

Sterling File Gateway

System Administrator Guide

Version 1.1

Sterling Commerce
An IBM Company

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Overview

About Sterling File Gateway

Sterling File Gateway is an application for transferring files between partners using different protocols, file naming conventions, and file formats.

Sterling File Gateway utilizes the Sterling B2B foundation, which includes Gentran Integration Suite, Sterling Standards, and the Sterling platform, to deliver capabilities similar to those found in Sterling Advanced File Transfer and Connect:Enterprise for Unix, while adding new features and functionality.

Use Sterling File Gateway for movement of large and high-volume file transfers, with end-to-end visibility of file movement in a process-oriented and highly-scalable framework that alleviates file transfer challenges, such as protocol and file brokering, automation, and data security.

Sterling File Gateway supports integration with Gentran Integration Suite Mailbox, Sterling Control Center, Connect:Direct and Connect:Enterprise for Unix server products. Sterling File Gateway, which is delivered atop the Gentran Integration Suite platform with a unique application URL, provides single sign on access to the Gentran Integration Suite admin console through menu selection.

Prerequisites

You must have the following in order to install Sterling File Gateway:

- A relational database, installed and configured for use
- Appropriate connection credentials for performing the installation
- Administrative access on the machine where the install will be performed
- Adequate disk space on the machine where the install will be performed
- Gentran Integration Suite 4.3.13 installation with at least a core license
- Sterling File Gateway license

Features

Sterling File Gateway provides many features:

- File/File name Transformations – Flexible and powerful way to map input to output file names, leveraging regular expressions; support for system-wide and group policies as well as partner-specific definitions; pre-built support for common file processing tasks: compression/decompression, and PGP encryption/decryption, and signing.

- File Transfer Visibility – Events recorded for monitoring and reporting; detailed tracking for input-output file structure processing and dynamic route determination (run-time resolution decisions); ability to view all Sterling File Gateway data flows for all users and filter such views.
- Replay/Redeliver – One click replay/redeliver capability that allows users to reprocess a transmission from the beginning or to resend just the processed file to a specific delivery destination.
- Notifications – partners and operators can subscribe to events to be notified about them by email.
- Predefined business processes – define common behaviors in file-transfer scenarios, reducing the need for customization.
- Extensibility – custom features (for example, custom event codes) can be added to support unique scenarios.
- Broad Communications Protocol Support – FTP, FTP/S, SSH/SFTP, SSH/SCP, and Connect:Direct are supported upon installation, and additional protocols (such as AS2, AS3, or Odette FTP) may be configured through use of the extensibility feature.
- Partner Interface (myFileGateway) – Web browser-based interface that enables partners to upload/download files, subscribe to notifications of events, manage passwords, search and view file transfer activity, and generate reports about file transfer activity.
- Flexible Mailbox Structures – Ability to specify mailbox structures that leverage pattern matching policies and specify attributes that must be true of all partners or a subset of partners
- Dynamic Routing – Consumer derived at run-time, either through mailbox structure, business process-derived consumer name, or map-derived consumer name.
- Partner Onboarding – Easy-to-use graphical user interface to onboard partners and configure the various combinations of communication protocols to enable Sterling File Gateway operations.

License Requirements

Sterling File Gateway can only be installed as part of a Gentran Integration Suite 4.3.13 installation. The Gentran Integration Suite installation must be completed before the Sterling File Gateway installation can begin. Therefore, a Gentran Integration Suite license is required.

In addition, a Sterling File Gateway license is required to perform the Sterling File Gateway installation. The Sterling File Gateway license includes components needed for complete functionality:

- Sterling File Gateway Core
- Sterling File Gateway Extensibility
- Configuration Deployment Tool (CDT)
- Mailbox
- PGP
- Connect:Direct Server adapter
- FTP Server adapter

- FTP Client adapter
- HTTP Server adapter
- HTTP Client adapter
- SFTP Server adapter
- SFTP Client adapter

Terms and Concepts

The following terms pertain to Sterling File Gateway:

Term	Definition
Arrived File	A message in a mailbox that Sterling File Gateway monitors, causing Sterling File Gateway to perform some activity on it.
Communication Sessions	Records of a complete set of steps involved in all protocol level interactions between the client and server, typically performed to facilitate a file transfer, from connection to disconnection. Contain the authentication, authorization, file transfer, or non-file transfer records, for all communication activities that adapters participate in, whether or not data actually gets transferred.
Consumer	Partner who receives files directly or in a mailbox.
Consumer File Structure (CFS)	Description of consumer requirements for file naming and format structure.
Dataflows	Dataflows aggregate all documents that are related to each other by parent-child relationships, and annotates them with correlation entries and file transfer events.
Delivery	A record of the activities Sterling File Gateway took to deliver a file to a specific consumer endpoint.
Delivery Channel	Consumer side of the routing channel which specifies a consumer file structure and a mailbox delivery destination. There can be more than one delivery channel for each routing channel.
Event	Description of a distinct routing activity occurrence.
Fact	<p>A named fragment of information gleaned from a file as it is identified and matched against routing channels. Facts can be derived from:</p> <ul style="list-style-type: none"> Part of a file name Time the message arrived from the producer Name of the producer Name of the consumer
File Layer	Description of format. A file may encapsulate one or many other files. An

Term	Definition
	example of this is a ZIP file that contains a JPEG file. In this example, the ZIP file is a container layer because it contains another file. The JPEG file is a non-container layer.
File Structure	Description of a file's basic content structure and naming conventions. There are two types: <ul style="list-style-type: none"> • Consumer File Structure • Producer File Structure
Integration Architect	Type of user who creates partner groups, communities, routing channel templates, producer file structures, and consumer file structures .
Mailbox	A repository for messages with a hierarchical structure similar to files and directories on Windows and Unix.
Notification	Email sent to a subscriber to tell an event has occurred.
Mailbox Virtual Root	A position in the mailbox hierarchy associated with a user account that acts as the user's root directory.
Operator	Type of user who monitors system status and file activity. Troubleshoots problems with Partner activity, using logs, reports, and notifications.
Partner User	Type of user who uploads and downloads files from myFileGateway portal and works on behalf of the Partner. Views their own activity, specifies notifications to receive, and generates reports. Partner users are producers and consumers.
Producer	Partner who creates and sends files.
Producer File Structure (PFS)	Description of producer requirements for file naming and structure.
Redeliver	The operation that an Operator performs on a delivery, to reattempt that delivery. This can only be performed if a delivery has been attempted.
Regular Expression	An industry standard pattern-matching language. Used in Sterling File Gateway for matching file names and gathering facts related to file names.
Replay	The operation that an Operator performs on a file, to cause the system to reprocess that file again, as if it were sent again by the Producer.
Route	A route is a record of all the activities performed on a Routable Payload, once it known who the consumer is. Each Routable Payload is associated with a route. A replay of a route results in a new route and new file.
Route Details	Route details contain the details about a route, including the consumer, producer, list of deliveries that were attempted to the consumer and the events generated while processing the Route, start and end times, any errors

