

WebSphere IBM WebSphere Partner Gateway Enterprise and Advanced
Editions
Version 6.2.1

Troubleshooting Guide

IBM

Note

Before using this information and the product it supports, read the information in "Notices" on page 87.

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Chapter 1. Overview of troubleshooting

Troubleshooting is a systematic approach to solving a problem. The goal is to determine why something does not work as expected and how to resolve the problem.

The first step in the troubleshooting process is to explain the problem completely. If there is no proper understanding of the problem, neither you nor IBM® can know where to start to find the cause of the problem.

- What are the typical symptoms of the problem?
- In what scenario does the problem occur?
- When does the problem occur?
- Can the problem be reproduced?

The answers to the following questions typically lead to a good description of the problem, and that is the best way to start down the path of problem resolution

- What are the symptoms of the problem?
- What is the problem?

This might sound like a simple question; however, you can break it down into several more-focused questions that create a more descriptive picture of the problem. These questions can include:

1. What are the error codes and messages?
2. How does the system fail? For example, is it a loop, hang, crash, performance degradation, or incorrect result?
3. What is the business impact of the problem?
4. Where does the problem occur?
5. Determining where the problem originates is not always easy, but it is one of the most important steps in resolving a problem. Many layers of technology can exist between the reporting and failing components. Networks, disks, and drivers are only a few components to be considered when you are investigating problems.

Questions below will help you in isolating the problem layer. It can help you in understanding whether the problem is widely spread across different platforms or operating systems or is specific to a particular platform or operating system.

Is the current environment and configuration supported?

It is important to know that if one layer reports the problem, the problem does not necessarily originate in that layer. The crux lies in understanding where the problem originates and understanding the environment in which it exists. Verify the environment, OS, configuration and confirm that you are running within an environment that is a supported configuration.

When does the problem occur?

Note down the time when the problem occurred and try to verify the events in the logs and information. You can spot the error event in the log file and the 'Event Viewer' in WebSphere Partner Gateway console.

To understand the periodicity and timelines of happening of events, answer the following questions:

- Does the problem occur at a certain time of day or night?
- How often does the problem happen?
- Is there any sequence of events after which the problem is reported?
- Does an environment change like upgrading or installing software or hardware trigger the problem?

Responding to these types of questions can provide you a better understanding of the problem.

Under which conditions does the problem occur?

Understanding which other systems and applications are running at the time that a problem occurs is an important step in troubleshooting. These and other questions about your environment can help you to identify the root cause of the problem:

- Is the problem occurring when the same task is being performed?
- Is there any sequence of events after which the problem is reported?
- Is there a failure seen in any of the applications at the same time?

Answering the above type of questions can help you explain the environment in which the problem occurred and correlate any dependencies.

Can the problem be reproduced?

From the troubleshooting perspective, there are two kinds of problems. Problems which occur only once that cannot be reproduced. And, there are certain types of problems that can be reproduced. Typically problems that can be reproduced are easiest to debug resolve.

If possible, re-create the problem in a test or development environment, which typically offers you more flexibility and control during your investigation.

Tip: Simplify the scenario to isolate the problem to a suspected component. The following questions can help you with reproducing the problem:

Can the problem be re-created on a test machine?

Are multiple users or applications encountering the same type of problem?

Can the problem be re-created by running a single command, a set of commands, a particular application, or a stand-alone application?

Chapter 2. Troubleshooting checklist for WebSphere Partner Gateway

Understanding the hardware and software requirements, product fixes, specific problems, error messages, and diagnostic data will help you in troubleshooting WebSphere Partner Gateway

The following queries can help you in identifying the source of a problem that is happening with WebSphere Partner Gateway.

1. Is the configuration properly supported?

Refer to WebSphere Partner Gateway system requirements

<http://www-01.ibm.com/support/docview.wss?rs=2311&uid=swg27013981> to check whether your system meets all hardware, operating system and software requirements.

2. Are the latest fixes applied. Refer to <http://www-01.ibm.com/support/docview.wss?rs=2310&uid=swg27009177> for the list of fixes relevant for your product version.

3. What is the problem?

- Installing and configuring WebSphere Partner Gateway - refer to Chapter 3, "Troubleshooting Installation of WebSphere Partner Gateway," on page 5
- Migrating from previous versions of WebSphere Partner Gateway to version 6.2 - refer to Chapter 4, "Troubleshooting migration of WebSphere Partner Gateway," on page 9
- Administration of WebSphere Partner Gateway - refer to Chapter 9, "Troubleshooting WebSphere Partner Gateway Administration," on page 37
- Archiving - refer to Chapter 6, "Troubleshooting Archiver Issues," on page 15
- Getting runtime errors - refer to "Resolving error events" on page 21
- Encountering issues with transports - refer to Chapter 5, "Troubleshooting transport protocol issues (sending and receiving)," on page 11
- Database related issues - refer to "Troubleshooting database related issues" on page 38
- SSL transaction failures - refer to "Troubleshooting SSL transaction issues" on page 47
- Integration with WebSphere Transformation Extender - refer to Chapter 7, "Troubleshooting issues related to Websphere Transformation Extender (WTX) Integration," on page 19
- Not able to process the documents - refer to "Troubleshooting document processing issues" on page 41

4. Have any errors been issued? Refer to Chapter 8, "Troubleshooting runtime errors, validation errors, and exceptions," on page 21 for solutions /workarounds.

5. Difficult problems can require the use of tracing, which exposes the low-level flow of control and interactions between components. Refer to Chapter 11, "Server log files," on page 71 for details on logging and tracing.

6. If the checklist does not guide you to a resolution, you can collect additional diagnostic data. This data is necessary for IBM Support to effectively troubleshoot and assist you in resolving the problem. For more information, see Chapter 14, "Contacting IBM Software Support," on page 85.

Chapter 3. Troubleshooting Installation of WebSphere Partner Gateway

This chapter details the issues you might face while installing WebSphere Partner Gateway and provides a possible solution/workaround to resolve those issues.

Resolving reinstallation issues

If reinstallation of WebSphere Partner Gateway fails, examine the log files and error messages to determine the cause of the problem. Refer to “Installation Log files location” on page 72 section to know the exact location of the log files that are stored during installation.

Here are few tips to resolve certain reinstallation issues.

Reinstalling WebSphere Partner Gateway in distributed mode

While reinstalling WebSphere Partner Gateway in distributed mode using the same deployment manager, the WebSphere Partner Gateway servers do not federate to the cell, resulting in the following addNode.log errors:

This section provides tips to resolve issues related to reinstallation.

```
ADMU0507I: No servers found in configuration under: /opt/IBM/bcghub-distrib/wasND/Profiles/bcgprofile/config/cells/bcgCell/nodes/bcgnode_<host name>/servers.
ADMU2010I: Stopping all server processes for node bcgnode_< host name>.
ADMU0024I: Deleting the old backup directory.ADMU0015I: Backing up the original cell repository.ADMU0012I: Creating Node Agent configuration for node: bcgnode_<host name>.
ADMU0014I: Adding node bcgnode_<host name> configuration to cell;dmgrCell.
ADMU0027E: An error occurred during federation Invalid keystore format; rolling back to original configuration.
ADMU0211I: Error details may be seen in the file.
```

This issue is due to problems encountered in WebSphere Application Server fixpack. Use the following workaround to resolve this issue:

1. Stop the **Deployment manager**.
2. Rename trust.p12 and key.p12, which is present in: < dmgr_install_dir>\wasND\Profiles\bcgdmgr\config\cells\WebSphere Partner GatewayCell.
3. Start the **Deployment manager** and proceed with the installation.

Note: When you restart deployment manager, new trust.p12 and key.12 files are automatically created.

Alternatively, you can resolve this issue by reinstalling the **Deployment Manager**.

Troubleshooting installation of Database Loader

If you encountered problems while installing the Database Loader, refer to the Database Loader logs in the system temp\bcgdbloader\logs directory for more information. After the problem is resolved, run the Database Loader uninstaller and remove the database. Once you have deleted the database, rerun the Database Loader wizard.

Troubleshooting logon failure error while starting WebSphere Partner Gateway as a Windows service

The bcguser is the default user to start WebSphere Partner Gateway service. The bcguser needs to have Logon as a service user right. If not, the service will not start the first time you access the application and a Logon failure error will be displayed.

In order to run a system service correctly using a user account, manually set your user account to have the Log on as a service rights.

There are two steps to resolve this issue:

1. Configure the user account that will start the WebSphere Partner Gateway service. This user account needs to have the “Logon as a service” user right at this juncture. This needs to be done before the start of the WebSphere Partner Gateway installation.
2. After WebSphere Partner Gateway installation is completed, follow these steps:
 - a. Go to **Control Panel > Administrative Tools > Services > WebSphere Partner Gateway service**.
 - b. Right-click the **WebSphere Partner Gateway Service** and select **Properties**.
 - c. Select the Logon tab and type the correct password for the bcguser account again. This will also provide the bcguser account with the Logon as Service user right. This needs to be done the first time you install the application.

Unsatisfied Link Error

When applications are restarted from WebSphere Application Server console, an error is logged in SystemErr.log:

```
[7-06-07 11:40:35:682 UTC] 00000062 SystemErr R
java.lang.UnsatisfiedLinkError: /opt/IBM/bcghub-distrib/wasND/Profiles/
bcgprofile/installedApps/wpgCell/ BCGBPE.ear/native/libAIXNative.a (Library
is already loaded in another ClassLoader) [7-06-07 11:40:35:707 UTC]
00000062 SystemErr R at
java.lang.ClassLoader.loadLibraryWithPath(ClassLoader.java:953)
```

On performing application level restart, this exception is observed. It can be ignored as there is no impact on the functionality of the product. To resolve this issue, restart the Cluster.

Resolving document processing issues in WebSphere Partner Gateway

During high volumes of document transaction on WebSphere Partner Gateway using messaging engine on DB2, the document processing stops abruptly with the following error messages:

```
JMSQueueSender com.ibm.bcg.util.JMSQueueSender sendMessage JMS Exception
occurred for queue: jms/bcg/queue/main_InboundQ javax.jms.JMSException:
CWSIA0067E: An exception was received during the call to the method
JmsMsgProducerImpl.sendMessage (#4): com.ibm.websphere.sib.
exception.SIResourceException: CWSIC8007E: An exception was caught from
the remote server with Probe Id 3-008-0007. Exception:
com.ibm.websphere.sib.exception.SIResourceException: CWSIP0002E: An
internal messaging error occurred in com.ibm.ws.sib.processor.impl.
ConsumerDispatcher, com.ibm.ws.sib.msgstore.RollbackException:
CWSIS1002E: An unexpected exception was caught during transaction
completion. Exception: com.ibm.ws.sib.msgstore.PersistenceException:
CWSIS1500E: The dispatcher cannot accept work...
```

This issue occurs when the size of the DB2 log file exceeds the value mentioned in MAS database. To resolve this issue, increase the value of the DB2 parameter - **LOGFILSIZ**.

Diagnosing install core dump on AIX platform

During installation of WebSphere Partner Gateway on AIX platform, if the installation exits before any dialogs are displayed, then a core dump is generated and the installation log files are created in /tmp. The 'istemp4274431210719', 'ismp004', '.oslevel.datafiles', 'ismp006' message is displayed on the console

The core dump analysis is as follows:

```
JVMDBG304: Java core file written to /opt/websphere/pg_install/DBLoader/javacore5
0786.1194536183.txt
JVMDBG215: Dump Handler has Processed Exception Signal 11 and produces a core and ja
vacore file.
```

It means that the Java virtual machine is having problems, which is resulting in core dump. This issue is caused by a problem with *libaixppk.so* native library, which is used by the AIX platform pack. As this is not a WebSphere Partner Gateway problem, refer to <http://support.installshield.com/kb/view.asp?articleid=Q111262> for more details on how to resolve this issue.

Diagnosing the problem when no logs are generated while un-installing WebSphere Partner Gateway

This issue occurs on UNIX platform if the servers are not stopped gracefully during the un-installation of WebSphere Partner Gateway. Thus, the subsequent server start will not have anything in the logs. This problem is frequently seen in case of MAS server. To correct this issue, check for the java process that the MAS server is using to kill the process, and restart the node agents, cluster/server again.

Use the below command to find the java process:

```
ps -ef | grep bcgmas
```

Chapter 4. Troubleshooting migration of WebSphere Partner Gateway

This chapter details the solutions/workaround to the issues you might face while migrating WebSphere Partner Gateway from previous versions to the latest version.

Resolving smart migration failure

Smart migration may fail due to one of the following reasons:

1. The hub migration may fail if the deployment manager stops during processing. Ensure that deployment manager is up and running before proceeding with hub migration.
2. WebSphere Partner Gateway smart migration fails when it is carried out immediately after WebSphere Application Server (WAS) fixpack upgradation. This is due to the fact that WAS server are internally stopped and started after the fixpack upgrade. To resolve this issue, after starting the fixpack upgradation process, allow WebSphere Application Server (WAS) servers to update its configuration to the latest level. Then, stop all cluster(s) or servers and start migration as per the procedure given in the WebSphere Partner Gateway Installation Guide. Finally, start WebSphere Partner Gateway 6.2 smart migration.

Note: The migration installer needs to be run on each of the machines where WebSphere Partner Gateway components are deployed. This is required to update the core files and product version on all the servers.

Note: If WebSphere Partner Gateway application fails to start after new instance creation, make use of distinct deployment managers.

Troubleshooting document processing failures after migration

While migrating from WebSphere Partner Gateway 6.0x to 6.2, the trading partner may fail to route documents to WebSphere Partner Gateway. This is due to the fact that WebSphere Partner Gateway simple and simple distributed mode (6.1 and above) uses default port values other than the one used in previous releases. Where as fully distributed mode retains the same default port values as used in previous versions of WebSphere Partner Gateway.

For Example: The receiver default port values for WebSphere Partner Gateway 6.0.x are: Unsecure Port = 57080 Secure Port = 57443

The Simple and Simple Distributed mode receiver default port values for WebSphere Partner Gateway 6.2 are: Unsecure Port = 58080 Secure Port = 58443

Ensure that the trading partner B2B software is updated to reference the new port value in the WebSphere Partner Gateway receiver URL.

JMS integration failure after migrating to WebSphere Partner Gateway 6.2

After migrating from WebSphere Partner Gateway 6.0 version to 6.2, the JMS Receiver and Destination do not work, and the SystemOut log shows the following error message:

```
- 00000041 JmsReceiverWo E JmsReceiverWorker trace Exception: Queue connection is null. Possible cause is that JMSConnectionFactory is configured instead of JMSQueueConnectionFactory -  
00  
00041 jmsReceiverWo E jmsReceiverWorker trace Got exception while Polling: Exception : Queue connection is null. Possible cause is that JMSConnectionFactory is configured instead of JMSQueueConnectionFactory javax.jms.JMSEException: Exception : Queue connection is null. Possible cause is that JMSConnectionFactory is configured instead of JMSQueueConnectionFactory at com.ibm.bcg.server.receiver.JmsReceiverWorker.connect(JmsReceiverWorker.java:376) at com.ibm.bcg.server.receiver.JmsReceiverWorker.run(JmsReceiverWorker.java:1882)
```

Although WebSphere Partner Gateway 6.2 does not require WebSphere Messaging Queue (WMQ) as a prerequisite, if the pre migration system uses WMQ for JMS integration, then perform the following instructions:

1. Copy fscontext.jar and providerutil.jar from **WMQ_path>\java\lib** to the WebSphere Partner Gateway component userexits folder.

Note: For Receiver, it is < **WebSphere Partner Gateway_path>\receiver\lib\userexits**. For Document Manager, <**WebSphere Partner Gateway_path>\router\lib\userexits**.

2. Restart WebSphere Partner Gateway servers.

Error on importing the sample

When you import the sample into WID 6.2 the tool prompts you to migrate to the rational tool. On migrating to the rational tool, errors are displayed in FTP logs:

```
dependent Utility project defined in v6 META-INF/. modulemaps:  
PIP3A4BuyerEJBClient is not defined as a v7 dependent project in the  
.settings/org.eclipse.wst.common.component file. dependent Utility project  
defined in v6 META-INF/. modulemaps: PIP3A4SellerEJBClient is not defined  
as a v7 dependent project in the .settings/  
org.eclipse.wst.common.component file.
```

To resolve the issues, add the dependency using the J2EE Module Dependencies properties page.

Chapter 5. Troubleshooting transport protocol issues (sending and receiving)

This chapter helps you resolve issues related to transports.

Resolving SFTP Issues

Here are some tips and solutions to resolve issues related to SFTP protocol.

How to enable trace for SFTP

About this task

In WebSphere Partner Gateway, enable debug logs to trace error messages related to SFTP failure. To enable debug logs:

1. Navigate to **WebSphere Application Server Admin Console > Troubleshooting > Logs and Traces > bcgServer > Diagnostic Trace Service > Change Log Detail Levels > Runtime**.
2. Click **com.ibm.j2ca** and select trace level as 'finest'.

Troubleshooting SFTP receiver destination creation failure in WebSphere Application Server

After successful creation of SFTP receiver destination in WebSphere Partner Gateway, confirm if the activation specification is created in WebSphere Application Server admin console, in the following location: **WAS Admin > Resource Adapters>J2CConnection Factories**.

1. For every SFTP destination creation/update, corresponding cluster or docmgr needs to be restarted.
2. The hostKey file should be specified properly, else the following error will be logged in the SystemOut.log file:

```
javax.resource.spi.ResourceAllocationException: An error occurred while validating the host key file. The specified host key file does not exist. The Adapter could not perform server authentication
at com.ibm.ejs.j2c.FreePool.createManagedConnectionWithMCWrapper (FreePool.java:2148)
at com.ibm.ejs.j2c.FreePool.createOrWaitForConnection(FreePool.java:1568)
```
3. The SFTP username, password, and output directory should be specified correctly, else the following error will be logged in the SystemOut.log file:

```
"0000001e SystemErrR Caused by: javax.resource.spi.
InvalidPropertyException: Error while validating ActivationSpec properties,
UserName/PrivateKeyFilePath/Passphrase EventDirectory(not able to connect, logi
n and initialize the FTP server connection, rectify the error properties,
Check EISEncoding also for validity).
UserName = ibm
PrivateKeyFilePath
```
4. In SFTP receiver/destination creation page, use relative path while specifying "output directory/remote event directory" path.

5. For each SFTP receiver creation, ensure that the corresponding SFTP MDB bean (SFTP-MDB-sftpRec-timestamp) is created in the following WebSphere Partner Gateway installed location:

```
<installDir>>/wasND/Profiles/<profileName>>/installedApps/<cellName>/BCGReceiver.ear/SFTP-MDB-sftpRec-timestamp.
```

Note: While routing a document to an SFTP destination, ensure SFTP Server is up, else the transaction will fail, and the following error is displayed: Not able to deliver to < SFTP destination> .

