cic.selector.os`, `cic.selector.arch`, and `cic.selector.ws`
> For information to determine correct values for these entries, see Command-line arguments for the **imcl** command.

It is not required to modify the properties that are given by `<preference name=...>`, nor any `<data key=...>` property not given in the above list.

To include additional features such as Sterling File Gateway, EBICS, and B2B Advanced Communications integration module, add the features to the list of features to install in the `<offering profile=...">` section. For example, `features='main.feature,filegateway.feature,fips.feature,as2.feature, financial.feature,ebics.feature,meigIntegration.feature'`

Important: The `meigIntegration.feature` corresponds to B2B Advanced Communications bridge component for Sterling B2B Integrator.

For more information about the standard response files, file format, and additional features, see "Sample response files (V5.2.6 or later)" on page 618.

The following parameters must be encrypted (and their original values are encrypted by the utility by default):
- `user.sb.DB_PASS`

- user.sb.APSERVER_PASS
- user.confirmPassphrase
- user.dbconfirmPassword

If you modify the passphrase in the new file, password encryption can be done with the following command:

```
-bash-3.2$ ./imutilsc encryptString Password
Nn07aEXCW36ozr3feBXWTQ==
-bash-3.2$ pwd
/fullpath/IBM/InstallationManager/eclipse/tools
```

For more information about passphrase encryption, see Installation Manager command-line arguments for silent mode.

Applying a Fix Pack (V5.2.6 or later)

A cumulative collection of fixes that is released between scheduled refresh packs, manufacturing refreshes, or releases. A fix pack updates the system to a specific maintenance level.

Important: To install or update to Sterling B2B Integrator V5.2.6, you must use IBM Installation Manager. You can use the silent mode or the graphical user interface mode to install or update to Sterling B2B Integrator V5.2.6 and later versions. InstallService remains enabled for a very limited number of special situations. Use installService only as directed by specific documentation or on advice of customer support. One specific scenario where you must use InstallService is to install Sterling File Gateway if you had not installed it when installing Sterling B2B Integrator. For information about installing Sterling File Gateway by using InstallService, see Installing Sterling File Gateway (2.2.2 and higher). For more information about Sterling File Gateway V2.2.6 installation changes, see *Using Installation Manager to install Sterling File Gateway.*

Information about the fix pack installation is automatically logged to /install_dir/install/logs/InstallService.log.

To roll back a fix pack, see the "Fix Pack Changes Report" on page 309 topic.

Important: Use the fix pack installation information in this section to install or apply fix packs to Sterling B2B Integrator nodes on Windows and Linux/UNIX operating systems by using the user interface. For information about fix pack installation for iSeries, see appropriate topics in iSeries installation and upgrade sections.

For information to install a fix pack with a response file, see "Installing or updating with a response file (V5.2.6 or later)" on page 621.

Preserving custom changes

When updating (applying a fix pack or interim fix or upgrading from one version to another) your Sterling B2B Integrator installation, you must preserve the customization of the system resources, property files, and cdinterop files.

Preserving system resource customization

Customization of some system resources such as, workflow definitions and maps are preserved during a fix pack, interim fix, or media upgrade (from one version to another, for example, 5.1.x to 5.2.x).

When you install Sterling B2B Integrator, a baseline record of the system resources is created. This baseline record is not affected by any customization from the customers. When you install a fix pack, interim fix, or upgrade your Sterling B2B Integrator installation, the resources in this baseline are compared with the resources in the existing system. If a baseline and existing resource are not the same, it means that the existing resource was customized and is not overwritten during the update.

During the fix pack, interim fix, or upgrade, the baseline record is updated with new system resource information, specific to the update. However, it is not updated with information about the customized resources.

Preserving property file customization

Property changes made directly in `*.properties` or `*.properties.in` files are overwritten when applying the fix pack or interim fix. Properties that are overridden using the `customer_overrides.properties` file are not affected. It is suggested to maintain property file changes using (when possible) the `customer_overrides.properties` file.