Term	Definition
	that occurred, and other details. Hyperlinks are provided to data flows, communication sessions, and business processes related to the route.
Route Provisioner	Type of user who creates and manages partners, group membership, and routing channels.
Routing Channel	Matches incoming producer files to consumers according to the requirements in the routing channel template, then transforms and sends them to the correct consumer in the format and name specified in the consumer file structure.
Routing Channel Template	The routing channel template (RCT) defines the structure through which routing occurs. The RCT specifies producer and consumer mailbox structures and file structures. It functions as a policy that mandates which partners can participate in various file transfer scenarios and which file formats they must use. An RCT is required to create a routing channel, which establishes the producer-consumer relationship for file transfers.
Routable Payload	A file that is eligible to match a routing channel. The top-level file (exactly as sent by the producer) is always routable; if the top-level file is a ZIP file, then the files contained within that ZIP file are also routable. A single payload must not match multiple routing channels. However, because a ZIP file and its constituents are distinct routable payloads, each is independently routed and can match different routing channels.
System Administrator	Type of user who installs and maintains system software. Creates initial users. Configures services, adapters, perimeter servers, certificates and the database for sending and receiving files.

Types of Users

There are several types of users that use Sterling File Gateway.

The personas that use Sterling File Gateway are:

- System Administrator - installs and maintains system software. Handles functions accessed in Gentrans Integration Suite. Creates initial administrative users. Configures services and adapters for sending and receiving files. Manages extensibility features. Moves resources and configurations between systems.
- Integration Architect - creates partner groups, communities, routing channel templates, producer file structures, and consumer file structures.
- Route Provisioner - creates and manages partners, group membership, and routing channels.
- Operator - monitors system status and file activity. Troubleshoots problems with Partner activity, generates reports, uses logs, and subscribes for their own notifications.

- Partner User - uploads and downloads files from myFileGateway. Views their activity, subscribes for their notifications about their activities, manages their password, and generates reports about their activities. Are producers and consumers.

Comparison of AFT and Sterling File Gateway

Gentran Integration Suite Advanced File Transfer (AFT) represented a first generation solution to enable enterprise-level file transfer. It offered consolidated partner configuration and onboarding and enabled streamlined definition of file exchange relationships.

Sterling File Gateway represents the next generation for enterprise-level file transfer. It includes all the features of AFT, and adds the following new capabilities:

- A Partner still belongs to exactly one community but it can belong to more than one partner group.
- An Integration Architect can configure File Gateway's mailbox hierarchy to match that which Partners are already familiar with.
- The structure for mailboxes is flexibly defined.
- Sterling File Gateway can perform format unwrapping and wrapping for the ZIP, GZIP and PGP formats.
- Sterling File Gateway can extract facts from file names and use them for routing and delivery, and as input for generating the file name the consumer sees.
- Producer and consumer mailboxes are no longer tightly constrained as they were with AFT. Both producer and consumer mailbox patterns can be built from facts available when a routing channel is provisioned; consumer mailbox patterns can also include facts that are only available when a file is being routed.

About AFT Migration to Sterling File Gateway

AFT customers who want to take advantage of the Sterling File Gateway application will find built-in capabilities to migrate them to the new system with minimal effort. After migration, all functionality from AFT is preserved in Sterling File Gateway.

Important considerations to keep in mind for migrating customers:

- The AFT interface will be substantially modified and the current interface will be unavailable when Sterling File Gateway is installed.
- The Advanced File Transfer tab in Gentran Integration Suite will be available, but limited to offer AFT Route Activity and Reporting links so that a legacy AFT user can still view old AFT data for as long as it exists in the system.

- Migration creates routing channels and standard AFT routing channel templates (prefixed with AFT) in Sterling File Gateway. Migration also creates custom AFT routing channel templates for all migrated partners according to the consumer identification policies selected in AFT.
- The evaluation mode of all AFT routing rules are changed to Evaluate Manually at migration, effectively disabling them. They are replaced with a single Sterling File Gateway routing rule with an evaluation mode of Evaluate Automatically.
- A Partner that has been migrated to Sterling File Gateway remains in the Community they were originally created in, but they are also associated with the partner group AllPartners, as well as the partner groups AFT_PRODUCER_GROUP and/or AFT_CONSUMER_GROUP based on their role as defined in AFT.
- The PGP configuration used in AFT remains unchanged after migration; the PGP Profile named "AFTPGPProfile" continues to be used in Sterling File Gateway as well as the command line adapter instance named "PGPCmdlineService".
- After migration, AFT producers are associated with routing channel templates that replicate those producers' prior consumer identification policies. This is also true of custom consumer identification policies in AFT.
- Custom customer identification is achieved differently in Sterling File Gateway than in AFT. For an AFT producer that has a custom consumer identification policy, create that producer in Sterling File Gateway.

About the Web Application myFileGateway

Partners send and retrieve files from the Web application myFileGateway. Log on to myFileGateway requires a valid user account. This user account is created when a Route Provisioner onboards the Partner.

From within myFileGateway, Partners can:

- Upload or download files.
- Search for routes they participated in.
- View recent activity and status for file transfers they participated in.
- Generate reports for activity they participated in.
- Subscribe to notifications.

Role of Operators

Operators monitor system status and file activity.

Operators perform the following functions:

- Search for files to drill down to view details about arrived files and routes
- Troubleshoot problems to resolve them and restore file transfers
- Replay or redeliver failed or successful file transfers

- View logs
- Generate reports
- Subscribe to notifications

Configuration Checklist for Operators

Before using Sterling File Gateway, review this checklist to understand the overall process.

To use Sterling File Gateway, you must complete a series of steps:

Stage	Description
1	Obtain product training.
2	Request a user ID from your system administrator.
3	Log into Sterling File Gateway .
4	Monitor the system status using the Activity Snapshot, reports, logs, and notifications.
5	Correct problems as they occur.
6	Request replay or redelivery of failed transfers after resolving the problems that caused the failure, and enter supporting comments.
7	Mark items as reviewed to reflect your ongoing or completed work to resolve issues.

Mailboxes

A key function of Sterling File Gateway is the routing of files from one mailbox to another, so mailboxes are fundamental to Sterling File Gateway operations.

Mailboxes used for Sterling File Gateway operations can be created automatically in the following circumstances:

- When a Partner is created in Sterling File Gateway
- When Partners are migrated from AFT
- When Partners are imported into Gentran Integration Suite
- When a routing channel is created
- On demand, at the time of file transfer

When a Partner is created, a mailbox with the same name is created. For example, if the partner is named "PartnerOne" a mailbox is created where the mailbox absolute path is "/PartnerOne". When the Partner user logs in, the absolute path is not displayed. The Partner only sees the virtual path, which in this example is "/".