FTP Scripting destination with user level locks

About this task

In multiple document manager setup, all document manager instances will attempt to deliver the documents to FTP Scripting destination.

As the **Lock User** option is set to *Yes*, all the instances will try to lock the same user account, but only one document manager instance will obtain the lock.

All other instances will keep trying till it exceeds the retry count. For the instances that fail to obtain the lock before the retry count exceeds, the document delivery fails with the error "Document Delivery Failed - Document delivery to partner Destination".

In such scenarios, set the value for **Lock User** attribute of the FTP Scripting destination to *No* in the WebSphere Partner Gateway console.

Follow the below steps to edit the value of **Lock User** attribute:

1. In the WebSphere Partner Gateway console, navigate to **Partner > Destination > FTP scripting gateway** (choose the specific FTP scripting gateway)
2. Edit **Lock User attribute** to *No*.

FTP Scripting Destination fails to route documents on AIX platform

About this task

On AIX platform, FTP Scripting Destination fails to deliver documents for large transaction volumes in Active mode.

The passive mode must be used for transferring large volumes of documents in AIX. Specify passive mode for file transfer operation in the script used by FTPScripting Destination. Use 'passive' command or 'pasv' command in the script.

Resolving JMS exceptions when working with MQ v7.0

When using JMS Receiver or JMS Destination with WebSphere MQ v7, an error messageException in thread "Thread-52" java.lang.UnsatisfiedLinkError: mqjbn05 (Not found in java.library.path)" is displayed by the SystemErr.log file of WebSphere Partner Gateway server.

Cause of the error message

This error message is seen when connecting to MQv7 using Bindings transport, and ".bindings" file is generated from MQv7 JMS Administered Objects.

Problem resolution

To resolve this error, perform the following steps:

1. Log on to the WebSphere Application Server Admin console.
2. Select **Environment** → **WebSphere Variables** → **All Scopes**.
3. Edit or update the values of "MQ_INSTALL_ROOT" environment variable.
 - **For AIX:** MQ_INSTALL_ROOT/usr/mqm
 - **For UNIX:** MQ_INSTALL_ROOT/opt/mqm
 - **For Windows:** MQ_INSTALL_ROOT C:\Program Files\IBM\WebSphere MQ

After editing or updating the values of the "MQ_INSTALL_ROOT" environment variable, stop the respective server and then restart the server.

Log on to the WebSphere Application Server Admin console and update the JVM argument for Java library path.

- For WebSphere Partner Gateway simple mode of installation, implement the changes on "server1" scope level.
- For WebSphere Partner Gateway simple distributed mode of installation, implement the changes on "bcgserver" scope level.
- For WebSphere Partner Gateway full distributed mode of installation, implement the changes on "bcgreceiver" and "bcgdocmgr" scope level.

Note: The values for the Java library are defined correspondingly to the platform on which WebSphere Partner Gateway is installed.

On the WebSphere Application Server Admin console, go to **Servers** → **Application Server <server name>** → **Server Infrastructure** → **Java and Process Management** → **Process Definition** → **Java Virtual Machines**.

- For Generic JVM arguments, the path is `-Djava.library.path=<library_path>`.
- For 32-bit Linux, the path is `-Djava.library.path=/opt/mqm/java/lib`.
- For 64-bit Linux, HP-UX, and Solaris, the path is `-Djava.library.path=/opt/mqm/java/lib:/opt/mqm/java/lib64`.
- For 64-bit AIX, the path is `-Djava.library.path=/usr/mqm/java/lib:/usr/mqm/java/lib64`. Additionally, since `/usr/lib` is always in the system library path, if you are using 64-bit JVM, you must also delete the symbolic links in `/usr/lib` which point to the 32-bit libraries in `/usr/mqm/lib`. This is done using the WebSphere MQ binary "dlmqlnk". Note that it is not necessary to delete these symbolic links if you are using a 32-bit JVM.

For more information, you refer to the white paper on WebSphere MQ V5.3, V6 and V7 as JMS Provider for WebSphere Application Server V5, V6.0, V6.1 and V7 at <http://www-01.ibm.com/support/docview.wss?uid=swg27017881>.

The following URL will help you set the class path http://publib.boulder.ibm.com/infocenter/wmqv7/v7r0/topic/com.ibm.mq.csqzaw.doc/ja10330_1.htm.

Chapter 6. Troubleshooting Archiver Issues

This chapter provides solutions to Archiver related issues.

Diagnosing Archiver Export failure

The export may fail due to inadequate permissions (and/or space) for the locations used for archiving the contents of Non-repudiation data store and export of database tables. If export fails, then try to write a sample file into the corresponding directory with proper user credentials. Follow these steps:

1. If copying fails for file backup, then try to write a sample file in the NonRep File Archive location directory as the hub owner, for example, "bcguser".
2. If export fails for database table, then try to write a file in the NonRep Archive Database location as the DB2 fenced user. In case the database is Oracle, then try to write a file in the NonRep Archive Database location as the oracle instance owner.

In all the above cases, if you are unable to write file as respective user, then the issue will be related to the permissions provided for those folders.

Archiver task failure will be logged as event "BCG700002 - Archiver Error for task {0} Execution Time {1} Error Reason {2}" on page 23; refer to the event viewer for detailed message description.

Resolving Archiver Data Restoration Failure

About this task

While restoring archive data, you may encounter BCG700005 error event. Refer to Event viewer for the detailed description of the error. To resolve the archive restore failure, do the following:

- Check whether NonRep file backup is present in proper format inside NonRep File Archive Location.
- Check whether NonRep database backup is present in proper format inside NonRep Database Archive Location.
- In case the database is DB2, check if you have installed the correct version with relevant fixpacks. DB2 v8.0 does not support Archiver Restore through WebSphere Partner Gateway console. In that case, you need to manually restore data using the script "bcgDBNonRepImport".
- In case the database is Oracle, check if you have installed the correct version with relevant fixpacks. Oracle 9i does not support Archiver Restore through WebSphere Partner Gateway console. In that case, you need to manually restore data using the script "bcgDBNonRepImport".

Console based restore (from archive) support

The console based restore (from archive) feature in WebSphere Partner Gateway 6.2 does not support the backup archives taken on WebSphere Partner Gateway versions earlier than 6.1.

If the database is DB2 and the archive backup was taken on WebSphere Partner Gateway 6.1 or later, then you can restore them using the restore feature provided in WebSphere Partner Gateway 6.2. Perform the following steps:

1. The archive destination used for taking the backup (using bcgDBNonRepExport script) has to be accessible to the DB2 fenced user. You may need to change the ownership permissions for the folder and its subdirectories, such that DB2 fenced user is able to read the files.
2. On the Restore screen in WebSphere Partner Gateway 6.2:
 - Enter the Start Date and To Date. This range will be used to filter the folders from which data will be imported.
 - For NonRep File Archive Location, enter a fully qualified path of the Destination location that was used to archive during the COPY of the non-repudiation data (call to bcgArchive script). The hub process owner, for example, bcguser, has to have read permissions for this location and its subfolders.
 - Provide the fully qualified path name used for archiving destination (as in bullet 1 above) in the NonRep Database Archive Location.
 - Click **Restore** to restore the data.

In the case of Oracle database, it is not possible to restore the archived data from earlier versions on the WebSphere Partner Gateway 6.2 installation. It will fail with the error: "Exception while doing the db restore java.sql.SQLException: ORA-20999: 20002 AR_IMPORT_DATA ORA-29913: error in executing ODCIEXTTABLEOPEN callout ORA-29400: data cartridge error KUP-11010: unable to open at least one dump file for load ORA-06512: at "BCGAPPSD.AR_IMPORT_DATA", line 338"

The workaround is to convert the format of the oracle export files. For this, the user needs to have another installation (installation separate from the production) of WebSphere Partner Gateway 6.2:

- Use the scripts for bcgDBNonRepImport to import the table data into LG_MSG_ARCHIVE table.
- Run the archiver from the console. This will create the database export files in the format supported on WebSphere Partner Gateway 6.2, which may be restored using the console.
- Follow the steps mentioned in the restore of DB2.

To restore the non-repudiation file backup of 6.0 archived data from 6.2 console, in the Archiver Restore screen, select the last modified date of the directory such that it falls within the start date and end date range (as 6.0 non rep directory structure is not in the YYYYMMDD format).

Tips and Workarounds

Here are some tips and workarounds that will help you resolve few archiver issues.

- *Auto refresh for status in Archiver configuration page is not enabled.*
Solution: Refresh the page manually to get the proper updated status.
- *Auto Refresh for Archiver Restore Status is not enabled*
Solution: Click on the refresh button in Archiver Restore page to get the updated status of Archiver Restore Operation.

- *Archiver Search Restored Documents*: Search Results Raw message viewer does not display the message details.
Solution: Check whether the document with the same VUID exists in Archiver Restored location (dataRestore folder in the common directory).
- *Archiver report does not explain the cause of Archiver task failure*
Solution: Refer to event description of BCG700002 event and resolve accordingly.

Chapter 7. Troubleshooting issues related to Websphere Transformation Extender (WTX) Integration

Here are the steps to follow to resolve issues related to WTX integration:

1. Ensure that WebSphere Partner Gateway v6.2 is installed and running.
2. Ensure that WebSphere Transformation Extender v8.2 with FP3 is installed and running.
3. WebSphere Transformation Extender (WTX) server must have access to the WebSphere Partner Gateway common file system. Make sure common file system of WebSphere Partner Gateway is mapped on to WTX server.
4. Copy the *dtspi.jar* from the WebSphere Transformation Extender installation directory into the directory `<WebSphere Partner Gateway Install>\router\lib\userexits`. Ensure that the hub owner (for example, *bcguser*) has 'read' and 'execute' permission for the jar file. This jar file contains the runtime classes that are required to invoke WTX for performing the transformation.
5. Restart WebSphere Partner Gateway to pick up the new jar files.
6. For all platforms other than Windows, execute the file *setenv.sh* available in the WTX installation directory. This will initialize the environment variables required for WTX in the current session. You need to restart WebSphere Partner Gateway servers from the same session so that the new path settings are loaded. For Windows, the WTX installation directory path needs to be added to the system environment variable *PATH*.
7. If you are using the WebSphere Transformation Extender RMI Server, then start the server. Refer to WTX documentation for more details.
8. On WebSphere Partner Gateway console, provide values for the attributes:
 - **wtx.rmihostname**
 - **wtx.rmiport**
 - **rmiuseserver**
 - **bcg.wtx.mapLocation** (under System Administration tab)

To obtain the port number where the WTX RMI server is listening to, open command prompt and invoke `<WTXinstallDir>/startRMIServer.bat -verbose`

Note: While uploading WebSphere Transformation Extender map to WebSphere Partner Gateway console, make sure that the map is compiled for the native platform on which WebSphere Transformation Extender is installed. If you want to send many documents, you need to change the values of the attributes in the WTX design studio, and then compile the map. To change the values of the attributes, navigate to **Map** → **Map Settings**, and change the values as shown below:

- Attribute name: Workspace
- Attribute value: Memory

To compile WebSphere Transformation Extender map for a specific platform, use the 'build map' option in WTX design studio.

Chapter 8. Troubleshooting runtime errors, validation errors, and exceptions

This chapter details the solution/workaround for some common error message that you might encounter while installing or working on WebSphere Partner Gateway. For detailed listing of all the error messages, along with the resolution, refer to WebSphere Partner Gateway Console. Every error message will have link to the detailed information such as Problem Cause, Symptom, Detailed explanation, and Solution.

Resolving error events

This section provides solution or workaround to some of the errors that you may encounter while installing or working with WebSphere Partner Gateway.

BCG103201 - Hub Owner State Engine Error

Error Reason :{ 0}. The "Hub Owner State Engine" error occurs when the state engine is unable to retrieve/post sponsor events:

This error is generated when the database is unavailable or Messaging System and Common File System (CFS) are unavailable.

To resolve this issue, make sure that the dependent resource like database messaging system and Common File System (CFS) are available.

BCG103203 - Receiver Processing Error

Target '{0}{1}' failed processing document error: {2}. The "Receiver Processing" error occurs when WebSphere Partner Gateway receiver is unable to process received document. This error is generated due to any of the following reasons:

- Insufficient permission over Common File System
- Non-existence of mandatory directory under Common File System
- Unable to read the content from its source stream
- Failure in retrieving the metadata

To resolve this issue, take remedial action based upon the events argument interpretation.

BCG103205 - Receiver Error

Target '{0}{1}' failed to process target: {2}. The "Receiver" error occurs when WebSphere Partner Gateway receiver is unable to process the received document.

This error is generated when the received document under Common File System(CFS) cannot be persisted.

To resolve this issue, make sure you have sufficient disk space available for Common File System and permission to store the file.

BCG210031 - Unable to Non-Rep document

Event BCG210031 is generated due to one of the following reasons:

- Database or network (connection) goes down.
- Network connection to common file system goes down.
- Common file system disk space is full.

To resolve this event, perform the following checks before initiating a re-send on the failed document with event code 210031.

1. Check that the WebSphere Partner Gateway database and network to the database workstation is up and established.
2. Check that there is network connectivity between the common file system and WebSphere Partner Gateway components.
3. Check that the common file system disk has enough free space to write the documents.

BCG210033 - Message store failed

Unable to store document plain text: {0}.

The error occurs while the document is routed through WebSphere Partner Gateway. During the message store operation of a document, this error is generated whenever there are problems in the file system and database access.

This event is generated due to any one of the following reasons:

- Database is down
- File system is full or
- There might be any other unexpected error condition while attempting to access the file system or database during the message store of a document.

To resolve this issue, analyze the system trace logs.

BCG240701 - Activity logging error

Error occurred while logging activity details {0}

This error occurs while the document information is logged in the WebSphere Partner Gateway:

Activity Logging Error: <error string>

The Activity Logging Error is generated due to any of the following reasons:

- If duplicate document ID exists.
- Document ID does not exist.
- Failure in establishing sync document link.
- Error while trying to mark batch status as complete.
- Error while trying to log summary.
- Error while inserting into an activity table.
- Error while trying to log AS Activity.
- Error while trying to log activity end state.

- Error while trying to log RN activity.
- Error while trying to log vtp status.
- Error while trying to establish the Request Response Link for CIDX.
- Error while trying to establish the Sync Request Response Link.
- Error while trying to create activity chain.
- Error while trying to log the envelope inclusion.
- Error while trying to mark batch status as complete.

This is a generic error and occurs when there is problem in logging the document information to the database.

To resolve this issue, make sure that the right document is sent for processing.

BCG410020 - Not enough information to generate error

Missing {0}

This error is generated due to any of the following reasons:

- Unable to create a SOAP message for error.
- Unable to create a SOAP message for acknowledgement.
- Unable to create a SOAP message for pong.
- Unable to create a SOAP message for status request.

To resolve this issue, verify the logs and decide upon the course of action.

BCG700002 - Archiver Error for task {0} Execution Time {1} Error Reason {2}

This event is generated when an error condition occurs during the archiving task. The following errors occur when archiving fails:

- Archiver Error for task {0}.
- Execution Time {1}.
- Error Reason {2}.

This error is generated due to any one of the following reasons:

- Inadequate file permissions - The directory you have specified for backing up files do not have write permission set.
- Directory does not exist - The directory which the user has specified for backing up file and DB does not exist.
- No disk space.

When the archiving task fails, this error gets generated.

To resolve this issue, perform the following checks:

- Inadequate file permissions - Check that the directory which the user has specified for backing up file and DB has write permission set.
- Directory does not exist - Check that the directory which the user has specified for backing up file and DB exists.
- No disk space - Check that adequate disk space is available on the machine where the data is to be archived.

- Locks on db side - Increase the number of database locks.
- No space for db log files - Increase the space.

BCG210022 - Process transaction rolled back

This event will be displayed in the bcg_router.log file with these details:

```
Message Logged
Message
Message Code:210022
Final State:Failed
Severity:Info
Location:null
ArgumentString:1
EventTimestamp:1218741497343
BusinessDocumentId:121873973432400505696471D0063494719D3953EC4CEA6
HostIPAddress:53.67.26.177
EventId:121874149734300505696471D0116746AAD747214D08DE1
MessageName:Document processing transaction rolled back
ParentBusinessDocumentId:121873973432400505696471D0063494719D3953EC4CEA6
```

To resolve the issue, perform the following steps:

1. Run the following query after connecting to the WebSphere Partner Gateway application database: `select ACTIVITYID,STATUSCD,CREATEDATE FROM BP_PROCESS_LOG WHERE STATUSCD=2`
2. Shutdown WebSphere Partner Gateway servers.
3. For each record returned, you will need to run the following: `update bp_process_log set statuscd = 1 where ACTIVITYID = 'value returned from previous query'; commit;`
4. Start WebSphere Partner Gateway servers.

BCG240415 - MDN Not Signed

If WebSphere Partner Gateway continually attempts to process the same document, the following error may occur:

```
BCG210031: Unable to Non-Rep document {0} BCG240415: AS Packager Error: {0}
The following is an example of the messages that the router.log file contains:
,681 ERROR [BPEEngine] [main Thread 1] - Error in nonRepProcess
,681 ERROR [BPEEngine] [main Thread 1] - java.io.FileNotFoundException:
xception:
/opt/wbi/ca/common/data/Inbound/process/917/fa/xxx (A file or directory in the path
name does not exist.) at java.io.FileInputStream.open(Native Method)at java.io.Fil
eInputStream.
```

These errors are produced when the affected document (identified in the log files by a unique identifier or UUID) is cycling in the system through the main_inbound queue and the common\data\inbound\serialize folder.

To resolve this error:

1. Stop the document manager.
2. Clear the queues.
3. Remove the affected UUID entry in both main_inboundq and common\data\inbound\serialize folder.
4. If the operation does not succeed the first time, possibly because of some timing condition, clear the system again.
5. Ensure that the router.log does not contain the error. Also, router CPU usage must not contain the error and the CPU usage must be normal.

BCG210001- Check Channel Error and BCGEDIEV0056 - Translation Table Lookup Warning

This error occurs when the Oracle database is not created with the Unicode character set, but is incorrectly set to Windows 1252 or similar non-Unicode code page.

An EDI transformation map can fail with the Check Channel error and errors BCGEDIEV0056 and BCG210001 on Oracle systems, and produce the warning event:

Warning BCGEDIEV0056 Event "Translation Table Lookup Warning": A translation table lookup returned no entry while deenveloping a message. Next: "Check Channel Error - Channel lookup failed. Not enough channel info.