If you edited any of the `cdinterop` files, you must back them up before applying the fix pack. The `cdinterop` files do not have initialization (*.in) files. After applying the fix pack, use the backup version of the files in your upgraded installation. Following is a list of `cdinterop` files:
* cdinterop-proxy-records.properties
* cdinterop-spoe-auth.properties
* cdinterop-spoe-policy.properties
* cdinterop-user-records.properties

Important: The fix pack installation might use one or more property override files. These files are named `propertyFile_patch.properties`. Do not alter these files.

Applying Sterling B2B Integrator V5.2.6 or later Fix Pack to V5.2.x

Update your Sterling B2B Integrator V5.2.x clustered or non-clustered installation to V5.2.6 or later.

Before you begin

Complete the following tasks before you update Sterling B2B Integrator V5.2.x to V5.2.6 or later:
* Ensure that a supported version of the IBM JDK is installed. For required version information, see **Prerequisites** > **Java** in the Detailed System Requirements for your operating system. If you need to upgrade your JDK, see Upgrading your JDK for instructions.

  Important: Using an incorrect JDK can cause installation failure.

Remember: You must install the IBM JDK on the system in a location other than the Sterling B2B Integrator installation directory. The required JDK version is provided with the Sterling B2B Integrator V5.2.6 or later media. You can use the JDK provided or install the JDK from any other relevant source. Ensure that the JDK version is the same or greater than the one provided with the Sterling B2B Integrator V5.2.6 or later media.

- Download the latest fix pack image from IBM Fix Central or IBM Passport Advantage.
- Extract the package to a folder, go to the media directory, and locate the following files:
  - `IM_<operating system>.zip` in the `InstallationManager` folder
  - `Common_Repo.zip`
- Extract the files to a common directory. After you extract the files, the directory must have the following subdirectories:
  - `IM_<operating system>`
  - `b2birepo`
  - `gmrepo`
- For Linux servers, set the `ulimit` and `language` as follows:
  - `ulimit -n 4096`
  - `ulimit -u 16000`
  - `export LANG=en_US`

About this task

Installation Manager V1.8.2 is required to install or update to Sterling B2B Integrator V5.2.6. You can update to V5.2.6 through the user interface or silent installation mode (response files), as console mode is not supported from V5.2.6 and later. Also, from V5.2.6 onwards, Sterling B2B Integrator JAR file is included in the repository. Therefore it is not required to manually select the appropriate JAR file.

You can install the fix pack to one node at a time or bring down the entire cluster. Installing the fix pack to one node at a time, does not impact the functioning of the cluster, thereby avoiding any interruption to the transactions and trading partners. Whereas, if you stop the complete cluster, there will be some downtime during which the transactions cannot be processed. You must decide the type of update based on your requirement and considering the type of update in the fix pack. For example, if the fix pack contains updates to the database or database schema, then you must bring down all the nodes (the complete cluster), apply the fix pack, and restart the cluster.

Important: If the fix pack contains updates to the database schema, then you must create a backup of the current database before applying the fix pack. If for some reason the update is interrupted or stopped midway, you must manually revert the database changes by using the backup, and then restart fix pack installation. Refer to the fix pack release notes for details about the updates contained in the fix pack.

To apply Sterling B2B Integrator V5.2.6 fix pack to Sterling B2B Integrator V5.2.x by using the user interface:

Important: The following procedure can be used for Unix/Linux and Windows operating systems.

In addition to installing a fix pack through the user interface, you can install it by using a script provided with V5.2.6 or through silent installation mode. For more information, see "Applying Sterling B2B Integrator V5.2.6 Fix Pack using a script" on page 630 and "Installing or updating with a response file (V5.2.6 or later)" on page 28.

For information to install a fix pack with a response file, see "Installing or updating with a response file (V5.2.6 or later)" on page 621.