When a routing channel is created, a producer mailbox is created in the structure specified in the governing routing channel template. Creation of a routing channel may or may not result in the creation of a consumer mailbox as well, depending on the governing routing channel template.

A consumer mailbox may optionally be created on demand (at run time), if configured to do so in the routing channel template.

Whether created at routing channel creation time or on demand at run time, the consumer mailbox will conform to the structure mandated by the routing channel template.

Sterling File Gateway can also use pre-existing mailboxes (for example, those from a Gentran Integration Suite instance), if their paths match those expected by a routing channel, which derives its mailbox path from the governing routing channel template. When creating routing channels, the Sterling File Gateway application first checks to see if a mailbox of the required structure exists. If the mailbox does not exist, Sterling File Gateway creates it, along with any needed permissions.

Disable Duplicate Messages

An important consideration for mailboxes is related to system behavior regarding duplicate files. A global system setting allows or disallows duplicates (files of the same name) in mailboxes. For optimum system behavior, disallow duplicates in your `customer_overrides.properties` file. To edit the `customer_overrides.properties` file:

1. In the `install_dir/properties` directory, locate (or create, if necessary) the `customer_overrides.properties` file.
2. Open the `customer_overrides.properties` file in a text editor.
3. Add the following:

```
mailbox.disallowDuplicateMessages=true
```

This ensures that every message in a single mailbox has a unique name. It also ensures that a message and a mailbox do not have the same name. If you write a message to a mailbox and the name matches the name of a message in the mailbox, the service deletes the old message before adding the new message.

Enable Routing Schedule

To enable the routing of files from one mailbox to another, you must also ensure that an appropriate mailbox routing schedule is enabled. Before attempting to operate the system, verify that one of the following schedules is enabled:

- `MailboxEvaluateAllAutomaticRules` (runs once per minute and can be edited for longer intervals)

- MailboxEvaluateAllAutomaticRulesSubMin (checks for the presence of routable messages once every ten seconds and can be edited for other intervals less than one minute by modifying the MailboxEvaluateAllAutomaticRulesSubMin business process)

To enable either of these schedules, from the Gentran Integration Suite Administration menu, select Deployment > Schedules.

Purge Messages from Mailboxes

Messages in consumer mailboxes are not automatically purged, and over time could affect system performance. To avoid this, configure the Mailbox Scheduled Delete service to delete messages from one, many, or all mailboxes. See [Mailbox Scheduled Delete Service](#).

View Sterling File Gateway Help

Definitions of each field on a page are available when you hover over a field. A complete library of information about Sterling File Gateway is available from the Help menu.

To access Help:

1. Click on the Help menu in the upper right corner.
2. Select Sterling File Gateway Help.

Change Your Password

You can change your password at any time, and you must change your password if prompted at login.

To change your password:

1. From the main menu, select Profile > Password.
2. Enter your current password.
3. Enter your new password in accordance with the policy set by your System Administrator.
4. Retype the new password to confirm it.
5. Click Save.

Log In or Log Out of Sterling File Gateway

Log in to Sterling File Gateway using the User ID and password provided by your System Administrator. Change your password the first time you log in to keep it secure.

When you log out of Sterling File Gateway, clear your browser history and close your browser window. To log out:

1. From the main menu, select Sign Out.
2. Confirm that you want to sign out.
3. Close your browser.

Tutorial

To learn how Sterling File Gateway works from end to end, perform the following procedure using sample files that you create to use with the tutorial.

Only the high-level tasks are listed here. For specific instructions for each step, see the topics in the appropriate persona library. Use the following log on information for users that are automatically installed with Sterling File Gateway:

Role	User ID	Password
System Administrator	fg_sysadmin	password
Integration Architect	fg_architect	password
Route Provisioner	fg_provisioner	password
Operator	fg_operator	password
Partner	fg_partner	password

1. Log in to Sterling File Gateway as fg_sysadmin.
2. Configure an FTP Server adapter. See *Prepare Communication Adapters*.
3. Log out.
4. Log in as fg_architect.
5. From the main menu, select Participants > Communities to create a community with the following values:

Field	Value
Community Name	FirstComm
Partner Initiates Protocol Connection	X
Partner Listens for Protocol Connections	X
FTP or FTPS	X
Should Receive Notification	Yes

See *Create a Community*.

6. Select Participants > Groups to create a group named Group1. See *Create a Group*.
7. Log out of Sterling File Gateway.
8. Log in as fg_provisioner.

9. Create two partners with the following values:

Field	Value For First Partner	Value For Second Partner
Community	FirstComm	FirstComm
Partner Name	Partner1	Partner2
Phone	333	444
E-mail	y@x.com	x@y.com
User Name	partner1	partner2
Password	password	password
First Name	partner	partner
Last Name	1	2
Partner Role	Is a consumer of data <ul style="list-style-type: none"> ○ Initiates a connection 	Is a producer of data
Use SSH	No	No
PGP Settings	<ul style="list-style-type: none"> ○ No ○ No 	<ul style="list-style-type: none"> ○ No ○ No

See *Create Partner*.

10. Associate the partners with Group1. Select Participants > Groups, then click Add Partner. Select the partners and the group, and click Execute. See *Add Partners to Groups*.
11. Log out.
12. Log in as fg_architect.
13. Select Routes > Templates > Create to create a routing channel template with the following values:

Field	Value
Template Name	FirstStatic
In the Type tab	
Type	Static
In the Special Characters tab	
Special Characters	None
In the Groups tab	
Groups	Group1 for producers and

Field	Value
	consumers
In the Producer tab	
Producer File Structure	Click Add
Producer File Type	Unknown
File name pattern as regular expression	.+
File name pattern group fact names, comma delimited	blank
In the Consumer tab	
Pattern for Consumer Mailbox Path	/\${ConsumerName}/Inbox
Consumer File Structure	Click Add
Consumer File Type	Unknown
Consumer file name format	\${ProducerFilename}

See *Create a Routing Channel Template*.

14. Log out.
15. Log in as fg_provisioner.
16. Create a routing channel with the following values:

Field	Value
Routing Channel Template	FirstStatic
Producer	Partner2
Consumer	Partner1

See *Create a Routing Channel*.

17. Log out.
18. Log in to myFileGateway as Partner2.
19. Upload a file to the / mailbox. See *Send a File from myFileGateway*.
20. Log out.
21. Log in to Sterling File Gateway as fg_operator.
22. Search for the file you uploaded. See *Search for a File*.
23. Click on the arrived file and observe the details about the events, the routing channel, and the routing channel template.
24. Log out.
25. Log in to myFileGateway as Partner1.

26. Download a file. See *Retrieve a File from myFileGateway*.
27. Log out.
28. Log in to Sterling File Gateway as fg_operator.
29. Search for the file you downloaded.
30. Click on the arrived file and observe the details about the events, the routing channel, and the routing channel template.
31. Replay the route. See *Replay From the Beginning of a Transfer*.