To verify the character set on Oracle:

1. Connect to the Oracle database.
2. Select NLS_CHARACTERSET from v\$nls_parameters.
3. The value returned should be AL32UTF.
4. Verify this on your Oracle systems. There is no direct way of modifying the character set of the database once it has been created. The solution is to re-create the database with the database character set and the national character set as Unicode.

BCG210013 - Connection Not Fully Configured

Unable to receive inbound document because of the following error:
BCG210013 - Connection Not Fully Configured.

If all other configurations appear to be correct, the most common cause of this error is an incorrect receiver specification.

1. Check that there are no spaces in front of the receiver URL definitions.
2. Navigate to **Tools > Test Partner Connection**.
3. Select the Partner and test the destination URL used in the connection.
4. Try to narrow down the problem trying to send a test EDI message using other business IDs available for the partners. Try to see if this is a business ID specific problem.
5. If step 3 fails, then take a debug trace of the error scenario as follows. Refer to "Enabling debug trace for WebSphere Partner Gateway" on page 63 for more details:
 - a. Shut down WebSphere Partner Gateway.
 - b. Change the debug setting for the receiver and router to FINEST for WebSphere Partner Gateways using the following command:

```
"*=info:com.ibm.bcg.*=finest"
```
 - c. Delete or backup to a different folder. For information on the current logs, see "Installation Log files location" on page 72.
 - d. Restart WebSphere Partner Gateway.
 - e. Run the error scenario only once.
 - f. Compress and send all logs along with a screen capture of the error message taken from the console viewer to IBM customer support.

If you are receiving

BCG210013 - Connection Not Fully Configured

message in spite of a fully configured channel, then check your HTTP Target Configuration for a missing '/' in the URI field. For example, */bcgreceiver/submit*.

BCGEDICM0001 - Unexpected Exception Occurred

When WebSphere Partner Gateway is configured to carry out large sized EDI transformations, in some cases, it was seen that the document fails transformation and the event BCGEDICM0001 is logged. The event details are:

```
BCGEDICM0001: An unexpected exception occurred in component: Validation. Exception text: java.lang.NullPointerException
```

During large file transformation, by default, WebSphere Partner Gateway uses pagination, so that the large document does not have to be held in memory when parsed. For this, it uses PageFileDir and PagingThreshold properties from the System Administration panel (in releases 6.1 and above) and ediparms.properties from the router properties (in release 6.0.x and above).

By default, the value provided for these are: PageFileDir= PagingThreshold=1000

If no value is specified for PageFileDir, WebSphere Partner Gateway used the user.home directory from the System property. This directory is expected to have read, write and delete permissions for bcguser or the userid, which was used to install WebSphere Partner Gateway. Hence, the transformation fails and the BCGEDICM0001 event is logged.

To resolve the issue, perform the following steps:

1. Check the user permissions on user.home directory, and change the permissions appropriately.
2. Optionally, user can provide a directory path in the property PageFileDir. This directory will then be used for internal paging. The permissions on this directory must be read, write, and delete.

Restart WebSphere Partner Gateway servers to avoid issues caused by cache refresh delay, if any.

Fixing the 500 Error in Console

The browser can display ERROR: 500 and following error is logged in the SystemOut.log file.

```
SRVE0026E: [Servlet Error]-[action]: java.lang.NullPointerException error
```

This error is generated when you install WebSphere Partner Gateway, start the Console, log in as 'hubadmin', and change the default password. The error occurs when the cookies turned off in the browser or the firewall setting for cookies is too strict.

To resolve the error:

1. Change the firewall security level to Medium/Medium High.
2. Enable the cookies on the browser.

This error can also occur if one of the servers is down. Verify if all WebSphere Partner Gateway servers are up. If all the servers are up and running, review the logs to determine the cause of the error.

If WebSphere Partner Gateway is installed in C:\IBM\WPG, the log files will be stored in the relevant locations. Refer to “Installation Log files location” on page 72 for more details.

In each folder, check the SystemErr log file. This file must have the time stamp of the latest access attempt. Scroll down to the bottom of the file to see the latest log entries and review the error messages.

ORA-00988 error

This error occurs because of the Oracle limitation. If a password beginning with a number is not entered within quotation marks, then the following error occurs: ORA-00988: missing or invalid password(s).

To resolve this error, if the password is a number, enter the password within quotation marks (for example, “123456ABC”) in the WebSphere Partner Gateway installation panels.

Errors - TCPC0003E and CHFV0029E

The WebSphere Partner Gateway receiver component can fail to start resulting in TCPC0003E and CHFV0029E errors in the SystemOut.log file.

The errors can occur because of the following conditions:

1. If configured ports are used by other applications port conflict may occur.
2. Ports numbers lower than 1024 are privileged ports, which are reserved for root. Unless your system has been configured to specially handle this restriction, non-root users will not be able to bind to those ports. WebSphere Partner Gateway uses the non-root user, bcguser, to start components and cannot bind to privileged ports.

Note: For WebSphere Partner Gateway, non-root users typically start the receiver and are not able to bind to those privileged ports. Change the receiver ports to available ports (that is, ports not used by other applications) and larger than 1024. The following example shows how to change port 80 to nnn.

1. Stop the Receiver.
2. Find and replace port number 80 to nnn in the following files:

Note: Backup all files before editing.

- Under <Installed_Path>bcghub/was/profiles/bcgreceiver.
 1. config\cells\DefaultNode\virtualhosts.xml.
 2. config\cells\DefaultNode\nodes\DefaultNode\serverindex.xml.
 3. config\templates\servertypes\APPLICATION_SERVER\serverindex.xml.
 4. installedFilters\wlm\bcgreceiver\target.xml
 5. logs\portdef.props.
- Edit <Installed_Path>bcghub\receiver\lib\config\bcg_receiver.properties.

Note: The port number can also be changed using the WebSphere Application Server admin console by going to Server > Ports page and changing the port for WC_defaulthost.

1. Start the receiver.
2. Type the receiver URL in your browser to ensure receiver works, `http://<host_name>:xyz/bcgreceiver`. The correct result is that browser should report "Unsupported Operation" message. If the receiver does not bind to the port successfully, the "The page cannot be displayed" message is displayed.

Fixing WebSphere MQ messages

If you are using JMS as a Gateway with WebSphere MQ as the messaging service, you can receive the following message when putting a particular message in a queue. MQJMS2007: failed to send message to MQ queue.

This occurs if the connector fails to write a message to output queue. The cause of this error maybe because of the maximum message length attribute for a queue. The queue manager or channel is not set to a value that is equal to or higher than the largest message size. To change the message length attribute for the queue, queue manager and channel:

1. Go to the **WebSphere MQ Explorer Queue Manager Properties**.
2. Click on the **Extended** tab and set the maximum message length attribute to a value greater than the size of the message.
3. Go to the **Channel Properties**.
4. Click on the **Extended** tab and set the maximum message length attribute to a value greater than the size of the message.
5. Go to the Queue properties for the queue that was specified while creating the gateway.
6. Click on the extended tab and set the maximum message length attribute to a value greater than the size of the message.

MQJMS2013 error

When WebSphere Partner Gateway communicates with WebSphere MQ, following error may occur:

MQJMS2013 invalid security authentication.

To resolve the error, perform the following steps:

1. Check the user ID that is used to login to the application.
2. Verify the user ID that is being used is in the mqm group (or some other group with sufficient authority).
3. If the user ID is not in the mqm group, then add it to the mqm group and issue the `runmqsc REFRESH SECURITY(*)` command.

Fixing SQL Errors

SQLCODE -1225 error

SQLCODE -1225 error may be displayed followed by a stack trace in the WebSphere Partner Gateway server logs, when DB2 resources are running low on the system.

The following is an example of the SQLCODE error:

```
java.sql.SQLException: com.ibm.db2.jcc.c.SQLException:  
DB2 SQL error: SQLCODE: -1225, SQLSTATE: 57049, SQLERRMC: null
```

This error typically occurs when transaction rates are high (large number of documents per second) and DB2 is not able to sustain this rate. The database administrator might want to monitor and tune the database to accommodate these high transaction periods. To improve the performance of the database logging, you can tune the following DB2 parameters:

- LOGPRIMARY.
- LOGSECOND.
- LOGFILESIZ.
- LOGFILESIZES.

SQLCODE -289 error

A DB2 error code -289 indicates that the database has run out of space on the file system.

1. Check with the database administrator about adding additional capacity on the database servers.
2. Alternatively, WebSphere Partner Gateway data can be archived to a different storage location to free up disk space.

SQLCODE -444 error

If you encounter SQLCODE -444 error messages when starting any of the WebSphere Partner Gateway components (bcgconsole, bcgreceiver, bcgdocmgr), you should increase the value of the DB2 Database Manager SHEAPTHRES parameter. This parameter should be at least two times larger than the highest sortheap value defined for any database within the DB2 instance. Consult your database administrator or see your DB2 administrator's guide before changing this setting.

A sample command is given below: `db2 UPDATE DBM CFG USING SHEAPTHRES xxxxx IMMEDIATE` If the SQLCODE -444 persists after changing the value of SHEAPTHRES, you can decrease the values of STMHEAP and APPLHEAPSZ for your WebSphere Partner Gateway database. A sample command is given below: `db2 UPDATE DB CFG FOR <dbname> USING APPLHEAPSZ xxxxx.`

This can also be found in the `<DB2Home>\SQLLIB\bin\db2diag.log` file.

QL 0964C Transaction log full error on the BCGMAS database

WebSphere Partner Gateway creates the BCGMAS database with the following default configuration values: LOGFILSIZ=1024 LOGPRIMARY=13 LOGSECOND=4. The amount of space required for the DB2 transaction log is dependent on a number of factors, including the peak rate of documents being processed by WebSphere Partner Gateway during a given time period.

If you observe that WebSphere Partner Gateway seems to quiesce while documents are still in the queue, check the FFDC logs for the BCGMAS server. If you find that the BGMAS server failed with error SQL 0964C, increase the size (LOGFILESIZ) and number (LOGPRIMARY, LOGSECOND) of transaction logs for the BCGMAS database.

java.lang.NoClassDefFoundError with reprocessDbLoggingErrors.bat

The reprocessDbLoggingErrors.bat file has the path to ws_runtime.jar, which is present in the directory: <WAS_HOME >\deploytool\itp\plugins\com.ibm.websphere.v61_6.1.0. But, after every fixpack release, the folder name com.ibm.websphere.v61_6.1.0 gets changed to the corresponding fixpack version. Hence, the batch file fails to find the ws_runtime.jar. Hence, you might encounter java.lang.NoClassDefFoundError.

You might encounter java.lang.NoClassDefFoundError for the following reason.

To fix this issue, you have to set the ws_runtime.jar path, as described below:

1. Navigate to the directory: <WAS_HOME >\deploytool\itp\plugins\com.ibm.websphere.v61_6.1.0.
2. Check the path for ws_runtime.jar.
3. Navigate to the directory: <WAS_HOME >\bin.
4. Edit the reprocessDbLoggingErrors.bat file directory.
5. Set the correct path for ws_runtime.jar and rerun the script.

Resolving the syntax error generated by relocation scripts on Solaris platform

When the relocation and redeployment scripts are executed on Solaris platform, syntax error occurs:

```
bash-3.00$ ./bcgChangePorts.sh WC_defaulthost 58080 console
WPGsun3 Have you taken a backup of your existing
configurations?Y/N y./bcgChangePorts.sh: syntax error
at line 49: `BACKCONFIG=$' unexpected
```

The relocation and redeployment scripts fail when executed on Solaris. This is because the scripts are invoked using sh shell.

To resolve the issue, perform the following steps: Execute the Relocation and Redevelopment scripts using the Korn (ksh) or Bourne (bash) shell. Follow these steps:

1. Take a backup of sh as follows:
mv sh sh_old
2. Make a symbolic link for ksh
ln -s ksh sh
3. Run sh

Resolving validation errors and exceptions

This section provides resolution for validation errors and exceptions.

0A1 generated with data validation errors

The 0A1 specification mandates that GlobalSupplyChainCode be present in the XML. If the incoming 3A7 does not contain this value, it must be added as an attribute to the 0A1. GlobalSupplyChainCode must be either in the 3A7 document or added as attribute to 0A1 in Document Definition. To add an attribute:

1. Click **Hub Admin > Hub Configuration > Document Definition**. The Console displays the Manage Document Definitions window.
2. Click **Package: RNIF > Protocol: Rosettanet > DocumentType: 0A1**, and click the **Edit attribute** values icon.
3. If the Global Supply Chain Code attribute is not there, click **Add Attributes** to add it.
4. Select a value from the list.
5. Click **Save**.

FTP Scripting Receiver Exception

Whenever the client connects to the FTP Server, a Welcome Message is sent. If StringIndexOutOfBoundsException occurs while connecting to a Pro FTP server, request the partner to remove all blank lines from the Welcome Message for the FTP server.

Error scenario The following example shows blank lines in the Welcome Message:

```
ftp myftp.mycompany.com Connected to myftp.mycompany.com 220-<blank line>.You have
connected to
myftp.mycompany.com FTP Server.<blank line>.Please enter userid
and password to login <blank line>220 MYC
OMPANY FTP Server ready.
User (myftp.mycompany.com:(none)):
```

Working scenario The following example shows the Welcome Message with the blank lines removed:

```
ftp myftp.mycompany.com Connected to ftp myftp.mycompany.com
220-You have connected to myftp.mycompany.com FTP Server.
Please enter userid and password to
login 220 MYCOMPANY FTP
Server ready.
User (myftp.mycompany.com:(none)):
```

ClassNotFoundException for User Exit classes

The ClassNotFoundException error can occur when a required class is not found for the following user exits:

1. Receiver user exits.
 2. Custom Actions user exit.
 3. Sender user exits.
- If the *ClassNotFoundException* error occurs, verify the following information:
 1. If the user exits are related to Receiver user exits, check that the corresponding jar or classes are present in either of the following folders:
 - <WebSphere Partner Gateway Install Dir>/Receiver/lib/userexits.
 - <WebSphere Partner Gateway Install Dir>/Receiver/lib/userexits/classes.

2. If the user exits are related to the document manager, check that the corresponding jar or classes are present in the following folders:
 - <WebSphere Partner Gateway Install Dir>/Router/lib/userexits
 - <WebSphere Partner Gateway Install Dir>/Router/lib/userexits/classes
3. If the jar or class files for the user exits are present in the correct location, verify that the corresponding user exits shared library has the correct entries.

To resolve this issue:

1. Open the **WebSphere Application Server Admin Console**.
2. Go to **Environment > Shared Libraries**.
3. Look for BCG_RCVR_USEREXITS and BCG_ROUTER_USEREXITS.
4. Edit the shared library information in these attributes and ensure that the corresponding jars or classes are added to the class path.

Resolving event 210031

While configuring the hub, using the console, if an exception occurs, the Console log shows the exception as part of logging information. For example, if you try to create an interaction that already exists; you will receive the VCBaseException in the SystemOut.log file. This exception is acceptable as part of Logging.

Fixing the hanging threads warning

The following is an example of a message you can receive in the SystemOut.log indicating that threads are hanging:

```
(/opt/IBM/bcghub/wasND/Profiles/bcgdocmgr/logs/
bcgdocmgr/SystemOut.log)
0000000f ThreadMonitor W WSVR0605W:
Thread "WorkManager.BCGBPEWorkManager : 5" (00000055) has
been active for 709464 milliseconds and may be hung.
There is/are 15 thread(s) in total in
the server that may be hung.
```

Note: WebSphere Application Server can show the warning message stating that some of the threads might be hanging. But WebSphere Partner Gateway still processes the threads. To resolve the message, change the following property under DocumentManager, Receiver servers: `com.ibm.websphere.threadmonitor.interval = 0`

This value is located in Custom Properties under **Server Infrastructure > Administration**.

Stopping the Document Manager exception

If you stop the document manager (Server) when a document processing is in progress, following exception message is displayed, which can be ignored:

```
ExceptionUtil E CNTR0020E: EJB threw an unexpected (non-declared
during invocation of method "onMessage" on bean
"BeanId(BCGBPE#ejb/bcgBpeEJB.jar#BPMainEngineMDB, null)".
Exception data: javax.ejb.TransactionRolledbackLocalException:
; nested exception is: com.ibm.websphere.csi.CSITransactionRolledbackException:
com.ibm.websphere.csi.CSITransactionRolledbackException:
at com.ibm.ejs.csi.TranStrategy.commit(TranStrategy.java:742) at
```

```

com.ibm.ejs.csi.TranStrategy.postInvoke(TranStrategy.java:181)
  at com.ibm.ejs.csi.NotSupported.postInvoke(NotSupported.java:99)
  at com.ibm.ejs.csi.TransactionControlImpl.postInvoke
(TransactionControlImpl.java:581)  at com.ibm.ejs.container.EJSContainer.
postInvoke(EJSContainer.java:3876)  at com.ibm.bcg.server.common.
EJSLocalStatelessTransController_5c554616.
onReceive(Unknown Source)  at com.ibm.bcg.server.common.
BaseMDB.onMessage(BaseMDB.java:194)

```

Although you receive this exception, all of the following objectives are met:

- Graceful recovery
- No document loss
- No duplicate document processing
- No performance degradation (after restart)
- No hung documents

java.security.InvalidKeyException: Illegal key size or default parameter

If you try to upload the PKCS12 file with a stronger cryptography than the one supported by default, or if you use a key with an illegal key size that is not supported by default, this exception is thrown. To resolve this error, you must obtain the unrestricted strength cryptography policy files and install them, if it is legal to do so. See the section on changing the cryptographic strength in WebSphere Partner Gateway Hub Configuration Guide.

ClassNotFoundException when WebSphere Partner Gateway tries to invoke the user exit from map

You can create a new User Exit profile whenever you have a user program or exit routine that will be called by the translator component (Map) of WebSphere Partner Gateway. When WebSphere Partner Gateway invokes the map which in turn should invoke the user exit, it may fail and raise an event.

```

User exit xxx had an unexpected exception:
java.lang.ClassNotFoundException:xxx

```

The User exit xxx.class should be in a path which WebSphere Partner Gateway can locate the class in runtime; otherwise, this exception will be generated.

To resolve the issue, perform the following steps:

1. Check the setting of WAS_EXT_DIRS variable in SetupCmdLine.bat (under bcg\hub\was\profiles\<bcgconsole, bcgreceiver or bcgdocmgr>\bin). For example,

```

"SET WAS_EXT_DIRS=%JAVA_HOME%\lib;%WAS_HOME%\classes;%WAS_HOME%\lib;%WAS_HOME%\
installedChannels;%WAS_HOME%\lib\ext;%WAS_HOME%\web\help;%ITP_LOC%\plugins\com.
ibm.etools.ejbdeploy\runtime"

```
2. Copy the User Exit jar/class file to one of path defined in WAS_EXT_DIRS (ex. copy to %WAS_HOME%\lib\ext) Or add your path to this variable. (ex. your User Exit jar/class is in c:\myDir, then SET WAS_EXT_DIRS=...;c:\myDir).