Procedure

1. Verify that the Sterling B2B Integrator database is up and ready to accept connections.
2. Based on whether you are stopping a single node or all the nodes (cluster), do one of the following tasks:
   - To stop a single node, go to the `\<install_dir>\install\bin` (Windows) or `/<install_dir>/install/bin` (UNIX or Linux) directory, open a command prompt and enter the **StopWindowsService.cmd** (Windows) or **./hardstop.sh** (UNIX or Linux) command. Wait until the perimeter server of the node is down before installing the fix pack.
   - To stop the cluster, open the Sterling B2B Integrator user interface (dashboard), and complete the following tasks:
     – From the Administration menu, select **Operations > System > Troubleshooting**.
     – Click **Stop the System**.
3. Perform a full backup of the Sterling B2B Integrator installation directory, including all subdirectories.

   Important: If for some reason the update is interrupted or stopped midway, you must manually revert the changes by using the backed up files, and then restart fix pack installation.
4. Perform a backup of the database.
5. If you edited any property files, ensure that the associated `properties.in` files have the most current changes. Property files are overwritten with the contents of the associated `properties.in` files during fix pack installation.
6. Go to the directory where you extracted the `IM_<operating system>.zip` file.
7. Open a command prompt and do one of the following tasks to start the Installation Manager:
   a. Go to the `IM_<operating_system>` directory and type **./userinst** or **userinst.exe** (Windows) for the following scenarios:
      - If you do not have the Installation Manager installed and are using the Installation Manager agent provided with V5.2.6.
      - If you have a 64-bit Installation Manager installed.
      - If you have the Installation Manager installed on a platform that has only one download available for Installation Manager. For example, AIX, Solaris, HP, zLinux.
   b. Go to `<installation directory>/Installation Manager/eclipse` (for Windows system, replace / with \) and type **./IBMIM** or **IBMIM.exe** (Windows), if you have 32-bit Installation Manager installed on a Linux or Windows system.
8. Follow the prompt to install Installation Manager 1.8.2 and restart the Installation Manager by using the **Restart** button or by using the command that you used to start the Installation Manager.

Important: If Installation Manager version lesser than V1.8.2 is installed on the server, the installer detects this and prompts for the upgrade.

9. To update to Sterling B2B Integrator V5.2.6, complete the following steps:

10. If you used Installation Manager to install your current Sterling B2B Integrator version, then click **Update** on the Installation Manager home page. Else, click **Install** and make sure to select the current installation directory to update to V5.2.6.

    If you did not use Installation Manager to install the current Sterling B2B Integrator, the Installation Manager does not know that the product is already installed and does not have the information that it needs to know about it for Installation Manager to run the update flow. Therefore, you must select the **Install** option and select the current installation directory to install V5.2.6 fix pack. It is a limitation of the Installation Manager.

11. Select **Sterling B2B Integrator** and click **Next**.

12. Verify that **Version 5.2.6.0** is selected and click **Next**.

13. Read and accept the license terms and click **Next**.

14. Select the features to install and click **Next**.

    Important: If your current Sterling B2B Integrator installation includes Sterling B2B Integrator and you select Sterling File Gateway, then Sterling File Gateway is updated to V 2.2.6. However, if Sterling File Gateway was not installed, it is not updated, even if you select the **IBM Sterling File Gateway**. In this case, to install Sterling File Gateway, when applying V5.2.6 fix pack, you must do one of the following tasks:

    - If upgrading from V5.1.x to Sterling B2B Integrator V5.2.6, install Sterling B2B Integrator to a new directory, and point to the previous database.
    - Run the `InstallService.sh` or `InstallService.cmd` command. For more information, see Installing Sterling File Gateway (V2.2.6 or later).

    Important: Features that are not part of your current Sterling B2B Integrator installation are disabled and you cannot select them when upgrading or applying a fix pack. To include them in your Sterling B2B Integrator setup, you must first upgrade to the current version, and then install them separately. If the fix pack or upgrade JAR includes updates to features that are part of your current Sterling B2B Integrator installation, the features are upgraded regardless of whether you select the them or not.