Install and Set Up

About Export and Import

The Import/Export feature enables you to save time and increase the accuracy of duplicating supported resources on different Gentrans Integration Suite or Sterling File Gateway environments that are set up for unique purposes. Specifically, the Import and Export options enable you to:

- Move resources such as adapters, communities, partners, mailboxes, and users from a Gentrans Integration Suite instance to a Sterling File Gateway instance or from one Sterling File Gateway instance to another.
- Move resources from a test environment into a staging or production environment.

Migrate from Advanced File Transfer to Sterling File Gateway

If you have an existing installation of Advanced File Transfer (AFT), you can migrate the partner configurations to Sterling File Gateway.

To migrate partner configurations from AFT:

1. Run the following script: `<install_dir >/tp_import/aft2fg.sh` (for Unix) or `aft2fg.cmd` (for Windows)
2. The script performs the migration and displays details of the migration. The following operations are performed:
 - Static and dynamic routing channels are created, based on the consumer identification policies in effect for the migrated producers.
 - AFT routing rules are replaced with a single automatic evaluation Sterling File Gateway routing rule.
 - AFT Route Business Process is disabled.
 - If a consumer identification policy of Use Map was utilized in AFT, a routing channel template is created so that the map will continue to drive the consumer identification. After conversion the name of the map used in the routing cannot be changed. The name of the map used is visible from the Data Session details window only.
 - PGP settings remain in effect.
 - The Advanced File Transfer tab in Gentrans Integration Suite will be available, but limited to offer AFT Route Activity and Reporting links so that a legacy AFT user can still view old AFT data for as long as it exists in the system.

3. If the migration fails, an error message is displayed. The migration report states what changes were successfully completed. Correct the error conditions and proceed.
4. The imported partners will automatically be associated with the "All Partners" partner group. You can also associate the newly migrated Partner with other Sterling File Gateway partner groups to make them work with routing channel templates that have specified these partner groups.
5. Turn off the AFTPurgeArchiveMailboxes business process in Gentran Integration Suite.

Create User Accounts

Create user accounts in the B2B Console.

To create a user account:

1. From Sterling File Gateway, select **Tools > B2B Console**.
2. From within Sterling Integrator, Select **Accounts > User Accounts > Create a new Account**.
3. Complete the steps in the wizard. Supply the following information about the user:
 - Authentication type (Local or external)
 - User ID
 - Password
 - Confirm Password
 - Policy - choose from:
 - [blank] (default)
 - Default User Policy - For the default user policy, the password must be at least six characters and is required to contain at least two of the following characters. (numeral, capital letter, !, @, #, \$, %, ^, &, *)
 - You can create a different policy for your system. Create the policy in Sterling Integrator first, then select it from the list when you create a user.
 - SSH Authorized User Key
 - Session Timeout (in minutes)
 - Accessibility
 - Dashboard Theme

See [Managing User Accounts](#).

4. Select one or more groups from the following list:
 - File Gateway Integration Architects - can only access File Gateway, not *myFileGateway*
 - File Gateway Operators - can only access File Gateway, not *myFileGateway*
 - File Gateway Partner Users - can only access *myFileGateway*

- File Gateway Route Provisioners - can only access File Gateway, not *myFileGateway*
- File Gateway System Administrators - can only access File Gateway, not *myFileGateway*

Note: For full Sterling File Gateway functionality, each of these groups must have at least one user. By default, the following users are created during installation of Sterling File Gateway:

- `fg_sysadmin` - belongs to all File Gateway groups except File Gateway Partner Users. Also belongs to Sterling Integrator Admin group.
- `fg_architect` - belongs to File Gateway Integration Architects group
- `fg_provisioner` - belongs to File Gateway Route Provisioners group
- `fg_operator` - belongs to File Gateway Operators group

A user can belong to multiple groups, but cannot belong to File Gateway Partner Users group while a member of any other group.

Note: To protect the security of your system, delete the default users or change the default passwords.

Note: To create an independent user that is the equivalent of `fg_sysadmin`, assign the Sterling Integrator Admin group and all File Gateway groups except File Gateway Partner Users group to that user.

5. Select the permissions for the user. (Optional.) The group assignments include the standard permissions for users of each group.
6. Supply the following information for the user:
 - First Name
 - Last Name
 - E-mail
 - Pager
 - Preferred Language (English, Japanese)
 - Manager ID
 - Identity
7. Review and confirm to create the new user account.

Rebrand Sterling File Gateway

You can rebrand Sterling File Gateway and *myFileGateway* to use your company's logo or other special content.

To rebrand Sterling File Gateway:

1. Locate the following directories:
`<install_dir>/container/Applications/filegateway/isomorphic/skins/[skin]&`
 and
`<install_dir>/container/Applications/myfilegateway/isomorphic/skins/[skin]&`
2. Using the image you want to place into the Sterling File Gateway header, create a file named "hdr_logo.gif" in the containers:
`<install_dir>/container/Applications/filegateway/images/brandingimages`
 and

`<install_dir>/container/Applications/myfilegateway/images/brandingimages`

An image size of 161 pixels wide by 50 pixels is suggested.

3. Add an image for your footer to the /images/FGimages/brandingimages directory in the skin folder.
4. Copy the existing FileGateway skin folder in the /isomorphic/skins directory and rename it with your company name, with 20 characters or less.
5. Create an HTML file for the header and name it "header.txt" in the /brandingcontent directory of the new skin folder created above. Use the following sample and modify with your content:

```
<style type="text/css">
<!--
.styleHeader {
    font-family: Arial, Helvetica, sans-serif;
font-size: 10em;
}
-->
</style>
<body>
<div id="lyrHeader" style="position:absolute;
width:740px;
height:95px;
z-index:1; left: 0px; top: 0px;">
<div id="lyrDTS" class="styleHeader"
style="position:absolute; width:250px;
height:9px; z-index:1; left: 538px; top: 4px;">
<a
href="http://qiudubidvapp001.qa.local:8085/help/topic/T31471/https://dataweb.customer.com/adhoc"
target="_top">Data Services</a> |
<a href="http://qiudubidvapp001.qa.local:8085/help/topic/T31471/#"
onclick="fupop(this.href);
return false">Contact Us</a></div>

```

```

<div id="lyrLogo" style="position:absolute;
width:202px; height:38px; z-index:1;
left: 0px; top: 0px;">
<a
href="http://qiudubidvapp001.qa.local:8085/help/topic/T31471/http://www
.customer.com" target="_top">
</a></div>
</div>

```

6. Create an HTML file for the myFileGateway header and place it as “myFgHeader.txt” in the /brandingcontent directory of the skin folder created above.
7. Create an HTML file for the footer and name it "footer.txt" in the /brandingcontent directory of the new skin folder created above. Use the following sample and modify with your content:

```

<div align='center' style='color:#FFFFFF'>
&copy;2008
<a style='color:#FFFFFF'
href='http://www.BigBank.com' target='_blank'>
BigBankDS</a>
All rights reserved.</div>

```

8. Open "loadskin.js" in the skin folder and modify the variables at the top of the page. Comments on the page provide more instruction.
9. Change approximately line 47 of load_skin.js in your new skin directory at sv_local/share/ /container/Applications/file gateway. Change line 47 to refer to the directory name of your new skin, that is, "isc.Page.setSkinDir("[ISOMORPHIC]/skins/<new skin directory name>")
10. Modify "home.jsp" approximately line 23, to replace 'skin=FileGateway' with a reference to the new skin folder name instead of "FileGateway."
11. Run the following scripts:
 - <install_dir>/bin/hardstop.sh
 - <install_dir >/bin/deployer.sh
 - <install_dir >/bin/run.sh
12. Refresh your browser cache.