Note: Restart the component if this step is performed.

Resolving parse error generated while sending encrypted document

WebSphere Partner Gateway may receive parse error when sending encrypted document. The parse error is when the text is binary but WebSphere Partner Gateway keeps trying to parse it as EDI.

Note: A clear text may not generate any errors.

The following is the error message:

```
486 DEBUG [ASUnPackaging] [synchronous Thread 0] -
>>set contenttype on business document =application/EDI-X12
```

To resolve the issue and for WebSphere Partner Gateway parser to recognize it as binary, the content type has to be application/octet-stream.

Handling certificate usage errors

Certificate chaining error

Each certificate in the Certificate chain has to be uploaded into WebSphere Partner Gateway to allow successful build of the Cert Path. If all the certificates in the CertPath are not loaded, WebSphere Partner Gateway will throw the following CertPath build errors:

```
java.security.cert.CertPathBuilderException: PKIXCertPathBuilderImpl could
not build a valid CertPath.; internal cause is:
java.security.cert.CertPathValidatorException: The certificate issued by OU=Class 3
Public Primary Certification Authority, O="VeriSign, Inc.", C=US is not trusted; i
nternal cause is:
java.security.cert.CertPathValidatorException: Certificate chaining error
at com.ibm.security.cert.PKIXCertPathBuilderImpl.engineBuild(Unknown Source)
at java.security.cert.CertPathBuilder.build(Unknown Source)
at com.ibm.bcg.util.CertPathUtil.buildCertPath(CertPathUtil.java:454)
at com.ibm.bcg.util.CertPathUtil.validateCertPathWithReset(CertPathUtil.java:189)
at com.ibm.bcg.util.PKCS7Util.checkCertificateValidity(PKCS7Util.java:1490)
at com.ibm.bcg.util.PKCS7Util.encryptBytesS(PKCS7Util.java:292)...
```

To disable complete CertPath build, set the property `bcg.build_complete_certpath` to 'False'. Using this value you need to load only the leaf certificate and the immediate Issuer certificate.

You can also resolve the issue by performing the following steps:

1. In **Create New Certificate** page, add the Leaf certificate for Encryption/Digital Signature of a partner.

Note: The issuer certificates can be extracted as follows in Windows XP Professional. In the **General tab** of the Leaf certificate for Encryption/Digital Signature, you can view the subject and issuer information, for example "Issued to: IBM_WPG_Support.ibm.com" and "Issued by: VeriSign Class 3 Security Server CA".

- Click **Certification Path** tab. It displays the complete path of CA chain. In the chain, you can view "VeriSign Class 3 Security Server CA", which is the Intermediate certificate that has to be loaded as Root/Intermediate under the Hub Operator.
- Click **View Certificate**. This will display the Intermediate certificate "Issued by: Class Public Primary Certificate Authority", which is the root certificate.

- To extract the Intermediate certificate, click **Details** tab and then click **Copy to File**.
- In **Welcome to the Certificate Export Wizard**, click **Next**.
- Select *DER encoded binary X.509 (.CER)* format and click **Next**.
- Browse or enter the path and file name for the certificate to be saved and click **Next**. The **Completing Certificate Export Wizard** is displayed.
- Click **Finish**. You are now ready to upload the Intermediate certificate as Root/Intermediate to the Hub Operator profile.

Revocation status failure

The CAs frequently publish a revocation list of revoked certificates. The certificate contains the URL to retrieve these CRLs in its CRL Distribution Point element. By default, WebSphere Partner Gateway has the Revocation check enabled. Inability to determine the revocation status leads to errors.

If the URL cannot be reached by WebSphere Partner Gateway during runtime, then these CRLs can be pre-downloaded onto WebSphere Partner Gateway common file system in the folder `security/crl`.

To disable Certificate revocation check, set the property `bcg.checkRevocationStatus` to 'false'. The WebSphere Partner Gateway console image shows the location where these properties need to be set.

Normally the Issuer and Subject DN is used to build the CertPath from leaf upwards to the Issuer certificates, but if the leaf certificate has Authority Key Identifier extension then it is used to build the CertPath. In such cases, the KeyID attribute of the Authority Key Identifier must have a value equal to the Subject Key Identifier of the Issuer certificate.

Absence of KeyID attribute leads to CertPath build errors. IBM JDK has released a patch APAR PK33715 to handle these type of certificates. Certificate Revocation List (CRL) is the list of certificates revoked by the Provider. CRL Distribution Point has the URL to retrieve the CRLs. Inability to determine the revocation status leads to errors.

```
java.security.cert.CertPathValidatorException: The revocation status of the certificate with subject (CN=My Corp 1, OU=IBM Sales, O=IBM, L=Bangalore, C=IN) could not be determined.
```

If the URL cannot be reached, the CRL can be pre-downloaded onto WebSphere Partner Gateway file system at the location `security/crl`.

To disable revocation check, set the property `bcg.checkRevocationStatus` to 'false'.

OpenPGP certificate monitor alert event

In case of OpenPGP, whenever you schedule a OpenPGP certification monitor alert event, the document manager does not read the updated data.

To resolve this issue, refresh the changes made to the system properties and restart the server.

Messages that can be safely ignored

Resolving WebSphere Partner Gateway hub installer error messages

When running the WebSphere Partner Gateway Launch Pad, errors similar to the following might be displayed:

```
java.util.prefs.FileSystem
Preferences$3 run WARNING: Could
not create system preferences directory.
System preferences are unusable.
java.util.prefs.FileSystemPreferences
checkLockFile0ErrorCode WARNI
NG: Could not lock System prefs.
Unix error code 270913688.
PM java.util.prefs.FileSystemPreferences
checkLockFile0ErrorCode WARNING: Could not
lock System prefs. Unix error code 270931432.
java.util
prefs.FileSystemPreferences checkLockFile0ErrorCode
WARNING: Could not lock System
prefs. Unix error code 270937824.
```

These messages can be safely ignored.

DB password required error in bcgHubInstall.log

During the installation of WebSphere Partner Gateway hub, the installer logs the following error messages in bcgHubInstall.log:

```
com.ibm.bcg.install.ismp.wizard.conditions.JdbcDatabaseConnectCondition,
err, ERROR: dbPassword is required.
```

This error message does not have any impact. Servers can be started and the documents can be routed successfully. This error message can be safely ignored.

Chapter 9. Troubleshooting WebSphere Partner Gateway Administration

This chapter provides solution to issues that you might encounter while configuring or administering WebSphere Partner Gateway.

Tips to avoid long processing time

If you encounter issues while document processing time is long, these tips could be of help.

Avoiding long processing time for large encrypted documents

Large file support with an order of size in GBs has been extended for AS2 and AS3. In version 6.1.1 and above, the maximum file size processed using byte arrays is configurable. When the amount of memory allocated is more than the available heap size, `OutOfMemoryError` occurs. If the size of data is less than the available memory, `OutOfMemoryError` may still occur if the memory allocated increases the available memory. At runtime, it determines whether the file size configured can be supported based on available heap memory. You can specify the maximum file size that can be used with byte arrays using the property - `bcg.maximumFileSizeForByteArrays`.

Avoiding long processing time on large encrypted AS documents

About this task

Large encrypted AS documents can take a long time to process on some lower-end hardware configurations. To avoid delays, take the following actions: Set the AS Compressed attribute to Yes to decrease the size of the document being sent.

Avoiding out-of-memory errors

Following are the areas that can contribute to the out of memory conditions:

Document Manager memory configuration

This configuration specifies the amount of memory the underlying Java application has allocated to work with.

Document Manager workload

You can configure the number of threads subcomponents can use. If the configured thread number is higher and if there is a heavy work load, then more memory is required to handle all the documents.

Document structure of the documents that are being processed

Depending on the document structure, more memory can be required to process a document, especially for large documents. Areas affected are security (encryption, decryption, signing, and signature verification) and XML Transformation and Validation processing steps (especially those documents with large text values).

Improving document manager performance

Here are some tips to improve document manager performance.

Enabling document manager memory configuration

To improve performance, and to avoid out of memory errors, increase the size of the initial and maximum heap sizes for the WebSphere Partner Gateway components.

To increase the Heap Size from the WebSphere Application Server admin console:

1. Navigate to **Application Servers**.
2. Select the WebSphere Partner Gateway component.
3. Select Java and **Process Mgmt > Process Definition > Java Virtual Machine**.
4. Update the values for **Initial Heap Size** and **Maximum Heap Size**.
5. Restart WebSphere Partner Gateway.

Enabling document manager workload

The number of processing threads used can be configured for several subcomponents by setting system properties. The default values for these properties are low, but they might have been modified by the administrator.

TCP Settings required for Document Manager High Availability configuration

This problem is observed in a high availability setup of WebSphere Partner Gateway, V6.1 and above, in a fully distributed mode installation. The high availability setup involves clustered Document Managers running on separate systems. When one of the Systems involved is shut down, some documents are not processed. The WebSphere Application Server SIB component obtains an exclusive database lock for its internal operations. When one of the machines is shut down, the acquired database lock is not released. The release of the database lock is dependent on the system level configuration of the TCP/IP setting. This TCP/IP property retains the obtained database lock for two hours, as the default value of this property is two hours.

In the Windows operating system, this TCP/IP property name is KeepAliveTime. On AIX operating system, this property is referred by the name TCP_KEEPIIDLE.

- **On Windows:** The value for the TCP property "KeepAliveTime" has to be set to a lower value, that is, approximately 60000 or 120000 milliseconds. For more information, see <http://support.microsoft.com/kb/314053/>
- **On AIX:** The value for the TCP property of "TCP_KEEPIIDLE" has to be set to a lower value, that is, approximately 60000 or 120000 milliseconds. For more information, see http://publib.boulder.ibm.com/infocenter/wasinfo/v6r0/index.jsp?topic=/com.ibm.websphere.nd.doc/info/ae/ae/tpf_tuneaix.html

Troubleshooting database related issues

Depending on the kind of error, refer to the appropriate section for the solution to resolve the database related issues.

Ensuring sufficient virtual memory for DB2 agents

This error displayed in the WebSphere Partner Gateway logs indicates that there is insufficient virtual memory available to the database agent for sort processing. To resolve this error, decrease the value of the SORTHEAP parameter for WebSphere Partner Gateway database that you created. Contact your database administrator for specifics on how to set that parameter in your environment.

Following is an example of an insufficient virtual memory error:

```
Error[DBChannelCheck] [main Thread 2] - Error in channel check for
com.ibm.bcg.channel.CheckChannelParameters@ebda9664
com.ibm.ejs.cm.portability.ResourceAllocationException: DB2 SQL error:
SQLCODE: -955, SQLSTATE:57011, SQLERRMC: null
```

```
ERROR [BPEEngine] [main Thread 2] - BPE:
```

```
ERROR [BPEEngine] [main Thread 2] -
java.lang.ArrayIndexOutOfBoundsException: 0
```

```
ERROR [BPEEngine] [main Thread 2] - Error closing
transConn.com.ibm.ejs.cm.exception.WorkRolledbackException: Outstanding
work on this connection which was not committed or rolledback by the user
has been rolledback.
```

Optimizing database query performance

RUNSTATS command optimizes the database query performance. This command updates the database query access plan for each table and index. To optimize database query performance, run RUNSTATS at least once a week when IBM WebSphere Partner Gateway application and database activity is minimum. As database traffic increases, run RUNSTATS more frequently, up to once a day.

Notes:

1. Following points have to be considered while running the RUNSTATS command: Since RUNSTATS updates database system information, lock time-outs potentially can occur under specific circumstances. The WebSphere Partner Gateway application be quiesced and database access be limited to running RUNSTATS.
2. A lock timeout may occur when RUNSTATS and db2rbind are run simultaneously. It is recommended that these commands be run daily at different times.

Another method of updating the DB2 access plan is to use the reorgchk command. From a DB2 command window, run the following commands:

1. db2 connect to <database name>
2. db2 -v reorgchk update statistics on table all
3. db2 connect reset

Note: Ensure that you stop all Websphere Partner Gateway components before starting this procedure. You should also stop and restart the database instance after you finish the reorgchk.

Documents not processed when using Oracle 9i Release 2

About this task

If you are using Oracle 9i Release 2, you might find that documents are not processed and the BCGMAS messaging engine logs contain the following error:

J2CA0056I: The Connection Manager received a fatal connection error from the Resource Adapter for resource datasources/bcgMASDS The exception displayed as com.ibm.websphere.ce.cm.StaleConnectionException: No more data to read from socket: java.sql.SQLException: No more data to read from socket

To resolve this issue, install the Oracle 10g version of the JDBC driver. This driver alleviates known incompatibilities between Oracle 9i and the WebSphere Application Server Messaging Engine.

Oracle user account gets locked with wrong credentials

When wrong credentials are provided for accessing Oracle database during WebSphere Partner Gateway hub installation, the oracle user account gets locked automatically.

This issue can be resolved by unlocking the oracle user account before proceeding with the WebSphere Partner Gateway hub installation. To unlock the oracle user account, perform the following steps:

1. Login to oracle as sys user from the sqlplus prompt.
2. Execute the command

```
ALTER USER username ACCOUNT UNLOCK;
```

where **username** is the name of the user account that got locked.
3. Enter the correct password in the installer and proceed.

Troubleshooting Oracle exceptions

You may encounter the following exception in the SystemOut log file:

```
java.lang.NoClassDefFoundError: oracle.jdbc.driver.OracleLog
```

To resolve this, ensure that the hub owner, for example, bcguser must have read and execute permissions on the entire path to Oracle JDBC driver ojdbc_X.jar.

Error messages during startup

When you start the servers after installing WebSphere Partner Gateway in simple distributed mode, error messages are observed in SystemOut.log during startup:[10/24/08 11:45:11:437 UTC] 00000030 SessionContex I SESN0169I: Session Manager found Webcontainer custom property com.ibm.ws.webcontainer.invokefilterscompatibility with value true. [10/24/08 11:45:11:890 UTC] 00000030 VirtualHost I SRVE0250I: Web Module EHS3.01 has been bound to default_host[*:9080,*:80,*:9443,*:5060,*:5061,*:443,*: 55080,*:55443,*: 58080,*:58443,*:54080,*:54443]. [10/24/08 11:45:12:015 UTC] 00000031 jdbc E Error while registering Oracle JDBC Diagnosability MBean. javax.management.MalformedObjectNameException: Invalid character ' ' in value part of property at javax.management.ObjectName.construct(ObjectName.java:544) at javax.management.ObjectName.<init>(ObjectName.java:1312) at oracle.jdbc.driver.OracleDriver.registerMBeans(OracleDriver.java:303) at oracle.jdbc.driver.OracleDriver\$1.run(OracleDriver.java:213) at java.security.AccessController.doPrivileged(AccessController.java:197)If the SystemOut.log file has the string "InternalOracI DSR8206I: JDBC driver version : 11.1.0.6.0-Production", then you need to download the patched ojdbc.jar file. A plus sign (+) at the end of the

string indicates that you are already running the patched file. The patched ojdbc.jar file can be downloaded from Oracle: http://www.oracle.com/technology/software/tech/java/sqlj_jdbc/htdocs/jdbc_111060.html.

When hub is started in RHEL platform, an error occurs:

```
[11/19/08 15:55:24:187 UTC] 00000027 J 2CUtilityCla E J2CA0036E: An
exception occurred while invoking method setDataSourceProperties on
com.ibm.ws.rsadapter.spi.WSManagedConnectionFactoryImpl used by resource
datasources/bcgDocMgrDS : com.ibm.ws.exception.WsException: DSRA0023E:
The DataSource implementation class
"oracle.jdbc.xa.client.OracleXADataSource" could not be found.
```

This problem occurs when the JDBC data resources created for accessing oracle is unable to get the ojdbc14.jar due to permissions.

To resolve this problem, perform the following steps:

1. Copy the ojdbc14.jar to /home/bcguser
2. login to admin console, for example, <http://ipaddress:55090/admin>.
3. Navigate to **Resources > JDBC Providers**, and select the WebSphere Partner Gateway Oracle Providers.
4. Change the class path to /home/bcguser/ojdbc14.jar.
5. Stop the node agent and restart clusters in case of fully distributed mode or restart the servers in case of simple or simple distributed mode.

Document processing when the database goes down

While WebSphere Partner Gateway is processing the documents, if the database goes down, then the documents will get stuck in the 'inprocess' state and the messages will be moved to datalogerrorQ. When the database is up, you must run the batch file **reprocessDbLoggingErrors.bat** (present under WebSphere Partner Gateway_HOME/bin) in order to move the messages back from the datalogerrorQ and continue processing the documents.

Document structure

Large documents can come either from the external partner or the internal partner (backend application). Determine if there are ways to reduce the document sizes, such as reduced batch sizes or using smaller documents.

Troubleshooting document processing issues

If you are facing issues with document processing, this section could be of help.

File size settings for large files

If the file size is more than the value of this property specified in `bcg.maximumFileSizeForByteArrays`, then it is processed using streams. If the file size is less than the value specified in this property, and if sufficient memory is not available, an error event BCG210050 is generated.

When you log in as a hub operator, navigate to **System Administration > Common Attributes**. Overwrite the default value of

bcg.maximumFileSizeForByteArray property to specify the maximum file size to be used with byte arrays. Increase the value of this property for better performance.

To avoid out of memory errors, the value of property **bcg.maximumFileSizeForByteArrays** has to be set such that very large files are processed using streams rather than that of byte arrays. For example, if RAM size is 512 MB, then the value of **bcg.maximumFileSizeForByteArrays** property can be set to 20 MB. All documents of size greater than 20 MB will be processed using streams and not using byte arrays. Documents of size less than 20 MB will be processed in memory.

Documents routed twice when network is lost or document manager server shutdown abruptly

If the system running your Document Manager abruptly loses its network connection or shuts down while processing a document that has not yet had its status updated, the document may be sent twice.

EDI reports export the first 1000 records only

When exporting the reports through the EDI Reports - FA Overdue and Rejected Transactions, the export function in these reports exports only the first 1000 records. This is done in order to minimize unexpected system shutdowns because of memory overflow issues. If the number of records to export from the reports is over 1000, export the records directly from the related database view: `LG_EDI_Overdue_FA_VW` or `LG_EDI_Rejected_Tx_VW`.