15. Verify the JDK directory and click **Next**.

    Important: The JDK specified here cannot be the `jdk` sub-directory in the Sterling B2B Integrator installation directory. Selecting the `jdk` sub-directory in the Sterling B2B Integrator installation directory might corrupt the JDK.

16. Verify the JCE policy file and click **Next**.

17. Type the system passphrase, confirm the passphrase, and click **Next**.

18. Verify the update details and click **Update**.

19. Click **Finish** to complete updating to Sterling B2B Integrator V5.2.6.

20. Repeat the steps for each node.

    Attention: For node 2 and higher, you must update the value of `REINIT_DB` to false. When `REINIT_DB` is false, database updates are not applied during each fix pack. The `REINIT_DB` attribute is in the `\<install_dir>\install\ properties\sandbox.cfg` file.

21. If you stopped the Sterling B2B Integrator cluster, restart the cluster.

Applying Sterling B2B Integrator V5.2.6 Fix Pack using a script

In Sterling B2B Integrator V5.2.6 or later, a script that can be used to install the fix pack is provided with the media.

Before you begin

Complete the following tasks before you update Sterling B2B Integrator V5.2.x to V5.2.6 or later:

- Ensure that a supported version of the IBM JDK is installed. For required version information, see **Prerequisites** > **Java** in the Detailed System Requirements for your operating system. If you need to upgrade your JDK, see Upgrading your JDK for instructions.

    Important: Using an incorrect JDK can cause installation failure.

    Remember: You must install the IBM JDK on the system in a location other than the Sterling B2B Integrator installation directory. The required JDK version is provided with the Sterling B2B Integrator V5.2.6 or later media. You can use the JDK provided or install the JDK from any other relevant source. Ensure that the JDK version is the same or greater than the one provided with the Sterling B2B Integrator V5.2.6 or later media.

- Download the latest fix pack image from IBM Fix Central or IBM Passport Advantage.
- Extract the package to a folder, go to the media directory, and locate the following files:
    - `IM_<operating system>.zip` in the `InstallationManager` folder
    - `Common_Repo.zip`
- Extract the files to a common directory. After you extract the files, the directory must have the following subdirectories:
    - `IM_<operating system>`
    - `b2birepo`
    - `gmrepo`
- For Linux servers, set the `ulimit` and `language` as follows:
    - `ulimit -n 4096`
    - `ulimit -u 16000`
    - `export LANG=en_US`

About this task

Restriction: You cannot use the script for the following installation scenarios:

- If you installed or updated your existing Sterling B2B Integrator by using the Installation Manager.
- If you currently have a 32-bit version of the Installation Manager installed on your Linux system that is not running on IBM z Systems.
- To install the fix pack in a Windows operating system.
- To install Global Mailbox.
- To install the fix pack on more than one Sterling B2B Integrator per machine.

The script installs or updates Installation Manager V1.8.2, updates Sterling B2B Integrator V5.2.1 or higher to V5.2.6 by populating necessary update parameters in

a silent response XML file (update.xml), and invokes Installation Managers silent installation mode by using the populated silent response XML as the input.

Using the script to apply fix pack is another option. It does not replace the existing options of applying the fix pack through Installation Manager user interface or by using a manually modified response file. You can choose the method to apply the fix pack based on your requirements and convenience.

The script is supported on the following operating systems:
- Linux, on the following hardware:
  - x86-64
  - IBM z Systems
- Solaris
- AIX
- HP-UX

To use the fix pack script to apply Sterling B2B Integrator V5.2.6 patch:

Procedure
1. Download the Sterling B2B Integrator V5.2.6 fix pack from IBM Fix Central or IBM Passport Advantage.
2. Decompress the `Media_IM_5020600.zip`.

   Important: Do not decompress the `Common_Repo.zip` or `IM_<OS>.zip` files. The script decompresses the compressed files when it runs.
3. Run the following command from the `UpdateScript/` directory `$ update.sh <full_path_to_b2bi_install_dir> <ProfileID> -acceptLicenses <system_passphrase>`

   Important: `system_passphrase` is an optional parameter used to specify the system passphrase, which must be set if the system passphrase is not stored in a property file.