When you launch Sterling File Gateway, the new branding is shown in the header and footer. When your Partner users launch myFileGateway, the new branding is shown in the header.

Export and Import Resources

There is a new version of this topic. If you have installed Build 4317 or later, see Build 4317 Updates.

If you want to use the same configurations of partners, communities, and groups in multiple Sterling File Gateway installations, you can create them in one installation, export them from there, and import them into other installations. This is useful for first creating a test system and then moving the successful configurations to a production system.

You will need to use a combination of tools to move Sterling File Gateway resources from a test environment to a production environment. Use the export and import capabilities to move communities, partners, adapters, SSH keys, PGP profiles, mailboxes, and the mailbox routing rule named FileGatewayRoutingRule. Use the Configuration Deployment Tool (CDT) to move partner groups, routing channels, and routing channel templates.

You can only export one community at a time and each goes into its own XML file. This is because each community is associated with a unique resource tag that is applied to every partner belonging to the community (and to all resources that belong to each partner). Partners cannot be exported individually. Partners are exported by exporting the community the partners belong to, which exports all partners in the community at once.

To export a community:

1. From the Administration menu, **Deployment > Resource Manager > Import/Export**.
2. Choose **XML Document** for the type of format.
3. Select **Yes** for tag name.
4. Choose the resource tag with the name of the community name you want to export from the list.
5. Select whether to export private certificates.

The export file is created. Examine the export report to confirm that there are no errors.

When importing a community, a page is presented for each kind of resource in the export file. Choose all the objects for each kind of resource so all objects are imported. You cannot specify individual partners for import; all the partners in the exported community are imported at once. Keep the name of the resource tag the same.

The Gentran Integration Suite resources created from the Admin menu, such as adapters and SSH profiles must be exported separately. From the Admin menu, select **Deployment > Resource Manager > Import/Export**.

6. When importing routing rules, do not import any routing rules with a suffix of "_AFTRouter".

Move Windows Test Environments to Production

This topic is not applicable for Build 4317 or later.

It is a good practice to fully implement Sterling File Gateway in a test environment. You can configure the users, partner groups, adapters, routing channel templates, and other elements, test to confirm that everything is functioning as you require, and then move to a production environment. You may want to use a staging environment as another step in the process. To move resources between environments, systems must be on the same operating system.

You will need to use a combination of tools to move Sterling File Gateway resources from a test environment to a production environment. Use the export and import capabilities to move communities, partners, adapters, SSH keys, PGP profiles, mailboxes, and the mailbox routing rule named FileGatewayRoutingRule. Use the Configuration Deployment Tool (CDT) to move partner groups, routing channels, and routing channel templates.

1. Associate the resources you want to export, such as communities, partners, adapters, SSH keys, PGP profiles, mailboxes, and the mailbox routing rule named FileGatewayRoutingRule, with the resource tag of the community you will export.
2. To export and import from Sterling File Gateway, select **Tools > B2B Console > Deployment > Resource Manager > Import/Export**.
3. Follow the steps in the wizard to export from the test system, then go to the production system to import.
4. To use the CDT, go to the <install_dir>/database/cdt directory.

Note: The Configuration Deployment Tool does not enforce checks to restrict configuration data modification on the source or the target schemas using other means. You must develop and enforce your own methodology. For example, if you use the CDT to migrate data from staging to production, it is not expected that the configuration in production is modified by means other than this tool. In such a case those changes are overwritten the next time CDT is run. Also, this could potentially lead to data integrity issues if the changes are performed in either the source or target while CDT is being run. See the Configuration Deployment Tool Guide for comprehensive information and instructions.

Some strategies to consider for using multiple environments are to either:

- a. Make all changes in a test environment, then synchronize with the production environment, keeping the two systems identical.

- b. Make incremental changes in a test environment, then select only the resources to move to the production environment. Use this method if you do not want all of the resources in your test environment moved to the production environment.
5. Copy the file named filegateway-config-db.xml.
6. Paste the file into config-db.xml.
7. From the <install_dir>/bin directory, run the ydk.cmd script.
8. In the CDT, select **Tools > Deployment > Configuration Data Deployment**.
9. Enter the source (test) and target (production) database credentials.
10. Right-click on the **File Gateway** tree node. Select the **Compare** menu choice.

Note: Do not select the **Resources** folder. This is not supported at this time and could cause unexpected results.

11. After the comparison results are displayed, either:
 - a. Click **Deploy** to deploy all changes to the target system. After this operation, the target system's RC, RCT, and group configuration will be identical to the source system's configuration.
 - b. Or, to deploy only a subset of the comparison results, expand the **File Gateway** tree node and individually select each difference you wish to deploy to the target system. Click **Deploy** to deploy each selected change to the target system.
12. Ensure a successful commit operation message appears in CDT, once all the data/resources selected have been deployed from the source environment to the target environment.
13. To see the migrated resources, refresh the cache using the following command:
`./bin/opscmd.cmd -cCLEARCACHE -pcache_name=ALL`

Or, restart Sterling File Gateway.

14. In Sterling File Gateway, associate the migrated partners with the correct groups. All partners must be associated with the All Partners group, and may be associated with additional groups.

Move Unix Test Environments to Production

This topic is not applicable for Build 4317 or later.

It is a good practice to fully implement Sterling File Gateway in a test environment. You can configure the users, partner groups, adapters, templates, and other elements, test to confirm that everything is functioning as you require, and then move to a production environment. You may want to use a staging environment as another step in the process. To move resources between environments, systems must be on the same operating system.

You will need to use a combination of tools to move Sterling File Gateway resources from a test environment to a production environment. Use the export and import capabilities to move communities, partners, adapters, SSH keys, PGP profiles, mailboxes, and the mailbox routing rule named FileGatewayRoutingRule. Use the Configuration Deployment Tool (CDT) to move partner groups, routing channels, and routing channel templates.