Preventing partner transactions from being processed by WebSphere Partner Gateway

To prevent document processing between two particular partners, the WebSphere Partner Gateway administrator must deactivate the connections created for those specific partners in the **WebSphere Partner Gateway Console Connections**. Although disabling the **Partner profile** prevents the entity from being listed in the **Partner Connections** menu, this does not close the active channels between that Partner and the Community Manager.

Preventing low performance of document transmission

About this task

WebSphere Partner Gateway document transmission time can increase exponentially, up to 40 minutes. This is caused by the default buffer size in DB2 being defined too small, resulting in documents being processing getting added to the queue.

To increase the buffer size:

1. Open the DB2 Command Line Processor: **Start > Programs > IBM DB2 > Command Line Tools > Command Line Processor**.
2. Connect to the database using the command:
`DB2 > connect to bcgapps user <username> using <password>`
3. Increase the buffer size using the command:
`DB2 alter bufferpool buff32k immediate size 12500`

This will increase the specific buffer size from 500 (default) to 12500.

Reporting file size for documents greater than 2 GB

When a document is greater than 2 GB in size, WebSphere Partner Gateway might show the file length as 0 KB in the document viewer. This is because of a maximum limit for the database data type.

Increasing the heap size

About this task

When sending a large number of documents (approximately 40) having a size of 50MB, encrypted, signed, and compressed, over AS3, it is necessary to increase the heap size. If the heap size is not increased, documents can fail with the OutOfMemory error.

This error occurs as the working memory is not sufficient for the WebSphere Partner Gateway to route the documents in bulk. Therefore, it is recommended to increase the heap size. To increase the heap size parameters for the DocMgr server, perform the following steps:

1. Log into the WebSphere Application Server admin console.
2. From the WebSphere Application Server admin console, select **java and process management > Process Definition > Java virtual machine** for the bcgDocMgr server.
3. Set the **initial heap size** to 1024.
4. Set the **max heap size** to 1536. If the system has more than 2GB, then max heap size can be set to a value higher than 1536 value.

Avoiding duplicate document delivery when there is more than one router

When processing high volumes of documents (for example, more than one hundred thousand documents in a 24 hour period) there is a possibility that a duplicate document can be delivered to a gateway in a UNIX environment. The duplication occurs when there is more than one router instance involved and the common file system is mounted under any UNIX environment.

To resolve this issue, include the following attributes in the WebSphere variables of each router instance:

1. `bcg.dm.checkFileLatency=true`
2. `bcg.dm.latencyWaitTime=3000`

Handling issues when the expected *.rpt files are not created

If the user turns on the specific EDI attribute trace (for example: `traceLevel.FTP-Scripting=2`) in the console path **System Administration > Feature Administration > EDI Properties**, then the expected logging "rpt" files are not written to the `<WebSphere Partner Gateway installationpath>\wasND\Profiles\bcgprofile\logs` folder.

To resolve this issue, turn *On* the specific EDI attribute trace, and also set the value of `transcript.file.option` attribute to *Yes* in the same console panel. The default value is *No*.

Resolving document processing issue whenever the receiver crashes

While processing the document, if the receiver crashes, few documents are left unprocessed. These documents can be found in **<hub-installed path >>\common\receiver\reject** directory or in the Document Root Path of the File Receiver with `bcg_tmp` extension. This is observed in the deployment of both single and multiple receivers.

To resolve the issue, perform the following steps:

When the receiver crashes, the unprocessed documents can be found in **<hub-installed path >\common\receiver\reject** directory or in the Document Root Path of the File Receiver with `bcg_tmp` extension. The following must be done on these files:

1. Move to the Document Root Path of the File Receiver.
2. Rename to the original file extension.

Once the Receiver becomes operational, they will be successfully processed.

Collating data for multiple languages

WebSphere Partner Gateway depends on the following databases for collating data. If your installation supports multiple languages and the unicode data is not sorted correctly, review this section:

DB2

Since version 6.0, WebSphere Partner Gateway configures DB2 to use the UCA400_NO collating setting. DB2 version 8.2 does not support all special cases (as described in Unicode Standard version 4.00 Technical Standard #10) for all languages. In these instances contact DB2 directly.

Oracle

Oracle databases use dynamic changing for collation sequences. In order to use this functionality, WebSphere Partner Gateway changes the value of the `NLS_SORT` session variable depending on the locale of the current user.

Table 1. Locale information

Browser Locale	Language	NLS_SORT Value
pt_BR	Brazil/Portuguese	BINARY
zh	Chinese	SCHINESE_RADICAL_M
en_US	English	BINARY
fr	French	FRENCH_M
de	German	XGERMAN
it	Italian	BINARY
ja	Japanese	JAPANESE_M
ko	Korean	KOREAN_M
es	Spanish	SPANISH_M
zh_TW	Traditional Chinese	TCHINESE_RADICAL_M

Table 1. Locale information (continued)

Browser Locale	Language	NLS_SORT Value
Other	Other	BINARY

Troubleshooting IBM service logs

In the previous releases of WebSphere Partner Gateway, logs were viewable using a text editor or the more command. In the current release, several of the logs are in a binary format and cannot be read with a text editor or by using the more command at the command line. .

If your service log output appears garbled when using either of these methods, convert the service log from binary format into plain text by issuing the showlog command from the workstation where the tool resides as shown below.

showlog -format CBE-XML-1.0.1 filename where filename is the file name of the service log file. Note that if the service log is not in the default directory you must fully qualify the service log file name. Showlog command produces output in Common Base Event XML format.

Increasing the Receiver timeout setting

About this task

If a partner opens a connection to WebSphere Partner Gateway and receives the error message Connection aborted by peer: socket write error, the WebSphere Partner Gateway Receiver is initiating a timeout because of the slow transmission rate from the partner.

From the WebSphere Application Server admin console:

1. Navigate to **Applications**.
2. Select the WebSphere Partner Gateway Receiver component.
3. Select **Web Container > Web Container Transport Chain**.
4. Modify the timeout settings for the WebSphere Partner Gateway Receiver ports.

Console does not start after a server restart

After installing WebSphere Partner Gateway, when you start the console server and log into the console successfully, and then restart the server, the console may not display, and it runs in a loop. This is because of tracing level being set to **WAS.*=finest**. This setting is used to perform the finest logging of all WebSphere Application Server related classes. The default connection time out for the WebSphere Partner Gateway console to start is set at 180 seconds. If the WebSphere Application Server tracing level is set to *finest*, the processing time it takes to log all information, along with making the requisite database connections causes the system to time out. Alter the setting and restart the console server.

Note: Setting the tracing level to *finest* can affect system performance.

Receiver Failure to read Configuration File

If the Receiver failed to read the configuration file, the following error message is displayed:

```
Unable to update the Receiver Config file java.io.IOException: A file
or directory in the path name does not exist.
```

This error occurs when the WebSphere Partner Gateway Receiver is starting and it does not have a connection to the database and it is attempting to read the configuration information from the `BCGReceiverConfiguration.xml` file. The `BCGReceiverConfiguration.xml` file is located in a folder specified by the attribute `bcg.receiver.configpath` on the System Administration Page of the console.

Ensure that the path specified by `bcg.receiver.configpath` is correct.

Configuring users to receive alerts notification

If the SMTP configuration has not been provided in the System Administration page of the WebSphere Partner Gateway console, the configured alerts are not sent to the users because document manager fails to locate the necessary SMTP configuration.

To configure the alerts, update the values of the following two attributes:

1. On the **System Administration > DocMgr Administration > Alert Engine page**, update the `bcg.alertNotifications.mailHost` attribute
2. On the **System Administration > DocMgr Administration > Delivery Manager page**, update the `bcg.delivery.smtpHost` attribute

Optionally, you can change the value of the attributes - `bcg.alertNotifications.mailFrom` and `bcg.alertNotifications.mailReplyTo`.

Reprocessing events and business documents that fail to log to the database

If WebSphere Partner Gateway fails to log an event or a document status to its database, the data is placed into the `DATALOGERRORQ` queue for later reprocessing when the problem is resolved.

To reprocess these failed events and documents, use the manual utility `reprocessDbLoggingErrors.sh`. This utility dequeues all the events and documents from `DATALOGERRORQ` and re-queues them into `DATALOGQ`. This enables the `DocumentLogReceiver` to log the events and documents into the database again.

The utility stops after it processes all the existing events and documents in `DATALOGERRORQ`. Any events and document that fails to log will be placed into the `DATALOGERRORQ` again; however, this time, the utility ensures that the event or document is reprocessed only once (that is, the utility does not enter an endless loop with failing events and documents).

To run the `reprocessDbLoggingErrors.sh` or `reprocessDBLoggingErrors.bat` utility:

1. Verify that the any variables are correctly defined in `reprocessDbLoggingErrors.sh` on any router:

```
REPROCESSOR_HOME=Document Manager installation root
JAVA_HOME=$REPROCESSOR_HOME/java
LOG_REPROCESSOR_CLASSES=$REPROCESSOR_HOME/classes
```

2. Run the utility from the command line:
`./reprocessDbLoggingErrors.sh` or `reprocessDBLoggingErrors.bat`

Disabling JIT in a WebSphere Application Server when WebSphere Partner Gateway produces a javacore

When WebSphere Partner Gateway components (Receiver, Document Manager, or Console) end abruptly and produce a javacore, it is typically because of a problem with the Java JIT compiler. If this behavior occurs, disable JIT from the WebSphere Application Server Admin Console. To disable JIT from WebSphere Application Server:

1. Logon to **WebSphere Application Server Admin console**.
2. Under Servers, click **Servers** and select the **WebSphere Partner Gateway Server**.
3. On the configuration page, select **Java** and **Process Management > Process Definition**.
4. In **Additional Properties** select **Java Virtual Machine**.
5. Select the **Disable JIT** check box.

Defining a custom transport type

When defining a custom transport type, do not create an attribute with name URI. This conflicts with a WebSphere Partner Gateway reserved keyword. You will not be able to create and save any destination of that transport type.

For example: `<tns2:AttributeName>URI</tns2:AttributeName>` should not be used.

Creating a WebSphere Partner Gateway on a drive other than C

If a WebSphere Partner Gateway File directory destination address is defined for a drive other than C, WebSphere Partner Gateway returns the error
Destination Directory does not exist

The console will accept the creation of the file directory destination, but generates a runtime error, similar to the following:

```
844 INFO [FileSender] [Gw_1_2] -  
Exception in delivering the message in first attempt.  
Exception is: java.lang.Exception: Destination directory '/wsi_gateway/inbound/tradingpartner01';  
does not exist at com.ibm.bcg.delivery.FileSender.getFileSystemProperties(FileSender.javA:244)  
  
844 ERROR [SenderFramework] [Gw_1_2] - First attempt failed  
: reason: java.lang.  
Exception : Destination directory '/wsi_gateway/inbound/tradingpartner01' does  
not exist
```

To define a folder on a drive other than C:, use three forward slashes instead of two. For example:

```
file:///d:\HubMgrGateway
```

Troubleshooting SSL transaction issues

Here are some tips to resolve SSL transaction issues.

Downloading CRL from for SSL transactions

About this task

SSL transactions can fail when using certificates if the CRL is not available. If the problem exists, the SSL transaction using certificates fails with error event:

BCG240024: "CertPath validation Failed".

The router log for event 240024 points to the fact that the revocation status of the certificate "could not be determined".

To address this error, do the following steps:

1. Download the CRL list from the Certificate Authority site, specified in the certificate CRL Distribution Point field on the Details tab or made available by a Certificate Authority download site.

For example: `http://SVRSecure-crl.verisign.com/SVRTrialRoot2005.crl`

2. Copy the CRL into the WebSphere Partner Gateway common/security/crl folder.

Note: Alternatively, with CRL DP you can retrieve CRLs from CRL DP at runtime.

Fixing test partner connection for SSL connections

If the Tools/Test partner Connection fails when a Gateway https URL is selected, the following error message displays:

```
Exception during http POST-: null
```

This error can occur when using either the POST or GET commands.

The Console Tools/Test partner Connection only works with HTTP.

SSL handshake fails due to no certificate received

About this task

This issue occurs during the SSLHandShake between a partner and WebSphere Partner Gateway. When you are sending to a partner using SSL with client authentication and if the partner does not send the list of certifying authority certificates, the SSL client in WebSphere Partner Gateway does not send the client certificate. This causes the handshake failure.

To resolve the handshake failure, modify the `java.security` file in WebSphere Application Server installations. This file is located in the **<WAS installation directory >>\java\jre\lib\security** directory.

Note: For UNIX systems, use the forward slash (/) instead of the back slash (\). The default order of providers in the `java.security` file is as follows:

```
security.provider.1=com.ibm.crypto.provider.IBMJCE security.provider.2=com.ibm.jsse
.IBMJSSEProvider security.provider.3=com.ibm.jsse2.IBMJSSEProvider2 security.provid
er.4=com.ibm.security.jgss.IBMJGSSProvider security.provider.5=com.ibm.security.cer
t.IBMCertPath #security.provider.6=com.ibm.crypto.pkcs11.provider.IBMPKCS11
```

In the `java.security` file, place the `IBMJSSE2` provider before the `IBMJSSE` provider as shown in the following example.

Note: If you implement a WebSphere Application Server fix pack after reordering the java.security file, your change is overwritten and the file must be reordered again.

```
security.provider.1=com.ibm.crypto.provider.IBMJCE security.provider.2=com.ibm.jsse
2.IBMJSSEProvider2 security.provider.3=com.ibm.jsse.IBMJSSEProvider security.provid
er.4=com.ibm.security.jgss.IBMJGSSProvider security.provider.5=com.ibm.security.cer
t.IBMCertPath #security.provider.6=com.ibm.crypto.pkcs11.provider.IBMPKCS 11
```

Restart the WebSphere Partner Gateway servers (bcgconsole, bcgreceiver and bcgdocmgr) after the java.security file is changed.

SSL connection failure due to invalid Certificate Revocation List (CRL)

WebSphere Partner Gateway fails the SSL handshake with the gateway server issuing the following error message in the bcg_router.log:

```
ERROR [SSLPoster] [Gw_2_0] - com.ibm.bcg.util.BcgException: Certpath is not valid
```

The above error is usually preceded by the following debug statements:

```
DEBUG [CertPathUtil] [Gw_22_2] - Verifying the certification path ...
DEBUG [CertPathUtil] [Gw_22_2] - CertPathValidatorException : The revocation status
of the certificate with subject (CN=xxx.yyy.zzz, OU=Terms of use at www.verisign.c
om/rpa (c)00, OU=aaa, O=bbb, L=ccc, ST=ddd, C=ee) could not be determined.
```

This issue occurs when the CRL check is enabled but WebSphere Partner Gateway fails the certpath validation, due to any one of the following reasons:

1. Failure to access the CRL locally, in < WPG_install_path>\common\security\crl.
2. Failure to access the CRL remotely, via the URL specified in the certificate.
3. Success to access the URL but failure to find the referenced CRL in the specific distribution point

This issue can be addressed in any one of the following ways:

1. Locally: Making the CRL available in < WPG_install_path>\common\security\crl.
2. Remotely: Enabling the CRL Distribution Points running the bcgSetCRLDP.jacl script.

For more details refer to **Hub Configuration Guide Chapter 13**, section **Enabling access to CRL distribution points** .

If the above solution does not resolve the error, then disable the revocation check setting property: bcg.checkRevocationStatus=false in the properties files of both receiver and the router, if WebSphere Partner Gateway 4.2.1 and 6.0 is used:

Receiver: <WPG_install_path>\bcghub\receiver\lib\config\bcg_receiver.properties.

Router: <WPG_install_path>\bcghub\router\lib\config\bcg.properties.

Note: If WPG 6.1 or later version is used, then set the property using console in the system administration properties. Make sure, not to use the certificate if it is revoked. Set bcg.checkRevocationStatus to false for troubleshooting and debugging.

Test Participant Connect does not work for SSL connections

When a Gateway HTTP URL is selected using either POST or GET commands, the Tools/Test Participant Connection of the Console fails with the error message: Exception during http POST:-null. This is because the Tools/Test Participant Connection of the console works only with HTTP.

Note that the Console Tools/Test Participant Connection is meant to be used only for HTTP.

Note: The Test Participant Connection feature works with HTTP that does not require any connection parameters.

Databinding in JMS Exports/Imports within WebSphere Process Server

When using WebSphere Partner Gateway Databinding in JMS Exports/Imports within WebSphere Process Server, there are certain messages which are providing the wrong/irrelevant information. When using WebSphere Partner Gateway Databinding in JMS Exports/Imports within WebSphere Process Server the following messages are printed out:

```
00000080 SystemOut 0 <<com.ibm.bcg.dataBinding.Utility>>
warning : Error in the element JMS-IBM-MsgTypeMsg :
Class 'BCGPackagingHeaders' does not have a feature named 'JMS-IBM-MsgType'

00000080 SystemOut 0 <<com.ibm.bcg.dataBinding.Utility>>
warning : Error in the element JMS-IBM-PutTimeMsg :
Class 'BCGPackagingHeaders' does not have a feature named 'JMS-IBM-PutTime'

00000080 SystemOut 0 <<com.ibm.bcg.dataBinding.Utility>>
warning : Error in the element JMS-IBM-Character-SetMsg :
Class 'BCGPackagingHeaders' does not have a feature named 'JMS-IBM-Character-Set'

00000080 SystemOut 0 <<com.ibm.bcg.dataBinding.Utility>>
warning : Error in the element JMSXDeliveryCountMsg :
Class 'BCGPackagingHeaders' does not have a feature named 'JMSXDeliveryCount'

00000080 SystemOut 0 <<com.ibm.bcg.dataBinding.Utility>>
warning : Error in the element JMS-IBM-EncodingMsg :
Class 'BCGPackagingHeaders' does not have a feature named 'JMS-IBM-Encoding'

00000080 SystemOut 0 <<com.ibm.bcg.dataBinding.Utility>>
warning : Error in the element JMS-IBM-PutApplTypeMsg :
Class 'BCGPackagingHeaders' does not have a feature named 'JMS-IBM-PutApplType'

00000080 SystemOut 0 <<com.ibm.bcg.dataBinding.Utility>>
warning : Error in the element JMSXGroupSeqMsg :
Class 'BCGPackagingHeaders' does not have a feature named 'JMSXGroupSeq'

00000080 SystemOut 0 <<com.ibm.bcg.dataBinding.Utility>>
warning : Error in the element JMS-IBM-System-MessageIDMsg :
Class 'BCGPackagingHeaders' does not have a feature named 'JMS-IBM-System-MessageID'

00000080 SystemOut 0 <<com.ibm.bcg.dataBinding.Utility>>
warning : Error in the element JMSXGroupIDMsg :
Class 'BCGPackagingHeaders' does not have a feature named 'JMSXGroupID'

00000080 SystemOut 0 <<com.ibm.bcg.dataBinding.Utility>>
warning : Error in the element x-out-filenameMsg :
Class 'BCGPackagingHeaders' does not have a feature named 'x-out-filename'

00000080 SystemOut 0 <<com.ibm.bcg.dataBinding.Utility>>
warning : Error in the element JMS-IBM-PutDateMsg :
```



```

Class 'BCGPackagingHeaders' does not have a feature named 'JMS-IBM-PutDate'

00000080 SystemOut 0 <<com.ibm.bcg.dataBinding.Utility>>
warning : Error in the element JMSXUserIDMsg :
Class 'BCGPackagingHeaders' does not have a feature named 'JMSXUserID'

00000080 SystemOut 0 <<com.ibm.bcg.dataBinding.Utility>>
warning : Error in the element JMS-IBM-FormatMsg :
Class 'BCGPackagingHeaders' does not have a feature named 'JMS-IBM-Format'

00000080 SystemOut 0 <<com.ibm.bcg.dataBinding.Utility>>
warning : Error in the element JMSXAppIDMsg :
Class 'BCGPackagingHeaders' does not have a feature named 'JMSXAppID'

```

Configuring Content-Types attribute for the fixed workflow handlers

WebSphere Partner Gateway might fail to route an EDI document received through HTTP. When an EDI document is sent with the content-type as text/plain, ensure that the Fixed Workflow handlers are configured correctly. To configure the Content-Types attribute:

1. Go to **Hub Admin > Hub Configuration > Fixed Workflow > InBound**.
2. Click **com.ibm.bcg.server.ChannelParseFactory**.
3. Click **Edit**.
4. In the configured list, select *EDIRouterBizProcessHandler* and click **Configure**.
5. Edit Content-Types attribute to modify the content-types specific for every handler. For example, in the previous step, EDI handler was edited and the document got processed as EDI. To include multiple content types for an handler, ensure that the values are separated by comma.