Applying a Fix Pack to Sterling B2B Integrator V5.2.6 or later

Update Sterling B2B Integrator V5.2.6 or later clustered or non-clustered installation with a fix pack.

Before you begin

Complete the following tasks before you apply a fix pack to your V5.2.6 or later installation:
- Ensure that a supported version of the IBM JDK is installed. For required version information, see **Prerequisites** > **Java** in the Detailed System Requirements for your operating system. If you need to upgrade your JDK, see Upgrading your JDK for instructions.

  Important: Using an incorrect JDK can cause installation failure.

  Remember: You must install the IBM JDK on the system in a location other than the Sterling B2B Integrator installation directory. The required JDK version is provided with the Sterling B2B Integrator V5.2.6 or later media. You can use the

JDK provided or install the JDK from any other relevant source. Ensure that the JDK version is the same or greater than the one provided with the Sterling B2B Integrator V5.2.6 or later media.

- Download the latest fix pack image from IBM Fix Central or IBM Passport Advantage.
- Extract the package to a folder, go to the media directory and locate the following files:
  - `IM_<operating system>.zip` in the `InstallationManager` folder
  - `Common_Repo.zip`
- Extract the files to a common directory. After you extract the files, the directory must have the following subdirectories:
  - `IM_<operating system>`
  - `b2birepo`
  - `gmrepo`
- For Linux servers, set the `ulimit` and `language` as follows:
  - `ulimit -n 4096`
  - `ulimit -u 16000`
  - `export LANG=en_US`

About this task

You can install the fix pack to one node at a time or bring down the entire cluster. Installing the fix pack to one node at a time, does not impact the functioning of the cluster, thereby avoiding any interruption to the transactions and trading partners. Whereas, if you stop the complete cluster, there will be some downtime during which the transactions cannot be processed. You must decide the type of update based on your requirement and considering the update in the fix pack. For example, if the fix pack contains updates to the database or database schema, then you must bring down all the nodes (the complete cluster), apply the fix pack, and restart the cluster.

Important: If the fix pack contains updates to the database schema, then you must create a backup of the current database before applying the fix pack. If for some reason the update is interrupted or stopped midway, you must manually revert the database changes by using the backup, and then restart fix pack installation.

To install a fix pack to Sterling B2B Integrator V5.2.6 or later installation by using the user interface:

Important: For information to install a fix pack with a response file, see "Installing or updating with a response file (V5.2.6 or later)" on page 621.

Procedure

1. Verify that the Sterling B2B Integrator database is up and ready to accept connections.
2. Based on whether you are stopping a single node or all the nodes (cluster), do one of the following tasks:
   - To stop a single node, go to the `\<install_dir>\install\bin` (Windows) or `/<install_dir>/install/bin` (UNIX or Linux) directory, open a command prompt and enter the **StopWindowsService.cmd** (Windows) or **./hardstop.sh** (UNIX or Linux) command. Wait until the perimeter server of the node is completely down before installing the fix pack.

- To stop the cluster, open the Sterling B2B Integrator user interface (dashboard), and complete the following tasks:
  - From the Administration menu, select **Operations > System > Troubleshooting**.
  - Click **Stop the System**.

3. Perform a full backup of the Sterling B2B Integrator installation directory, including all subdirectories.

   Important: If for some reason the update is interrupted or stopped midway, you must manually revert the changes by using the backed up files, and then restart fix pack installation.

4. Perform a back up of the database.

5. If you edited any property files, ensure that the associated `properties.in` files have the most current changes. Property files are overwritten with the contents of the associated `properties.in` files during the fix pack installation.