1. Associate the resources you want to export, such as communities, partners, adapters, SSH keys, PGP profiles, mailboxes, and the mailbox routing rule named FileGatewayRoutingRule, with the resource tag of the community you will export.
2. To export and import from Sterling File Gateway, select **Tools > B2B Console > Deployment > Resource Manager > Import/Export**.
3. Follow the steps in the wizard to export from the test system, then go to the production system to import.
4. To use the CDT, copy the file named filegateway-config-db.xml.
5. Paste the file into config-db.xml.
6. Go to the <install_dir >/database/cdt directory.
7. Copy the file named filegateway-config-db.xml.

Note: If your desktop is a Windows machine, and you are connecting to a Unix/Linux machine where Sterling File Gateway resides, then you will need an X11 windowing system installed on your Windows machine in order to be able to view the CDT user interface.

8. Paste the file into config-db.xml.
9. Change the directory to <Sterling File Gateway_install_dir>/bin directory.

Note: The Configuration Deployment Tool does not enforce checks to restrict configuration data modification on the source or the target schemas using other means. You must develop and enforce your own methodology. For example, if you use the CDT to migrate data from staging to production, it is not expected that the configuration in production is modified by means other than this tool. In such a case those changes are overwritten the next time CDT is run. Also, this could potentially lead to data integrity issues if the changes are performed in either the source or target while CDT is being run. See the Configuration Deployment Tool Guide for comprehensive information and instructions.

Some strategies to consider for using multiple environments are:

- Make all changes in a test environment, then synchronize with the production environment, keeping the two systems identical.
- Make incremental changes in a test environment, then select only the resources to move to the production environment. Use this method if you do not want all of the resources in your test environment moved to the production environment.

10. Execute the `ydk.sh` script. This opens the Sterling Development and Deployment Work bench.
11. Select the **Tools > Deployment > Configuration Data Deployment**.
12. Enter the source (test) and target (production) database credentials.
13. Right-click on the **File Gateway** tree node. Select the **Compare** menu choice.

Note: Do not select the **Resources** folder. This is not supported at this time and could cause unexpected results.

14. After the comparison results are displayed, either:
 - a. Click **Deploy** to deploy all changes to the target system. After this operation, the target system's RC, RCT, and group configuration will be identical to the source system's configuration.
 - b. Or, to deploy only a subset of the comparison results, expand the **File Gateway** tree node and individually select each difference you wish to deploy to the target system. Click **Deploy** to deploy each selected change to the target system.
15. Ensure a successful commit operation message appears in CDT, once all the data/resources selected have been deployed from the source environment to the target environment.
16. To see the migrated resources, refresh the cache using the following command:

```
./bin/opscmd.sh -cCLEARCACHE -pcache_name=ALL
```

Or, restart Sterling File Gateway.

17. In Sterling File Gateway, associate the migrated partners with the correct groups. All partners must be associated with the All Partners group, and may be associated with additional groups.

Change Purge Settings

Sterling File Gateway activity is purged, not archived. Data that is purged is unrecoverable. Depending on your file transfer usage patterns, you may want to change the frequency in which Sterling File Gateway activity is purged. System Administrators can change the frequency for purging.

Purging behavior is governed by the following settings in the `visibility.properties` file:

- `lifespan_dataflow` - controls dataflow records
- `lifespan_adminaudit` - controls administrative change records, such as deleting a user
- `lifespan_session` - controls communication session records

Values for these settings are in the established schedule for the Purge Service. Changing either the settings or the schedule will result in a change in purge behavior.

Once activity is purged, it is no longer available in the system and will not be found in a search that matches the criteria for it.

To change settings for purge:

1. Open or create the following file: <install_dir>/properties/customer_overrides.properties
2. Add the following properties: dmvisibility.lifespan_dataflow=Value
dmvisibility.lifespan_adminaudit=Value
dmvisibility.lifespan_session=Value where Value is the number of hours before an item is purged.
3. Save the customer_overrides.properties file. See [Using Property Files](#).

Note: Changes made to this file affect the behavior of all of Sterling Integrator.

4. Restart Sterling File Gateway for the settings to take effect.

Purge Messages from Mailboxes

Messages in consumer mailboxes are not automatically purged, and over time could affect system performance. To avoid this, configure the Mailbox Scheduled Delete service to delete messages from one, many, or all mailboxes. You cannot replay or redeliver messages that have been purged. See [Mailbox Scheduled Delete Service](#).

Use Audit Records to Trace Administrative Actions

Audit records are helpful for proving that activities occurred at a stated time between partners. Audit records enable tracing creations and deletions to routing channel templates and routing channels. The records indicate when and what changed and who made the changes. By default, audit records are turned on. To view and use audit records:

1. Select **Tools > B2B Console > Admin > Operations > System > Support Tools > SQL Manager**.
2. Type the following:

```
select * from YFS_AUDIT
```

3. Click **Execute** to view all audit records.
4. Or, select the tables and columns you are interested in, for example:

```
select TABLE_NAME, OPERATION, AUDIT_XML, CREATETS,  
CREATEUSERID, MODIFYTS, MODIFYUSERID from YFS_AUDIT where  
TABLE_NAME = 'FG_ROUTCHAN_TMPL' or TABLE_NAME = 'FG_ROUTCHAN'
```

filegateway.properties

The filegateway.properties file contains properties which control the operation of Sterling File Gateway.

The following table describes properties in the filegateway.properties file:

Note: Do not edit the filegateway.properties file. Make all changes in the customer_overrides.properties file. For example, to change the pgpCmdline2svcname property, enter the following line into customer_overrides.properties:

```
filegateway.properties.pgpCmdline2svcname=CUSTOM
```

substituting CUSTOM with the name of your Command Line 2 adapter. See [Using Property Files](#).

Property	Description
ignoreFilename	Setting a regex pattern for this will cause any arrived file that matches your regex pattern to be ignored by Sterling File Gateway. This is useful for recognizing and ignoring temporary files sent by producers before they are renamed to the expected name. These will not be routed and are not considered failures. Note: The regex pattern must match the file name in its entirety. Partial matches are not recognized.
ftpClientAdapterName	The FTP Client Adapter instance or service group that the FileGatewayDeliverFTP business process will use. Override this property in customer_overrides.properties if a custom FTP Client Adapter instance must be used to contact trading partners. You can also specify an adapter group name to load-balance outbound FTP sessions across multiple adapter instances. Default is ftpClientAdapterName=FTPClientAdapter.
bpCompletionProbes.1 bpCompletionSleepMsec.1 bpCompletionProbes.2 bpCompletionSleepMsec.2	Timeouts and sleep intervals that control how long Sterling File Gateway waits for every sub-business process it invokes. These control the timeouts when a business process is executed synchronously during routing. Used for consumer identification business processes and for PGP processing. Enables one set of relatively quick probes followed by a second set of slower probes. The first set will be very reactive, but consume more processor. The second set will activate for longer-running processes and will consume less processor. First probe 120 times with 100 Milliseconds between, for a total