The following handlers are populated with a default list of content types:

- BinaryChannelParseHandler
- XMLRouterBizHandler
- EDIRouterBizProcessHandler
- cXMLChannelParseHandler.

To modify the content types, perform the following steps:

1. Go to **Hub Admin > Hub Configuration > Fixed Workflow > InBound**.
2. Click **com.ibm.bcg.server.ChannelParseFactory**.
3. Click **Edit**.
4. In the configured list, select the handler and click **Configure**.
5. Edit the Content-Types attribute by adding the new content type. Ensure that the content-type values are separated by a comma.

Note: It is recommended not to change these content-type values unless advised.

Using revocation check and using CRLDP support

When the CRL is unavailable, certpath validation fails because the revocation status could not be determined. To avoid this issue, CRLs can be made available in a local folder or can be retrieved automatically from the CRL Distribution Point (CRLDP).

Enable CRLDP support if CRLs are to be retrieved from the CRLDP. If the access to the CRLDP uses a proxy server, then the proxy server host and port must also be provided. For self-signed certificates, revocation check is not being done.

Resolving document volume report search issue

About this task

When you perform a Document Volume Report Search in WebSphere Partner Gateway it may not display the search result information about the console. The page will not show the typical message Δ No results were found based on your search criteria Δ . The page just flashes and displays nothing. The problem is with the browser popup blocker, which prevents the resulting page (which is a popup page) from being displayed. Turn off the popup blocker, and the page will be correctly shown.

To turn off the blocker:

Mozilla Firefox:

1. Navigate to **Tools > Options > Web Features**.
2. Clear the **Block Popup Windows** field.

Internet Explorer:

1. Click **Tools**.
2. Navigate to **Pop-up Manager**, and then click **Block Pop-up windows**.

Alternatively, you can also perform the following steps in Internet Explorer:

1. Click **Tools > Internet Options**.
2. Navigate to the **Privacy** tab, and then click **Block Pop-up windows**.

CA certificate expiration

The certificates that are used for encryption, signature, and SSL client are disabled when they expire. The CA certificate is not disabled when it expires, but it is not used at runtime. If the root or intermediate certificates expire between server restarts, those certificates are not included in the list of trusted certificates. Therefore, if the certpath build fails because the CA certificate is not found, a possible cause can be that the CA certificate has expired. If a root or intermediate certificate expires in runtime, the certpath build fails and the corresponding encryption, digital signature or SSL certificates is not used in the business transaction. The validity status of the certificate can be found in the WebSphere Partner Gateway console. The WebSphere Partner Gateway console displays the validity period of certificates on the Certificate List page. The validity period is shown in red if the certificate is expired. If the CA certificate is expired, obtain a new certificate from the CA that issued the certificate. This new CA certificate should be uploaded in WebSphere Partner Gateway console.

Note: If the uploaded certificate is a self signed certificate for Server authentication and it is expired, the certificate should be disabled in the WebSphere Partner Gateway console.

The MDN status of 'unknown' for AS transactions

Upon completion of an upgrade to WebSphere Partner Gateway v6.2, the AS Viewer in the Community Console will show an unknown state for the MDN Status on AS transactions that occurred prior to the upgrade. This is a limitation of the migration procedures and utilities.

Servers fail to start after applying fixes

The servers (Dmgr, NodeAgent, and AppServers) might fail to start if you have recently applied a fix or fix pack with the Update Installer for version 6.1. The SystemOut.log will not contain any information about the failure.

However, the startServer.log shows: ADMU3011E: Server launched but failed initialization. startServer.log, SystemOut.log (or job log in zOS) and other log files under /home/dwhare/WebSphere61/profiles/Dmgr01/logs/dmgr should contain failure information.

The problem is caused by applying a fix or fix pack as root when the WebSphere Application Server environment is set up to run as a non-root user.

Note: For existing installations, the root or non-root installer who owns the currently installed files is the only user who can perform subsequent installation or removal operations on that installation. The reason the servers fail to start is that the OSGI cache was not updated after applying the fix pack because of an issue with the permission. To verify this,

Note: check the < WAS_PROFILE_HOME>configuration/ directory for a log file with a string of numbers as the file name.

This file will contain an error like:

```
MESSAGE Error reading configuration: /home/dwhare/WebSphere61/profiles/Dmgr01/configuration/org.eclipse.osgi/.manager/.fileTableLock (Permission !STACK 0 java.io.FileNotFoundException: /home/dwhare/WebSphere61/profiles/Dmgr01/configuration/org.eclipse.osgi/.manager/.fileTableLock (Permission at java.io.FileOutputStream.openAppend(Native Method) at java.io.FileOutputStream.<init>(FileOutputStream.java:203) at org.eclipse.core.runtime.adaptor.Locker_JavaNio.lock(Locker_JavaNio.java:34) at org.eclipse.core.runtime.adaptor.FileManager.lock(FileManager.java:361)at org.eclipse.core.runtime.adaptor.FileManager.open(FileManager.java:658).
```

To resolve this problem:

1. Stop all remaining WebSphere Application Server processes that are running.
2. Change the file permissions for the WebSphere install back to the non-root user.
3. Run <WAS_HOME >>/profiles/< profile> >/bin/osgiCfgInit.sh.
4. Start the server.The osgiCfgInit command updates the contents of subdirectories in <WAS_HOME>/configuration/. This directory is used for caching data in the jars in <WAS_HOME>/plugins/.

When the data in the jars is updated (for example, when a service pack is installed), the caching data must be updated. The updating of the cache is supposed to occur the first time a command is issued in a profile after a service pack is installed. (For example, the startServer.sh command). However, if there is an exception, like one of the above, then the cache is not updated, it must be updated manually.

Correcting the shortcut ports for WebSphere Application Server

About this task

While using Start Menu to launch WebSphere Application Server ND admin console and the ports used for the shortcut in a Windows system are not correct then you must change the ports. To change the ports:

1. Go to **Start Menu > Programs > IBM WebSphere > Application Server Network Deployment V6.1 > Profiles > bcgprofile > Administrative console.**
2. Right click and select properties to change the values for the ports.

Rendering of tab headings on displays with resolution greater than 1024

'On' displays that have the resolution width set to a value greater than 1024 pixels, the Community Console might mis-draw the tab headings on screens, such as the Document Details view. You can ignore this behavior.

Recovery process when queue and disk is full or unavailable

About this task

When messaging system and common file system are full or not available during processing, the Business Document Object (BDO) will be persisted temporarily under Receiver machine temp folder: WPG_HUB_INSTALL_HOME\Receiver\temp. In this case, the Hub will trigger an event 103205 with the following description:

```
Receiver Processing halted, due to following reason failed to process target:  
With Queue and File system unavailable/Full.  
Please make sure queue and disk system are available  
for processing and start the receiver.
```

If you get a message with the above description, do the following:

1. Make sure queue and common file system disk are available for processing.
2. Restart the receiver server.
3. Move the Business Document Object (BDO) persisted under receiver temp folder to (Hub's) common file system **router_in** folder.

Changing HubOperator user password

When you create a user under HubOperator and log in as that user, it is not possible to change the password on demand. This is because of the unavailability of password while editing the user profile.

To resolve this issue, the hub administrator has to provide permissions to the user. To provide permission to any partner, you have to login as hub administrator or administrator for that particular partner.

Perform the following steps to provide permissions to a partner created under hubadmin or external partner:

1. Log in as **hub operator**.
2. Navigate to **Groups > Default** and view the permissions.
3. Give read/write permission to **Users** module name.

4. Click Save.

Handling exception while using AES algorithm with 192 and 256 bit key size files

While routing ebMS encrypted message with Encryption Algorithm as "aes-192-cbc" or aes-256-cbc" and Encryption Protocol as "Xml Encryption", this exception occurs: Encryption failure XMLEncryptionException occurred while encrypting the content.

To resolve this issue, install the unrestricted cryptography policy files, if legally permitted.

Creating new instance of WebSphere Partner Gateway using the existing deployment manager

WebSphere Partner Gateway fails to start if you create a new instance of the application using the existing deployment manager.

To resolve the issue, use distinct deployment manager for every instance of WebSphere Partner Gateway.

Here are few points to keep in mind:

- If installing the deployment manager on the same machine, ensure you install the same using WebSphere Application Server Profile Management Tool, not WebSphere Partner Gateway installer.
- You can also install deployment manager on a different machine using the WebSphere Partner Gateway installer.
- If there are multiple instances of WebSphere Partner Gateway on the same machine, then ensure that only one instance is started at any given point of time.

Resolving FTP scripting errors

Here are some tips to resolve FTP errors.

FTP scripting for Target/Receiver

After a period of inactive status, users experience an issue wherein the FTPSCRIPTING Target/Receiver stops polling. This occurred until the WebSphere Partner Gateway servers were restarted. This issue was found wherever the Matrix FTP Server was used.

To resolve problem, add 'passive' to your ftpscript. Here is an example of using passive:

```
open %BCGSERVERIP% %BCGUSERID% %BCGPASSWORD%
passive
bin
cd frmtolas
mgetdel *.WGT*
quit
```

TR0842 and FF0162 Immediate error attempting to translate the next transaction

For customers having FTP scripting receivers in WebSphere Partner Gateway, the EDI X12 997 acknowledgements are brought in by the scripts. WebSphere Partner Gateway is setup on a Windows server. It passes transactions to the Mainframe MQ outbound queue using JMS. The WDI batch process receives and de-envelopes, which is performed against the outbound MQ queue. WDI gets a translation error while processing the MQ queue. No transactions are processed and the following message is displayed:

```
Message: TR0842 and FF0162 Immediate error attempting to translate the next transaction. FF0162 Immediate error attempting to translate the next transaction.ftp script should be set to different mode to avoid garbage inserted in the transaction
```

To resolve the issue, do the following:

```
set bin mode for the ftp script
Example looks like:
open %BCGSERVERIP% %BCGUSERID% %
BCGPASSWORD%
cd /download
bin
mget *
```

The bin mode will avoid the garbage insert and allow successful transaction.

Using FTPScripting Destination with user level locks to route documents

In a multiple document manager setup, when FTP Scripting destination is used to route documents with value for "Lock User" attribute set to "Yes", documents may fail with error Document Delivery Failed - Document delivery to partner Destination.

In multiple document manager setup, all the document manager instances will attempt to deliver the documents to FTP Scripting destination. As the 'Lock User' option is set to "Yes", all the instances will try to lock the same user account, but only one document manager instance will obtain the lock. All other instances will keep trying till it exceeds the retry count. For the instances that fail to obtain the lock before the retry count exceeds, the document delivery fails with the error Document Delivery Failed - Document delivery to partner Destination.

To resolve such issues, set the value for "Lock User" attribute of the FTP Scripting destination to "No" by editing it from WebSphere Partner Gateway console.

Follow the below steps to edit the value of "Lock User" attribute:

1. In the **WebSphere Partner Gateway console**, navigate to **Partner > destination > FTP Scripting Gateway** (choose the specific FTP scripting gateway).
2. Edit Lock User attribute to **NO**.

Turning FTP scripting destination to offline

When FTP Scripting Gateway is turned offline, the document manager application should be restarted for offline state to take effect.

Events not published in the Console Event Viewer

Events not published in the Console Event Viewer. The systemOut.log shows the following errors. Resolve the issue as per the events provided in the error messages below:

CWSIT0088E: There are currently no messaging engines in bus BCGBus running. Additional failure information:

CWSIT0103E: No messaging engine was found that matched the following parameters: bus=BCGBus, .This points to a problem with the message engine. In this specific case, in fact, the MAS server was not started.

Mandatory Data Element Missing

When XML to EDI mapping was done, Mandatory Data Element Missing error message was displayed.

To resolve this issue, examine the map and define the elements that are mandatory. Mandatory elements are indicated by 'm' next to it.

Handling RosettaNet Tag GlobalUsageCode showing Test or Production

RosettaNet Tag GlobalUsageCode set by attribute.

RosettaNet tag of GlobalUsageCode is set:

```
<GobalUsageCode>Production<GlobalUsageCode>
```

This value is set in the RODPostProcessing user exit through the attribute of x-aux-production. x-aux-production attribute determines GlobalUsageCode.

To resolve the issue, change this value through user exit RODPostProcessing.

Handling two way pip RosettaNet 3A4 transaction failure

WebSphere Partner Gateway 6.x may not return a "Receipt Acknowledgement" for a two way pip 3A4, before backend system sends the "PO Confirmation Action". This will cause the 3A4 transaction to go out of sequence and fail.

This document addresses the issues related to 3A4 PIP, however, this problem may still occur for other two way PIP transactions, such as 3A8 "PO Change Request".

For "PO Request", the backend system returns the "PO Confirmation Action" before WebSphere Partner Gateway can send the "Receipt Acknowledgement". The "Receipt Acknowledgement" sent by the Trading Partner for the "PO Confirmation Action" will cause the RosettaNet 3A4 transaction to go out of sequence and fail.

To resolve the issue:

1. In the event viewer, check the time the 3A4 PO Request was received.

2. Next check the time that the "PO Confirmation Action" was sent. Subtract the two for the time difference. If the difference is 6 seconds, then set the `inbound_poll_interval` property for Rosettanet to 5 seconds. This will insure that the "Receipt Acknowledgement" is sent before the "PO Confirmation Action" is sent from the back- end system.

To resolve this issue in WebSphere Partner Gateway:

1. Open the **Console**.
2. Go to **System Administration > DocMgr Administration > RosettaNet**.
3. Click **EditRecord**.
4. Lower the value of `bcg.mne.inbound_poll_interval`. The default is 10000 (10 seconds).
5. Click **Save**.

Note: You should monitor a few transactions and may need to lower the time more depending on the results you receive.

Handling integration issues when simple mode of WebSphere Partner Gateway and WebSphere Process Server are installed on the same machine

The following integration issues arise when simple mode of WebSphere Partner Gateway and WebSphere Process Server are deployed in the same machine:

WebSphere Partner Gateway is unable to lookup the resource object (queue connection factory/queue) bound with WebSphere Process Server. This problem occurs when two servers with the same name, running on the same host, are used to interoperate. For example, an application is executed on node 1 of a server. This uses a remote object reference to an object that resides on node 2 of a similarly named server. When both the nodes are installed on the same host, the following failures might occur:

1. JNDI lookups fail with a `NameNotFoundException`.
2. Object references that are obtained other than JNDI lookups fail, most likely with an `org.omg.CORBA.OBJECT_NOT_EXIST` exception.

Generally, the remote object reference does not resolve correctly for an object in the local process. That is, a reference to a remote object on the server process in node2 resolves incorrectly to the same kind of object in the local process of node 1.

To resolve this issue, do not have similar server names in a single box as it leads to JNDI resolution failures. Recommended method is to use either Simple Distributed or Fully Distributed topology for these kinds of integration scenario.

DIS Import bat/sh fails to upload the map in WebSphere Partner Gateway 6.1.0 Simple Distributed topology

Uploading maps from DIS Import batch or shell script fails stating communication error as below:


```
WARNING: jndiUnavailCommErr com.ibm.bcg.server.serviceclient.RouterServiceClient importMaps Router Server is probably down check the following exception com.ibm.bcg.server.serviceclient.RouterServiceClient importMaps A communication failure occurred while attempting to obtain an initial context with the provider URL: "corbaloc:iiop:localhost:56809".
```

1. Make sure that any bootstrap address information in the URL is correct and that the target name server is running.
2. A bootstrap address with no port specification defaults to port 2809. Possible causes other than an incorrect bootstrap address or unavailable name server include the network environment and workstation network configuration. Invalid Bootstrap address pointer for simple distributed topology.

To resolve the issue, open the bcgDISImport batch or shell script and edit the bootstrap value under apps constraint block to obtain the bcgServer bootstrap value.

How to look for the bootstrap port under bcgServer?

1. Login to **Deployment Manager Admin Console**.
2. Choose server option in the left pane and select the bcgserver displayed on the right pane.
3. Under the bcgServer page information select ports link under that ports page look out for "BOOTSTRAP_ADDRESS" column and pick the value against it. (e.g. 56809).

Using IPv6 protocol for an FTP connection

IPv4 address is used as the default address for an FTP connection from WebSphere Partner Gateway to the FTP server; therefore, the IPv4 protocol will be used. If IPv6 protocol has to be used, the property `java.net.preferIPv6Addresses` should be set to true.

By default, `java.net.preferIPv6Addresses` is set to false; therefore, the JDK returns the IPv4 address for the IP address of the localhost. When the IPv4 address is sent to the server in the EPRT command, IPv4 protocol will be used for data transfer.

To resolve this issue, the JVM system property `java.net.preferIPv6Addresses` should be set to true. It will ensure that if IPv6 is supported and the IPv6 address is available, then the IPv6 address is sent in the FTP EPRT command and the IPv6 protocol is used in the connection.