6. Is the database password encrypted? If Yes, decrypt the password.

7. Close all command prompt windows.

8. Open a command prompt and do one of the following tasks to start the Installation Manager:

   a. Go to the `IM_<operating_system>` directory and type **./userinst** or **userinst.exe** (Windows) for the following scenarios:
      - If you do not have the Installation Manager installed and are using the Installation Manager agent provided with V5.2.6.
      - If you have a 64-bit Installation Manager installed.
      - If you have the Installation Manager installed on a platform that has only one download available for Installation Manager. For example, AIX, Solaris, HP, zLinux.

   b. Go to `<installation directory>/Installation Manager/eclipse` (for Windows system, replace / with \) and type **./IBMIM** or **IBMIM.exe** (Windows), if you have 32-bit Installation Manager installed on a Linux or Windows system.

9. On the Installation Manager home page, click **File > Preferences > Add Repository**.

   Tip: By default, IBM Installation Manager will attempt to connect to the internet. If the server does not have internet access, this behavior can be modified by disabling the **Search service repositories during installation and updates** option in the preferences while adding the repository. After adding the repository, reenable the option.

10. Click **Browse** and select the updated `repository.config` file in the `b2birepo` folder. The repository file is located at

    `<directory_where_Common_Repo.zip_was_extracted>/b2birepo/repository.config`.

11. On the Installation Manager home page, click **Update**.

12. On the Update Packages page, **Sterling B2B Integrator** and **Global Mailbox** options are displayed. Select **Sterling B2B Integrator** and select **Update all packages with recommended updates and recommended fixes** and click **Next**. Wait for the installer to read the updates and resolve references. You can also see information about the installed packages and installation directory on the page.

13. The packages to be updated are selected by default. Verify the selection, and click **Next**.

    If there are more than one updates in the repository, the latest update is displayed if you select the **Show recommended only** option. You can select the recommended repository by using the **Select Recommended** option.

14. The features and applications (Sterling B2B Integrator) that must be updated are selected by default. Verify the selection and click **Next**.

    To see if the current installation or update has any dependencies or prerequisites, select the **Show dependencies** check box.

15. Verify the JDK directory and click **Next**.

    Important: The JDK specified here cannot be the `jdk` sub-directory in the Sterling B2B Integrator installation directory. Selecting the `jdk` sub-directory in the Sterling B2B Integrator installation directory might corrupt the JDK.

16. Verify the JCE policy file and click **Next**.

17. Type the system passphrase, confirm the passphrase, and click **Next**.

18. Review the summary information about the updates and click **Update**.

    Important: You cannot install or remove any of the features listed on this page. However, if you select any feature that was not part of the original installation, an appropriate error message is displayed indicating the same.

19. Notice the progress of the update and click **Finish** after the update completes.

20. Repeat the steps for other Sterling B2B Integrator nodes.

    Attention: For node 2 and higher, you must update the value of `REINIT_DB` to false. When `REINIT_DB` is false, database updates are not applied during each fix pack. The `REINIT_DB` attribute is in the `\<install_dir>\install\ properties\ sandbox.cfg` file.

21. If you stopped the Sterling B2B Integrator cluster, restart the cluster.

What to do next

To verify the fix pack installation, go to the Rollback panel and check that the appropriate version number is displayed. For example, if the fix pack contained updates to Global Mailbox, then the version must show as 1.0.0.1.

Fix Pack Changes Report

The Fix Pack Changes Report is used to obtain information if you need to roll back a fix pack.

The fix pack report can be found in the installation directory `fix pack_reports` folder. The report contains the following fix pack information:

- Fix pack ID
- Fix pack changes
- Number of files deleted
- Number of JAR files removed
- Number of JAR files added
- Number of files added
- Number of files changed
- Number of properties added
- Number of business processes added

- Number of service instances added
- Number of service definitions added
- Number of templates added
- Number of reports added
- Number of maps added
- Number of schemas added
- Number of business rules added

For example, the installation directory `fix pack_reports` folder contains the `fix pack_Report.html` file. When you open this file, you can view the fix pack information.

Applying an interim fix (V5.2.6 or later)

A cumulative collection of fixes that is released between scheduled refresh packs, manufacturing refreshes, or releases. An interim fix updates the system to a specific maintenance level.