Following is the procedure to set the property:

1. In the Administrative console, navigate to **Servers > Application Servers > {server} > Java and Process Management > Process Definition > Java Virtual Machine**.
2. To enable the use of IPV6 protocol, set the `java.net.preferIPv6Addresses` JVM property in the **Generic JVM arguments** field to true by adding `-Djava.net.preferIPv6Addresses=true`

in the text field.

3. Click **Apply** to apply the new settings.
4. When the next page is displayed, click **Save** on the console task bar to save the changes to the master configuration.
5. Click **Restart** to restart the application server.

This configuration needs to be done for the server1 instance in the Simple mode, the bcgserver instances in the Simple Distributed mode, and the bcgdocmgr instances in the Full Distributed mode.

Distributed deployment certificate stores configuration may have conflicts in existing WebSphere Application Server Network Deployment Cells

In a distributed deployment when WebSphere Partner Gateway is deployed, the trust store (bcgSecurityTrust.jks) and key store (bcgSecurity.jks) for use by SSL are configured. In an existing WebSphere Application Server Network Deployment Cell, the trust store and key store configurations may conflict with existing certificate stores that are configured for other applications. The configurations for each of the distributed deployment modes follow:

Simple Distributed Deployment:

1. Trust store is configured at the Cell level (i.e. CellDefaultTrustStore).
2. The key store is configured at the Cell level (i.e. CellDefaultKeyStore).

Full Distributed Deployment:

1. Trust store is configured at the Cell level (i.e. CellDefaultTrustStore).
2. The key store is configured at the Node level (i.e. NodeDefaultKeyStore).

If conflicts occur following options are available to resolve the issue:

1. If the trust store or key store can be shared with the other applications, then either change the configuration of WebSphere Partner Gateway or the other applications such that they use the same certificate stores.
2. If the trust store or key store cannot be shared with the other applications, then either change the configuration of WebSphere Partner Gateway or change the other applications such that they use different certificate stores. You can also set the Keystore and truststore specific to WebSphere Partner Gateway at the cluster level. Perform the following tasks to set the certificate stores at the cluster level:
 - a. Create a SSL configuration using the WebSphere Partner Gateway keystore and truststore
 - b. Set the SSL configuration for the WebSphere Partner Gateway receiver and console clusters.

Note: This is also recommended whenever the receiver and the console has to use a different keystore and truststore.

The certificate stores can be configured by using the WebSphere Application Server Deployment Manager Administration Console.

Custom gateway using attribute name URI in the descriptor file, prevents attribute values from being saved

Using the restricted attribute, "URI" prevents the gateway profile attribute values from being saved when the gateway goes offline. As "URI" is a restricted attribute, it should not be used in the descriptor file.

To avoid this issue, when defining a descriptor file, do not use attribute value "URI".

For example: `< tns2:AttributeName>URI</tns2:AttributeName>` "URI" is a restricted attribute that should not be used in the descriptor file.

Errors running `cf_edi_protocoltypeu.sh` for UNIX/DB2

The command `cf_edi_protocoltypeu.sh` does not execute successfully on UNIX/DB2. The script will attempt to write a log of the execution to the `.../bcgdbloader/scripts/DB2` directory. If the database user does not have write permissions to that directory (`.../bcgdbloader/scripts/DB2`), then the script execution will fail.

Provide the database user, for example, `db2inst1`, write permissions to the `.../bcgdbloader/scripts/DB2` directory.

File name preserved in WebSphere Partner Gateway documents

About this task

When external customers send compressed, signed, and encrypted AS2 messages to WebSphere Partner Gateway partner, the incoming AS2 messages have the following headers (among others): Content-Disposition, Content-Type.

For example:

```
Content-Disposition: inline; filename=B8A2B300.418
Content-Type: application/pkcs7-mime; smime-type=enveloped-data;
name=smime.p7m
```

At the receiving end, the WebSphere Partner Gateway is configured to receive compressed, signed, and encrypted AS2 messages. These messages are unpacked and the extracted payload content is sent to an FTP gateway, which points to a backend FTP server.

When an AS2 message is received by WebSphere Partner Gateway, it performs the following tasks:

1. Decrypts
2. Signature verification
3. Unpacks payload content
4. Writes the file name as "smime.p7m"

All the AS2 files thus received from any partner is written with the same name as indicated in task 4.

Configuring the payload file to be delivered to a File Directory gateway (instead of ftp gateway) results in the same behavior.

WebSphere Partner Gateway partner at the receiving end is expecting the file name to be the original file name set in the HTTP headers (instead of "smime.p7m"). This behavior may happen for some particular partner products.

This particular case failed because the filename was present in the MIME headers of the compressed data and not in that of the encrypted data. WebSphere Partner Gateway extracts the filename from the encryption MIME headers.

Resolution:

It is validated that the filename, which the partner wants to preserve is not included in either the Content-Disposition AS header or the encrypted data MIME header. The filename that is desired to be preserved is in the binary content attachment of the data only. A custom code of user exit has to be developed to satisfy the requirements of the partner.

Configuring a synchronous response with EbMS

When you attempt to send a synchronous pong response back to the Trading Partner, it is not sent back in the same HTTP session.

Perform the following steps to resolve this issue:

1. Go to **Account Admin > Connections**.
2. Enter the **Source** and **Target Connections**.
3. Click **Attributes** on Target side of the Connection.
4. Change **Sync Reply Mode** to *mshSignalsOnly*.

ROD output from WebSphere Partner Gateway contains double quotes

When EDI is translated to ROD/ADF using WebSphere Partner Gateway, the values in each of the output fields are encapsulated within double quotes. To remove the double quotes, write a post process handler (user exit).

Chapter 10. Tips and Traps

This chapter provides few tips and traps to follow pertaining to WebSphere Partner Gateway.

Enabling debug trace for WebSphere Partner Gateway

To enable debug logs:

1. Navigate to **WebSphere Application Server admin console > Troubleshooting > Logs and Traces > <Server-name> Diagnostic Trace Service > Change Log Detail Levels > Runtime.**
2. Click **com.ibm.bcg** and select trace levels as *finest*.

In distributed mode, ensure that this change is made in all the servers where WebSphere Partner Gateway components are installed.

Exporting your current configuration for support

IBM support personnel may request that you export your configuration information to them for review. This can be done using the `BCGConfigurationExport` and `BCG_DBConfigurationExport` tools, located in the `{INSTALL DIR}\bin` directory.

BCGConfigurationExport: This utility copies the logs and properties files. The output will be a file called `BCGConfigurationExport.output.<hostname>.jar` where `<hostname>` is the host name of the workstation running WebSphere Partner Gateway. It will be created in a directory that you specify. The utility expects 3 parameters: – WebSphere Application Server log root directory (`{INSTALL DIR}\was`) – WebSphere Partner Gateway root directory (`{INSTALL DIR}\`) – destination location.

BCG_DBConfigurationExport: This utility copies configuration data from the WebSphere Partner Gateway database. The output will be a file called `BCGDB_ConfigurationExport.DB.output.<dbname>.jar`, where `<dbname>` is the name of the database. It will be created in a directory that you specify. The utility expects 5 parameters: – destination directory – database flag (DB2 or ORA) – database name – database login id – database password. Before running either utility, ensure that your path includes the Java jre directory (that is `INSTALL DIR>\was\java\bin\`). When running `BCG_DBConfigurationExport` with DB2, use a DB2 command line. For Oracle, ensure that you have your environment set up to run Oracle tools.

Configuring console server to use other WebSphere Partner Gateway databases

1. Login to **WebSphere Application Server Admin Console.**
2. Expand **Resources** and Click **JDBC > Data Sources** and click on **datasources/bcgConDS** and change the properties under **DB2 Universal Data Source Properties.**

3. Change **Database name**, **Server name** and **Port number** to the new values and save the changes to master configuration.
4. You may test the connection as well using the **Test Connection** button.

Changing WebSphere Partner Gateway common directory

1. Setup new common directory.
2. Create a shared folder on to keep the "../common/.." folder.
3. Create similar directory structure as the existing one.
4. Make a soft-link to point to this directory structure (mount/map).
5. Login to **WebSphere Partner Gateway console**. Click **System Administration** and change the values under **Common Attributes**.
6. Change all properties pointing to the old filesystem to reference the new file system.
7. Update URI entries in LG_MEDIA table for non_rep and msg_store paths.
8. Configure the **Receiver properties**.
9. Login to **WebSphere Partner Gateway console**. Click **System Administration** and change the values in **Receiver Administration > Receiver Directories Attributes**.
10. Change all properties pointing to the old filesystem to reference the new filesystem.
11. Configure **DocMgr** properties.
12. Login to **WebSphere Partner Gateway console**. Click on **System Administration** and change the values in **DocMgr Administration > Delivery Manager Attributes**.
13. Change all the properties pointing to the old filesystem to reference the new filesystem.

Controlling WebSphere Partner Gateway logging

Following are the steps to change the logging to the finest level for any error scenario:

1. Start the **WebSphere Application Server Admin Console**.
2. Click **Troubleshooting > Logs and Trace**.
3. Select Server name and click **Change log level details**.
4. Select the **Runtime** tab. If all components are enabled to the finest level, then disable the same. Enable only the specific components by entering finest for info:com.ibm.bcg.

Note: Changes made on the Runtime tab work on actively loaded modules and do not require a server restart. Changes made on the Configuration tab will not take place until the application server is restarted.

5. These steps must be repeated on all servers where WebSphere Partner Gateway components are installed.

External Integration with MQ Products

WebSphere Partner Gateway can work with MQ either on the Receiver or on the Sender side. In WebSphere Partner Gateway, for external integration with MQ, while defining the Queue Connection factory and queue definitions in WebSphere Application Server admin console, improper configuration can cause errors. Since this configuration is done in WebSphere Application Server, it warrants a WebSphere Application Server restart to get the configurations into affect.

Other MQ providers like Sonic MQ can also be used. They can be configured either as a new MQ provider in WebSphere Application Server or using file bindings or JNDI.

Documents stacking up without being delivered

Under some circumstances, documents may stack up in the Gateway folder if

1. A gateway is in Retry mode performing gateway retries. In this case, all the other threads of this gateway would be suspended. No other documents will be picked up for delivery.
2. If gateway has auto queue as 'Yes', then any delivery failure on the gateway would set it offline. Offline gateways will just queue the documents. Gateway then needs to be manually set to 'Online' to start delivery, preferably after the error condition on the gateway has been resolved.

Install Considerations

The group's ID and the users ID (UID) on each system must match the corresponding IDs on all the other systems involved in WebSphere Partner Gateway setup. Insufficient permissions on the common file system might cause File I/O errors.

While adding a new node to an existing WebSphere Partner Gateway installation, one must keep the following in mind:

1. Clocks on the existing node, document manager and the machine where the new node is to be installed must match.
2. Document manager must be able to resolve the HostName of the new node.

WebSphere Partner Gateway fixpack installers are meant for updating the WebSphere Partner Gateway components. Do not run the FP Installer on the systems having only the common file system or MAS server. Doing this might corrupt files in the WebSphere Partner Gateway installation.

Proxy Support in WebSphere Partner Gateway

WebSphere Partner Gateway uses HTTP tunneling method for Proxy Support. It supports connection to the Proxy server only on the HTTP port, and not on the SSL port. Since WebSphere Partner Gateway uses tunneling, the Proxy Servers to be used with WebSphere Partner Gateway must support the CONNECT method. WebSphere Partner Gateway provides following type of support:

1. Proxy Support only for HTTP/HTTPS protocol. This support has not been extended to protocols like FTP, FTPs.
2. WebSphere Partner Gateway supports Proxy server with authentication.

3. WebSphere Partner Gateway also supports SOCKS Proxy server.

Time out issues in WebSphere Partner Gateway

Either Write or Read Time outs can happen while sending data outbound to a partner. Reasons for such time outs might include huge data, slow network, and slow response by Partner etc. To overcome these issues, increase the Gateway Connection Time out value in the **Gateway definition page** in **WebSphere Partner Gateway Console**.

Time outs can also occur within WebSphere Partner Gateway in case of synchronous response flows. HTTP return codes of 408/410 might be observed on the Sender and the Receiver hubs respectively. Time outs in Sync flows normally happen because of the router taking longer time to return back the response. To overcome these issues adjust HTTP targets max Sync Time out value on the Receiving WebSphere Partner Gateway hub.

Installation and configuration troubleshooting tips

Here are some troubleshooting tips if you encounter any of the following issues:

Nodes not federating while using deployment manager in a remote machine

Check AddNode.log in `<installdir >/logs` folder.

Before you start installing simple or fully distributed mode on multi machine setup, ensure that the system time on all the computers is the same or has less than five minutes difference. Federation of the node fails if the time difference is greater than five minutes between the computers. You should be able to ping the machines used in multi machine setup using IP addresses as well as host names to successfully install WebSphere Partner Gateway in multi machine setup.

Messaging engine failing to start

If during installation, you want to re-install the hub after starting the cluster, you will have to re-install the MAS database.

Unable to view the console login page

If you are not able to login to the console, or view the login page, it could be due to any of the following reasons:

1. The operating system user and groups are not present in case of DB2. Refer to Pre-installation checklist tables in the WebSphere Partner Gateway Installation Guide for more details.
2. If you have selected Enable LDAP authentication and do not have hubadmin user created in LDAP, then you will not be able to login to the console.

If you wish to disable LDAP authentication, execute the following script which is available in `dbloaderinstall>/scripts/DB2` folder.

```
bcgResetAuthentication.bat/sh
```


This script will reset LDAP enabled to False and the hubadmin password to Pa55word. In case the application database is created using Oracle, the scripts can be found under <dbloaderinstall>/scripts/Oracle.

Issue in selecting the database creation option while installing another instance of WebSphere Messaging Engine

While installing WebSphere Partner Gateway in distributed mode, it is possible to install more than one instance of the WebSphere Messaging Engine. At the time of installation, following message prompts you to select any one of the given options. Please specify if you want the WebSphere Messaging Engine to create the database tables for you:

- Let WebSphere Messaging Engine automatically create tables.
- Manually create Messaging Engine tables.

Ensure that you select the option you had chosen in your previous installation.

Changing WebSphere Partner Gateway Receiver Ports using the Integrated Solutions Console

The receiver port number can be changed in the WebSphere Partner Gateway. Following is the procedure to change the port numbers in WebSphere Partner Gateway:

1. Access the WebSphere Application Server administrative console for the WebSphere Partner Gateway server, by default the addresses are:
 - Simple mode: `http://hostname.domain:58090/ibm/console`.
 - Simple distributed mode: `http://dmgr-host.domain:55090/ibm/console`.
2. Click **Login**.

Note: Password is not necessary to login.

3. Click the **Servers** navigation item on the left side of the console.
4. Click the **Application Servers** link.
5. Click the link for the server which hosts the receiver application.
6. Under **Container Settings**, expand **Web Container Settings** and then click **Web container transport chains**.
7. Click **New**.

Note: If the ISC gives an error when you try to create a new Transport Chain, shut down any desktop firewall that is running, end your browser session and start this procedure from the beginning.

8. Type a name for the **Transport chain** name field, for example Receiver.
9. Click **Next**.
10. Type a name for the **port number configuration**, for example bcgreceiver.
11. Skip the **Host** field, leaving the default value.
12. Type the desired port number for the WebSphere Partner Gateway Receiver, for example 57080.
13. Click **Next**.
14. Click **Finish**.

Note: If you use SSL, repeat steps 7-14. Use unique names, such as ReceiverSecure for step 8, and BCGReceiverSSL for step 10. Select

WebContainer-Secure from the Transport Chain Template drop down list after step 8, and use your desired SSL port number, for example 57443, for step 12.

15. In the Messages box which states a new port BCGReceiver was created, click Save.
16. Expand Environment navigation on the side of the console.
17. Click the **Virtual Hosts** link under **Environment**.
18. Click **New**.
19. Type a name for the new virtual host, for example receiver_host and then click **OK**.
20. In the **Messages** box which indicates changes were made, click **Save**.
21. Click the new **receiver_host** virtual host list item.
22. Under the **Additional Properties** heading, click the **Host Aliases** link.
23. Click **New**.
24. Leave the **Host Name** field with its default value.
25. In the **Port** field, type the port number that was used to create the Transport chain.

Note: If you use SSL, repeat steps 25-27, and type the SSL Port you specified earlier, for example 57443.

26. Click **OK**.
27. In the **Messages** box which indicates changes were made, click **Save**.
28. Click the **Applications** navigation item on the side of the console.
29. Click the **Enterprise Applications** link under Applications.
30. Click the **BCGReceiver** list item link in the **Enterprise Applications** list.
31. Under **Web Module Properties** click the **Virtual Hosts** link.
32. For the **Web/bcgReceiver.war** web Module, click the drop down list box and select the virtual host you created earlier, for example receiver_host.
33. Click **OK**.
34. In the Messages box which indicates changes were made, click **Save**.
35. Log out of the WebSphere Application Server administrative console.
36. Stop and restart the WebSphere Partner Gateway Server.

Note: If the installer fails to resolve the host name during installation, and the UnknownHostException is generated while resolving host name, refer to <http://www-1.ibm.com/support/docview.wss?uid=swg21249227>

WebSphere Application Server informational messages

Few WebSphere Application Server messages recorded as errors in WebSphere Partner Gateway system output logs are actually informational in nature and not indicative of a WebSphere Partner Gateway problem.

Additional WebSphere Product Resources

- Discover the latest trends in WebSphere Technology and implementation, participate in technically-focused briefings, web casts and pod casts at: <http://www.ibm.com/developerworks/websphere/community/>
- Learn about other upcoming web casts, conferences and events: http://www.ibm.com/software/websphere/events_1.html

- Join the Global WebSphere User Group Community: <http://www.websphere.org>
- Access key product show-me demos and tutorials by visiting IBM Education Assistant: <http://ibm.com/software/info/education/assistant>
- Learn about the Electronic Service Request (ESR) tool for submitting problems electronically: http://www.ibm.com/software/support/viewlet/probsub/ESR_Overview_viewlet_swf.html
- Sign up to receive weekly technical support emails.

Chapter 11. Server log files

Message: A message entry is an informational record that is intended for end users, systems administrators, and support personnel to view.

Trace: A trace entry is an information record that is intended for service engineers or developers to use.

The messages intended for end-user are logged as events in WebSphere Partner Gateway.

Trace messages are to a trace file by themselves. WebSphere Partner Gateway applications provide numerous trace messages that can be used to get detailed information about the operation of the system.