Important: To apply interim fix to Sterling B2B Integrator V5.2.6 and higher versions, you must use IBM Installation ManagerV1.8.2. You can use the silent mode or the graphical user interface mode to apply the interim fix. `InstallService` remains enabled for a very limited number of special situations. Use `InstallService` only as directed by specific documentation or on advice of customer support. One specific scenario where you must use `InstallService` is to install Sterling File Gateway if you had not installed it when installing Sterling B2B Integrator. For information about installing Sterling File Gateway by using `InstallService`, see Installing Sterling File Gateway (2.2.2 and higher). For more information about Sterling File Gateway V2.2.6 installation changes, see *Using Installation Manager to install Sterling File Gateway.*

Uninstalling an interim fix is a complex and manual process. To uninstall an interim fix, contact IBM Support by creating a Problem Management Record (PMR).

Important: Use the interim fix installation information in this section to install or apply interim fixes to Sterling B2B Integrator nodes on Windows and Linux/UNIX operating systems. For information about interim fix installation for iSeries, see appropriate topics in iSeries installation and upgrade sections.

For information to install a fix pack with a response file, see "Installing or updating with a response file (V5.2.6 or later)" on page 621.

Preserving custom changes

When updating (apply a fix pack or interim fix or upgrade from one version to another) your Sterling B2B Integrator installation, you must preserve the customization of the system resources, property files, `cdinterop` files.

Preserving system resource customization

Customization of some system resources such as, workflow definitions and maps are preserved during a fix pack, interim fix, or media upgrade (from one version to another, for example, 5.1.x to 5.2.x).

When you install Sterling B2B Integrator, a baseline record of the system resources is created. This baseline record is not affected by any customization from the customers. When you install a fix pack, interim fix, or upgrade your Sterling B2B Integrator installation, the resources in this baseline are compared with the resources in the existing system. If a baseline and existing resource are not the same, it means that the existing resource was customized and is not overwritten during the update.

During the fix pack, interim fix, or upgrade, the baseline record is updated with new system resource information, specific to the update. However, it is not updated with information about the customized resources.

Preserving property file customization

Property changes made directly in `*.properties` or `*.properties.in` files are overwritten when applying the fix pack or interim fix. Properties that are overridden using the `customer_overrides.properties` file are not affected. It is suggested to maintain property file changes using (when possible) the `customer_overrides.properties` file.

If you edited any of the `cdinterop` files, you must back them up before applying the fix pack. The `cdinterop` files do not have initialization (*.in) files. After applying the fix pack, use the backup version of the files in your upgraded installation. These files include the following files:
* `cdinterop-proxy-records.properties`
* `cdinterop-spoe-auth.properties`
* `cdinterop-spoe-policy.properties`
* `cdinterop-user-records.properties`

Important: The fix pack installation might use one or more property override files. These files are named `propertyFile_patch.properties`. Do not alter these files.

Installing an Interim Fix

Update your Sterling B2B Integrator V5.2.6 clustered or non-clustered installation with an interim fix.

Before you begin

Complete the following tasks before you apply an interim fix to V5.2.6 installation:
* Download the latest interim fix image from IBM Fix Central.
* Extract the package to a folder, go to the media directory and locate the following files:
  - `IM_<operating system>.zip` in the `InstallationManager` folder
  - `Common_Repo.zip`
* Extract the files to a common directory. After you extract the files, the directory must have the following subdirectories:
  - `IM_<operating system>`
  - `b2birepo`
  - `gmrepo`
* For Linux servers, set the `ulimit` and `language` as follows:
  - `ulimit -n 4096`
  - `ulimit -u 16000`

– export LANG=en_US

About this task

You can install the interim fix to one node at a time or bring down the entire cluster. Installing the interim fix to one node at a time, does not impact the functioning of the cluster, thereby avoiding any interruption to the transactions and trading partners. Whereas, if you stop the complete cluster, there will be some downtime during which the transactions cannot be processed. You must decide the type of update based on your requirement and considering the update in the interim fix. For example, if the interim fix contains updates to the database or database schema, then you must bring down all the nodes (the complete cluster), apply the fix, and restart the cluster.