The WebSphere Application Server console is used to filter trace messages based on two criteria:

- The severity of the message
- The origin of the message

You can configure WebSphere Application Server with the name of the trace file, the format of the trace file, the way that the trace file is managed, and the type of messages that are written to the trace file. Each WebSphere Partner Gateway application has default settings for these configuration values.

Log File Management

The log files SystemOut.log and SystemErr.log are located on the workstation where the application is deployed under the path:

```
< WebSphere Partner Gateway Install Dir>/wasND/profiles/<><profile-name>  
>/logs/<server-name>
```

WebSphere Partner Gateway system can be installed using Simple mode or Distributed mode. In a Simple mode system, the WebSphere Application Server admin console is found by browsing to `http://<server-address >>:58090/admin`. The `<server- address >` is the workstation where the system is installed. Port 58090 is the default port used by the installer. However, this port may be different, if the default port was not used during installation.

In a Distributed mode system, the WebSphere Application Server admin console for the deployment manager is found by browsing to `http://<deployment-mgr-address > >/55090/admin`. Port 55090 is the default used by the installer. However, this may be different, if the default port was not used during installation.

As all WebSphere Partner Gateway applications are deployed to server1, all the trace messages are written to the same trace file.

The trace file is available in the default directory of `<WebSphere Partner Gateway Install Dir>/wasND/profiles/<profile-name >>/logs/ <server-name>`. This is the same place where the log files are written by default.

The following table provides a snapshot of the log files created for each of the installation mode.

Table 2. Log files created for different installation modes

Installation mode	Log file	Details
Simple	bcgServer.log	Contains all messages, including error, warning, and information messages generated by the WebSphere Partner Gateway component during runtime. Continually updated while the WebSphere Partner Gateway component is running.
Simple Distributed	bcgServer.log	Contains all messages, including error, warning, and information messages generated by the WebSphere Partner Gateway component during runtime. Continually updated while WebSphere Partner Gateway component is running.
Fully Distributed	bcgReceiver.log	Contains all messages, including error, warning, and information messages generated by the WebSphere Partner Gateway Receiver during runtime. Continually updated while WebSphere Partner Gateway Receiver is running.
Fully Distributed	bcgConsole.log	Contains all messages, including error, warning, and information messages generated by the WebSphere Partner Gateway Console during runtime. Continually updated while WebSphere Partner Gateway Console is running.
Fully Distributed	bcgDocMgr.log	Contains all messages, including error, warning, and information messages generated by the WebSphere Partner Gateway DocMgr during runtime. Continually updated while WebSphere Partner Gateway DocMgr is running.

Logging

Installation Log files location

There are two types of logging in WebSphere Partner Gateway, Install logging and Runtime logging. WebSphere Partner Gateway uses the logging API supported by

WebSphere Application Server instead of Log4J API. Logging configuration is done using the WebSphere Application Server Administrative Console.

The following table specifies the installation log file locations. These are files generated during the installation. They are separate from the runtime log files when the WebSphere Partner Gateway servers are started. If the install fails, look at the temporary files in addition to the final installation files. Sometimes the problem may be logged in the temporary file since they are created before the final log files. The log is appended to the files rather than creating new files on every installation. The application and messaging database installation log files are available only in the temporary location. Those files are not copied to any final directory.

Components	Temp (during install) log files location
DBLoader	<System-temp >\bcgloader\logs.For Windows, system temp is C:\Documents and Settings\ <user>\Local Settings\Temp\</user>
WebSphere Partner Gateway Hub (Console, Receiver, Document Manager) and Messaging Application Server	System-temp\bcghub\logs
Hub (Simple mode)	Final log files location
Server and all install activities during install (like adding Node, creating profile)	<WebSphere Partner Gateway_HUB_HOME >>\wasND\Profiles\bcgprofile\logs\server1
Hub (Distributed mode)	Final log files location
Console	<WebSphere Partner Gateway_HUB_HOME>\wasND\Profiles\ <profilename >\logs\bcgconsole<="" td=""> </profilename>
Receiver	<WebSphere Partner Gateway_HUB_HOME>>\wasND\Profiles\profilename\logs\bcgreceiver
Document Manager	<WebSphere Partner Gateway_HUB_HOME>\wasND\Profiles\ <profilename>\logs\bcgdocmgr< td=""> </profilename>\logs\bcgdocmgr<>
Messaging Application Server	<WebSphere Partner Gateway_HUB_HOME>>\wasND\Profiles\ <profilename>\logs\bcgmas< td=""> </profilename>\logs\bcgmas<>

WebSphere Partner Gateway 6.1 and 6.2

<WebSphere Partner Gateway_INSTALL_DIR>\wasND\profiles\

As a comparison, WebSphere Partner Gateway v6.0

For Console:

<WebSphere Partner Gateway_INSTALL_DIR>\was\profiles\bcgconsole\logs\bcgconsole

For Document Manager

<WebSphere Partner Gateway_INSTALL_DIR> \was\profiles\bcgdocmgr\logs\
bcgdocmgr

For Receiver

<WebSphere Partner Gateway_INSTALL_DIR>\was\profiles\bcgreceiver\logs\
bcgreceiver

Managing Log Files

Log files properties can be managed from the Administrative Console of WebSphere Application Server.

- Navigate to **Logs and Trace** -> <Server-name> -> **JVM Logs**
- Configuration tab provides properties like:
 - File name
 - File Formatting
 - Basic
 - Advanced
 - File Size
 - Time
 - Number of Historical files to maintain

Admin Console: In the configuration tab, you can provide the name of the log file, the format of log messages, file size and the number of historical log files to maintain. Any changes made to the properties in the configuration tab are reflected in the next server startup.

Log level Mapping from 6.0 to 6.2

WebSphere Partner Gateway 6.0 used log levels that are not related to the WebSphere Application server log levels. Since WebSphere Partner Gateway 6.1 uses the WebSphere Application Server log levels, you can use this table to map the log level in 6.0 to the appropriate level in 6.1.

1. WebSphere Partner Gateway 6.0

- Log messages classified using severity levels used by WebSphere Partner Gateway.

2. WebSphere Partner Gateway 6.1 and 6.2

- Makes use of WebSphere Application Server Severity levels.

WebSphere Partner Gateway 6.0 Severity Level	WebSphere Application Server 6.1 Severity Level
FATAL	FATAL
ERROR	SEVERE
WARN	WARNING
INFO	INFO
DEBUG	FINEST

Refer to “Controlling WebSphere Partner Gateway logging” on page 64 for the steps to change the finest level logging.

High level tips on Reading Logs

- Log format:

```
[9/19/07 8:45:23:585 UTC] 000000b7 E UOW=null
source=com.ibm.bcg.util.DocumentProcessingImpl
class=com.ibm.bcg.util.DocumentProcessingImpl method=uniqueVUID org=IBM
prod=BCG component=WebSphere Partner GatewayCommon thread=[Thread-72]
unable to create the unique filejava.io.IOException: The file access permissions do
not allow the specified action.
```

- Pay special attention to the time when the error occurred (Timestamp).
- Logs have some module names or codes that are not easily understood, so look for fields that can help you understand the problems, such as MsgType, Thread id, Class, Method, Component, Message.
- A selected list of known problems.

In WebSphere Partner Gateway, certificates are used for Encryption, Signature and for SSL. When using a CA signed certificate for Security functions, each certificate in the chain must be uploaded into WebSphere Partner Gateway. This is to allow successful build of the CertPath.

If the entire Cert chain is not uploaded, this will lead to CertPath build errors. One can disable the complete certpath build functionality by setting the property `bcg.build_complete_certpath` to false. With this value, users need to load only the leaf and the immediate Issuer certificate. Now the CertPath will be built only till the immediate issuer.

WebSphere Application Server Event Types

A one character field that indicates the type of the message or trace event. Message types are in upper case. Possible values include:

Value	Message
F	A fatal message
E	An error message
W	A warning message
An	Audit message
I	An informational message
C	A configuration message
D	A detail message
O	A message that was written directly to SystemOut.log by the user application or internal components.
R	A message that was written directly to SystemErr.log by the user application or internal components.
Z	A placeholder to indicate the type was not recognized.

Integrated FTP Server logging This describes the integration of success and failure event messages for the FTP Server actions. When WebSphere Partner Gateway,

Partner intends to send a document to WebSphere Partner Gateway, Integrated FTP server, Integrated FTP server produces a client connect notification event. The appropriate connection event message is logged into WebSphere Partner Gateway database after examining the FTP server response codes.

Integration of Success and Failure events

The event messages produced by the FTP Server for various actions such as establishing connection, user login, file upload, file download and disconnect are logged as events in WebSphere Partner Gateway database. These events can be viewed from WebSphere Partner Gateway console through the existing event viewer. The possible response codes for connect event are:

Value	Message
220	Service ready for new user.
530	No server access from the IP.
530	Maximum number of server connections has been reached. After the connection is established, the user information is authenticated. After user authentication is performed, FTP Server produces a client login notification event. The appropriate login event message is logged into WebSphere Partner Gateway database.

The possible response codes for user authentication are:

Value	Message
501	Syntax errors in parameters or arguments.
503	Login with USER first.
202	Already logged-in.
21	Maximum number of anonymous login has been reached.
421	Maximum number of login has been reached.
230	User logged in, proceed.

After the user login is successful, WebSphere Partner Gateway FTP Sender attempts to put the document to the FTP Server. Once the file is uploaded, FTP Server produces an upload end notification event. The possible response codes for upload start event are:

Value	Message
150	File status okay; about to open data connection.
226	Transfer complete.
550	Invalid paths.
550	Permission denied.
425	Can't open data connection.
426	Data connection error.

Value	Message
551	551 Error on output file. Once the document is successfully uploaded to the FTP

Location, the FTP connection is disconnected. FTP server produces a disconnect notification event. This event is logged into WebSphere Partner Gateway database.

Chapter 12. Getting Fixes

About this task

You can get fixes by following these steps:

Procedure

1. Obtain the tools required to get the fix.
2. Determine which fix you need.
3. Download the fix. Open the download document and follow the link in the “Download package” section.
4. Apply the fix. Follow the instructions in the “Installation Instructions” section of the download document.

Error routing inbound and outbound ebXML message of size more than 2 GB

When ebXML message of more than 2 GB in size is routed, WebSphere Partner Gateway generates an Out Of Memory Exception. This is a limitation, as ebXML message of size more than 2 GB is not supported by WebSphere Partner Gateway. The issue is because of usage of JavaMail™ 1.4 and earlier versions. When a Mime Multipart message is created by passing FileOutputStream (use MimeMultipart.writeTo() method), the Mime Multipart APIs calculate the size of the message in integer. So, for message of size greater than 2 GB, the APIs generate an IOException: Value too large for the defined data type.

WebSphere Partner Gateway does not support PIDX out of the box

When a customer is trying to send a pidx invoice file and converts it to Rosettanet format, RNPackager MIME parsing error BCG240009 is displayed as this is not a supported task. WebSphere Partner Gateway does not support PIDX out of the box and requires the creation of transformation maps, PIPs and User Exits. Customers need to create transformation maps, PIPs and User Exits.

Property bcg.messagestore.threshold in WebSphere Partner Gateway

In the **Document Viewer**, for some documents, the Message Store not Performed icon is displayed. This problem occurs with large documents.

As the default size is 100000 bytes, any document above that value will not be stored in the message store.

In WebSphere Partner Gateway console, bcg.messagestore.threshold property is available in the **System Administration > Common Properties** page. Using this property, you can specify the maximum size of the documents that can be stored in the message store. Any documents that have a size greater than the value specified in bcg.messagestore.threshold will not be stored in the message store and the viewer will show the Message Store not Performed icon against such documents.

Chapter 13. Searching knowledge bases

You can often find solutions to problems by searching IBM knowledge bases. Learn how to optimize your results by using available resources, support tools, and search methods and how to receive automatic updates.

Available technical resources

The following technical resources are available to help you answer questions and resolve problems:

WebSphere Partner Gateway InfoCenter: http://publib.boulder.ibm.com/infocenter/dmndhelp/v6r2mx/index.jsp?topic=/com.ibm.wpg.entadv.doc/welcome_wpg.htm

Product documentation: <ftp://ftp.software.ibm.com/software/websphere/integration/wspartnergateway/library/doc/wpg62/docs/>

Technotes: <http://www-01.ibm.com/support/search.wss?tc=SSDKKW+SSDKJ8+SSDKJ8&rs=2311&q1=6.2.0&rank=8&dc=DB520+D800+D900+DA900+DA800+DB560&dtm>

IBM Educational Assistant: <http://publib.boulder.ibm.com/infocenter/ieduasst/v1r1m0/index.jsp>

WebSphere Partner Gateway Product Website: <http://www-01.ibm.com/software/integration/wspartnergateway/>

Searching with support tools

The following tools are available to help you search IBM knowledge bases. These tools help you to gain product knowledge, obtain up to date code level, to research known problems and usage tips, and diagnose problems. Here is the rich suite of problem determination tools:

Here is the rich suite of problem determination tools:

- Technote/Flash
- InfoCenter
- Forum
- Fix download
- APAR search in Readme
- IBM Education Assistant
- IBM Support Assistant Plug in
- IBM Assist On Site
- E-Support/ESR
- Must Gather data collection
- Fix Central

From your search engine, type “IBM Support” to get to IBM Support Site. From IBM Support Site, choose Troubleshoot and select WebSphere Partner Gateway Product.

- **WebSphere Partner Gateway Support Page** is one of the most important pages for do-it-yourself problem determination.
- Monitor **Flashes** to receive various WebSphere Partner Gateway announcements (including pervasive problems and Web cast).
- Exchange knowledge with other WebSphere Partner Gateway users through **forum** (monitored by WebSphere Partner Gateway dev).
- Search **Technotes** for tips and answers to known problems.
- **IBM Support Assistant** – Tool to help resolve problems.
- Download **Fixpack** and its readme to be on current code level.
- **InfoCenter** is the product documentation.
- **IBM Education Assistant** is a collection of free online education.
- **ESR** - Report problem (electronic support).

Further details of these tools:

- **Forum** - Exchange knowledge with other WebSphere Partner Gateway users through forum. This forum is monitored by WebSphere Partner Gateway development http://www.ibm.com/developerworks/forums/dw_forum.jsp?forum=1147&cat=9.
- **Flashes** - Monitor flashes to receive various WebSphere Partner Gateway announcements (including pervasive problems and Web cast invitation)
- **Technotes** – Search technotes for tips and answers to known problems.
- **InfoCenter** – The product documentation.
-
- **IBM Education Assistant** – A collection of free online education.
- **Fix download** – Download fixpack with readme for problem descriptions.
- **IBM Support Assistant (ISA) Plug in** – tool to help resolve problems.
- **Must gather list** (from technote) – While collecting screenshots/logs to submit to IBM, the data can assist you in diagnosing the problem.
- **E-Support/ESR Tool** – Electronic problem report tool. Link with further details on how to use this tool <ftp://ftp.software.ibm.com/software/websphere/techexchange/flash/esr-reply/ESR57.html>.
- **WebSphere Technical Exchange (WSTE)** - This is a technical exchange program where technical aspects of the product is presented to customers by L2/L3 subject matter experts. WSTE is quite effective in terms of gaining good product/feature knowledge and clarifying all your doubts.
- **Assist On Site (AOS)** – Plug in allows IBM Support analysts to access your screen and understand how to recreate the problem. This is done through a connection code. The tool is now enhanced to provide native support for Linux users, has ability to keep URLs to launch the client and send chat transcript via AOS console to the end user, among other features. For more details on the features of AOS, refer to <http://ayudame.uk.ihost.com/AssistOnSite/>

Fix Central: this is a corporate direction for IBM on fix storage. WebSphere Partner Gateway will deposit all the available fix packs and individual fixes to Fix Central location. Fix Central location will also have fix packs for other IBM products.

From internet search engine, input fix central to get to IBM Support: Fix Central <http://www-912.ibm.com/eserver/support/fixes/fixcentral>

Search tips

The following resources describe how to optimize your search results:

- Searching the IBM Support Web site.
- Using the Google search engine.

Receiving automatic updates

You can receive automatic updates in the following ways:

- **My support:** To receive weekly e-mail notifications regarding fixes and other support news, follow these steps:
 1. Go to the IBM® Software Support Web site at <http://www-01.ibm.com/software/integration/wspartnergateway/advanced/support/>.
 2. Click **My support** in the upper-right corner of the page under **Personalized support**.
 3. If you have already registered for My support, sign in and skip to the next step. If you have not registered, click **Register now**. Complete the registration form using your e-mail address as your IBM ID and click **Submit**.
 4. Click **Edit profile**.
 5. Click **Add products** and choose a product category; for example, **Software**. A second list is displayed.
 6. In the second list, select a product segment; for example, **Data & Information Management**. A third list is displayed.
 7. In the third list, select a product subsegment, for example, **Databases**. A list of applicable products is displayed.
 8. Select the products for which you want to receive updates.
 9. Click **Add products**.
 10. After selecting all products that are of interest to you, click **Subscribe to email** on the **Edit profile** tab.
 11. Select **Please send these documents by weekly email**.
 12. Update your e-mail address as needed.
 13. In the **Documents list**, select the product category; for example, **Software**.
 14. Select the types of documents for which you want to receive information.
 15. Click **Update**.
- **RSS feeds.** For information about RSS, including steps for getting started and a list of RSS-enabled IBM Web pages, visit <http://www.ibm.com/software/support/rss/>

Chapter 14. Contacting IBM Software Support

IBM Support provides assistance with product defects. Before contacting IBM Support, your company must have an active IBM software maintenance contract, and you must be authorized to submit problems to IBM. For information about the types of maintenance contracts available, see "Support Portfolio" in the Software Support Handbook at: <http://www14.software.ibm.com/webapp/set2/sas/f/handbook/home.html>

Complete the following steps to contact IBM Support with a problem:

1. Gather diagnostic information.
2. Submit your problem to IBM Support in one of the following ways:
 - Using IBM Support Assistant (ISA):
 - Online: Click the Report problems tab on the IBM Software Support site at: <http://www-01.ibm.com/software/integration/wspartnergateway/support/>
 - By phone: For the phone number to call in your country, go to the Contacts page of the Software Support Handbook
3. Refer to the "Getting IBM Support" in the Software Support Handbook <http://www-01.ibm.com/software/integration/wspartnergateway/support/>

If the problem you submit is for a software defect or for missing or inaccurate documentation, IBM Support creates an Authorized Program Analysis Report (APAR). The APAR describes the problem in detail. Whenever possible, IBM Support provides a workaround that you can implement until the APAR is resolved and a fix is delivered. IBM publishes resolved APARs on the IBM Support web site daily, so that other users who experience the same problem can benefit from the same resolution.

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