Important: If the interim fix contains updates to the database schema, then you must create a backup of the current database before applying the interim fix. If for some reason the update is interrupted or stopped midway, you must manually revert the database changes by using the backup, and then restart interim fix installation. Refer to the download document for details of fixes included in the interim fix.

If Global Mailbox is installed, refer to the following information: Installing an interim fix.

To install an interim fix to Sterling B2B Integrator V5.2.6 and higher by using the user interface:

Important: For information to install a fix pack with a response file, see "Installing or updating with a response file (V5.2.6 or later)" on page 621.

Procedure
1. Verify that the Sterling B2B Integrator database is up and ready to accept connections.
2. Based on whether you are stopping a single node or all the nodes (cluster), do one of the following tasks:
   - To stop a single node, go to the \<install_dir>\install\bin (Windows) or /<install_dir>/install/bin (UNIX or Linux) directory, open a command prompt and enter the **StopWindowsService.cmd** (Windows) or **./hardstop.sh** (UNIX or Linux) command. Wait until the perimeter server of the node is completely down before installing the interim fix.
   - To stop the cluster, open the Sterling B2B Integrator user interface (dashboard), and complete the following tasks:
     – From the Administration menu, select **Operations > System > Troubleshooting**.
     – Click **Stop the System**.
3. Perform a full backup of the Sterling B2B Integrator installation directory, including all subdirectories.

   Important: If for some reason the update is interrupted or stopped midway, you must manually revert the changes by using the backed up files, and then restart interim fix installation.
4. Perform a back up of the database.

5. If you edited any property files, ensure that the associated `properties.in` files have the most current changes. Property files are overwritten with the contents of the associated `properties.in` files during the interim fix installation.

6. Is the database password encrypted? If Yes, decrypt the password.

7. Close all command prompt windows.

8. To start the Installation Manager and provide the path to the input file, type **<IIMInstallationDirectory>/eclipse/launcher -input <pathToExtractedFixMedia>/fixInput.xml** on the command line for Linux servers or type **<IIMInstallationDirectory>\eclipse\launcher -input <pathToExtractedFixMedia>\fixInput.xml** for Windows servers.

   Important: You must install an interim fix by using an installed instance of Installation Manager. Therefore, you must launch Installation Manager from the <IIMInstallationDirectory>/eclipse/launcher directory and not from the IM_<operatingsystem> directory.

9. On the Installation Manager home page, click **Update**.

10. On the Update Packages page all the installed packages are listed. Based on the information from the release notes or interim fix notification, select the package that must be updated and click **Next**. Alternatively, you can select **Update all packages with recommended updates and recommended fixes** and click **Next**. Wait for the installer to read the updates and resolve references. You can also see information about the installed packages and installation directory on the page.

11. The packages to be updated are selected by default. Verify the selection, and click **Next**.

    If there are more than one updates in the repository, the latest update is displayed if you select the **Show recommended only** option. You can select the recommended repository by using the **Select Recommended** option.

12. The features and applications (Sterling B2B Integrator) that must be updated are selected by default. Verify the selection and click **Next**.

    To see if the current installation or update has any dependencies or pre-requisites, select the **Show dependencies** check box.

13. Review the summary information about the updates and click **Update**.

    Important: You cannot install or remove any of the features listed on this page. However, if you select any feature that was not part of the original installation, an appropriate error message is displayed indicating the same.

14. Notice the progress of the update and click **Finish** after the update completes.

15. Repeat the steps for other Sterling B2B Integrator nodes.

    Attention: For node 2 and higher, you must update the value of REINIT_DB to false. When REINIT_DB is false, database updates are not applied during each interim fix. The REINIT_DB attribute is in the \<install_dir>\install\ properties\sandbox.cfg file.

16. If you stopped the Sterling B2B Integrator cluster, restart the cluster.

What to do next

To verify the interim fix installation, go to the Rollback panel and check that the appropriate version number is displayed.

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