Property	Description
	<p>of 12 seconds. Default is bpCompletionProbes.1=120 and bpCompletionSleepMsec.1=100.</p> <p>Then probe 600 times with 2000 Milliseconds between, for a total of 1200 seconds (20 minutes). Default is bpCompletionProbes.2=600 and bpCompletionSleepMsec.2=2000.</p>
pgpCmdline2svcname	<p>The name of the Command Line 2 adapter to be used for PGP packaging and unpackaging. Override this property in customer_overrides.properties if a custom Command Line 2 adapter must be used for PGP operations. You can also specify an adapter group name to load-balance outbound PGP sessions across multiple adapter instances. Default is pgpCmdline2svcname=PGPCmdlineService.</p>
fgRoutePGPCmdLineSocket Timeout	<p>Timeout value, in milliseconds, for PGP package and unpackage operations invoked by Sterling File Gateway. Default value is 240000 milliseconds (4 minutes)</p>
fgRouteConcurrentSessionLimit	<p>Limits the number of File Gateway services that can be running concurrently. The services are split into two groups, and each group has this value as a limit. Therefore, there will be a maximum of two times the value of this property services running. It is best to set this somewhat (but not too much) higher than the number of business process threads in queues 4 and 6 (these are the queues where the File Gateway Services run.) The default is 8. To change this value, use the customer_overrides.properties file to set filegateway.fgRouteConcurrentSessionLimit=(# of limit).</p>
required_si_build_ver	<p>The build number (version) of Sterling Integrator that Sterling File Gateway requires. this is checked at system start up. If the current verison of Sterling Integrator does not equal the required_si_build_ver, a warning is issued and the system is shut down. Required.</p>

filegateway_ui.properties

The filegateway_ui.properties file contains properties which control the location of the Help systems for Sterling File Gateway and *myFileGateway*, as well as several other user interface settings.

The following table describes properties in the filegateway_ui.properties file:

Note: Do not edit the `filegateway_ui.properties` file. Make all changes in the `customer_overrides.properties` file. For example, to change the URL for the Help system, enter the following line into `customer_overrides.properties`:

```
filegateway_ui.properties.help.uri=http://CUSTOM
```

substituting CUSTOM with your preferred URL. See [Using Property Files](#).

Property	Description
reportingdirectory	Location of the reports templates. Default - reportingdirectory=&INSTALL_DIR/reporting Required. Do not modify or override.
help.uri	Specifies the URL for the Help used by Sterling File Gateway. Required. The default is: <code>http://help.sterlingcommerce.com/SFG20/index.jsp</code> . This site is hosted by Sterling Commerce.
myFghelp.uri	Specifies the URL for the help used by <i>myFileGateway</i> . Required. The default is: <code>http://help.sterlingcommerce.com/mySFG20/index.jsp</code> . This site is hosted by Sterling Commerce.
notification.admin.url	Login URL for admin staff to access FileGateway. Required. Default - <code>notification.admin.url=http://&HOST_ADDR;:&PORT1/filegateway</code>
notification.partner.url	Login URL for partner users to access <i>myFileGateway</i> . Required. Default - <code>notification.partner.url=http://&HOST_ADDR;:&PORT1;/myfilegateway</code>
fgMaxRoutingChannelRecords	Limits the total number of routing channel records returned by a search. Required. Default is 1000. To change this value, use the <code>customer_overrides.properties</code> file to set <code>filegateway_ui.fgMaxRoutingChannelRecords=(# of records)</code> .

About Event Codes

Each activity during the progress of a file transfer generates an event code. These codes are displayed in the activity details to enable Partners and Operators to see the progress and navigate to more details. System Administrators can create custom event codes and modify the permissions for standard event codes.

The following standard event codes display only in activity details:

Event Code	Name	Description
FG_0201	BusinessProcessStarting	When a business process is started, with the reason for starting it stored in context
FG_0202	BusinessProcessSuccess	When a business process is successfully completed, with a link to the business process
FG_0401	FactDiscovery	When a fact is discovered by the route, for example, matching a pattern on the file name
FG_0404	ProducerFound	When a producer and user are identified based on the arrived file
FG_0407	ConsumerFound	When a consumer is identified based on the route plan
FG_0409	ArrivedFileDeterminingRoutes	When an arrived file starts determining routes
FG_0410	ArrivedFileRouting	When an arrived file starts processing routes
FG_0412	RouteStarted	When a route is started from an arrived file
FG_0413	RouteDeterminingDeliveries	When a route starts determining deliveries
FG_0414	RouteDelivering	When a route starts processing deliveries
FG_0416	DeliveryStarted	When a delivery is started from a route
FG_0417	DeliveryTransforming	When a delivery starts to transform the consumer file
FG_0418	DeliveryDelivering	When a delivery starts delivering the consumer file to the consumer
FG_0421	ArrivedFileReplayOf	When an arrived file is a replay of an original arrived file, with a link to the original file
FG_0423	DeliverRedelivering	When a delivery starts

Event Code	Name	Description
		redelivering the consumer file to the consumer
FG_0501	ProducerMailboxRouteCandidates Found	When route candidates are found for an arrived file based on the producer and the mailbox of the message
FG_0502	RouteCandidatesFound	When route plan candidates are found for an arrived file
FG_0503	RouteCandidate	A route plan candidate for an arrived file
FG_0504	Route	When one or more routes are chosen from the candidates
FG_0505	RoutesFound	The number of routes that will be executed
FG_0506	Route Candidate Does Not Match	When a routing channel template contains no matching producer file structure for an arrived file.
FG_0601	TransformedMessage	When a message is transformed to the final format for the consumer
FG_0602	ProducerPayloadExtracting	When the router begins to extract a producer payload file
FG_0603	ConsumerPayloadConstructing	When the router begins to construct a consumer payload file for delivery
FG_0604	ConstructedLayer	When a single layer in the consumer payload file gets constructed
FG_0605	ExtractedLayer	When a single layer in the producer payload file gets extracted
FG_0606	LayerOptions	When options are passed to a business process to process a layer.
FG_0701	DeliveredMailboxMessage	When a message is delivered to a mailbox (either a consumer mailbox or a mailbox for sending to a listening consumer)
FG_0702	DeliveredListeningPartnerMessage	When the file transfer is complete
FG_0703	ChangeDirectory	When the supported protocol changes directory on the listening consumer's server to transfer the file

Event Code	Name	Description
FG_0704	ConsumerDestinationMailboxFound	When the destination mailbox for the consumer is discovered

Some event codes trigger notifications to subscribers. System Administrators can change the permissions for an event code by using the `customer_overrides.properties` file to override values in the `FGEventCodes.properties` file. The following event codes can be subscribed to by Operators, as the permissions are set at initial installation:

Event Code	Name	Description
FG_0050	MailboxAuthorizationFailure	When a user fails to access a mailbox that is monitored
FG_0250	BusinessProcessFailure	When a business process fails, with a link to the business process
FG_0408	ArrivedFileStarted	When a file arrives to be routed
FG_0411	ArrivedFileRouted	When an arrived file completes all its routes
FG_0415	RouteComplete	When a route completes all its deliveries
FG_0419	DeliveryComplete	When a delivery is complete
FG_0420	ArrivedFileReplayed	When an arrived file is replayed, with a link to the replay
FG_0422	Redeliver	When a redelivery is requested by a user
FG_0424	ArrivedFileIgnored	When an arrived file is ignored due to a configured pattern for ignoring files
FG_0425	ArrivedFileDescription	The description of the Arrived File
FG_0450	ProducerMessageNotFound	When a producer message is invalid or cannot be found
FG_0451	ProducerDocumentNotFound	When a producer document is invalid or cannot be found
FG_0455	ArrivedFileFailed	When an arrived file fails
FG_0456	RouteFailed	When a route file fails
FG_0457	DeliveryFailed	When a delivery fails
FG_0550	ZeroRouteCandidatesFound	When no route candidates are found for an arrived file
FG_0551	ZeroRouteChannelsFound	When no route channels are chosen from the list of

		candidates for an arrived file
FG_0552	InvalidRoute	When a route is invalid
FG_0607	PGPConstructSkipped	When the PGP Construct layer is skipped because the consumer does not handle PGP and it is optional on the Routing Channel Template
FG_0650	ExtractLayerFailed	When extraction of a layer fails
FG_0651	ConstructLayerFailed	When construction of a layer fails

Depending on when the events occur in the processing and transferring of files, some event codes can only send notifications to producers or consumers. System Administrators can change the permissions for an event code by using the `customer_overrides.properties` file to override values in the `FGEventCodes`. The following event codes can be subscribed to by Partners, as the permissions are set at initial installation:

Event Code	Name	Description	Notifies Producer, Consumer, or Both
FG_0408	ArrivedFileStarted	When a file arrives to be routed	Both
FG_0411	ArrivedFileRouted	When an arrived file completes all its routes	Both
FG_0415	RouteComplete	When a route completes all its deliveries	Both
FG_0419	DeliveryComplete	When a delivery is complete	Both
FG_0420	ArrivedFileReplayed	When an arrived file is replayed, with a link to the replay	Both
FG_0422	Redeliver	When a redelivery is requested by a user	Both
FG_0424	ArrivedFileIgnored	When an arrived file is ignored due to a configured pattern for ignoring files	Producer
FG_0425	ArrivedFileDescription	The description of the Arrived File	Producer
FG_0450	ProducerMessageNotFound	When a producer message is invalid or cannot be found	Producer
FG_0451	ProducerDocumentNotFound	When a producer document is invalid or cannot be found	Producer
FG_0455	ArrivedFileFailed	When an arrived file fails	Producer

Event Code	Name	Description	Notifies Producer, Consumer, or Both
FG_0456	RouteFailed	When a route file fails	Both
FG_0457	DeliveryFailed	When a delivery fails	Both
FG_0550	ZeroRouteCandidatesFound	When no route candidates are found for an arrived file	Producer
FG_0551	ZeroRouteChannelsFound	When no route channels are chosen from the list of candidates for an arrived file	Producer
FG_0552	InvalidRoute	When a route is invalid	Producer
FG_0607	PGPConstructSkipped	When the PGP Construct layer is skipped because the consumer does not handle PGP and it is optional on the Routing Channel Template	Consumer
FG_0650	ExtractLayerFailed	When extraction of a layer fails	Producer
FG_0651	ConstructLayerFailed	When construction of a layer fails	Consumer

FGEventCodes.properties

The FGEventCodes.properties file contains properties that control the operation of event codes in Sterling File Gateway.

There is a property in the FGEventCodes.properties file for each event, in the format:

```
FG_<EVENT_CATEGORY><EVENT_CODE>=<REPLACEABLE_TEXT>
```

where the values for <EVENT_CATEGORY> are:

Code	Category
00	Producer File Transfer
01	Routing Rule
02	Routing Business Process
03	File Gateway Service
04	File Gateway General
05	Route Plan Determination
06	File Transformation
07	Consumer File Transfer
08	Route Complete

Code	Category
10	Trading Partner Profile
11	PGP

<EVENT_CODE> is a unique code (within the category) to identify this event. Check the other properties (or the FileGatewayEvent enumeration) to ensure no duplication.

<REPLACEABLE_TEXT> is text that displayed in the route details so users can monitor progress of the route.

FGEventCodes.properties may include both standard events shipped with Sterling File Gateway and custom events you create. Specific information is needed for each event, regardless of event type:

Parameter	Description	Example
Name	Name of the event. Displayed in the subscription UI. Required.	XX_0050.name=MyCustomEventFailure
Attributes	Comma delimited list of named attributes to the event. Used in the text field and must correspond to the order listed in the text field. For example, UserId attribute corresponds to {0} below. All attributes need not appear in the text field. Required, but can be empty.	XX_0050.attributes=UserId, ErrorMessage
Text	Event description displayed in the route activity UI for a specific occurrence of this event. Required.	XX_0050.text=User {0} encountered failure {1}
Description	A generic event description that does not use attributes. Required.	XX_0050.description=When a user encounters this custom event failure
Permissions	Comma delimited list that indicates who can be notified and who can view this event. Possible values are: <ul style="list-style-type: none"> subscription - available for subscription to notifications producer - producers can see in events list and receive notifications consumer - consumers can see in events list and receive notifications Optional.	XX_0050.permissions=subscription

Enable the AFT Menu

If the Advanced File Transfer menu is not displayed in the B2B Console, you can enable it.

Note: The AFT menu will look different from what it looks like in Gentran Integration Suite without Sterling File Gateway installed. To add AFT to your user account:

1. From the Sterling File Gateway menu, select **Tools >B2B Console**.
2. Click **Manage Layout** in the upper right corner of the page.
3. Click **Add Pane**, and type AFT.
4. Click **Apply**.
5. Click on **AFT**.
6. Click **Add Portlet**.
7. Check in the **Add** box next to **Advanced File Transfer Management**.
8. Click **Apply**.
9. Click **Apply**.
10. Click **Save and Apply**. The AFT tab is available for this account.

Set Up HTTPS for myFileGateway

To run *myFileGateway* inside your secure network, no configuration is required. An HTTP Server adapter configuration (named Http Server Adapter) comes with Sterling File Gateway that enables the clients on the same network as Sterling File Gateway to access *myFileGateway*.

To run *myFileGateway* in a DMZ, an HTTP Server adapter must be configured that uses a remote perimeter server.

After a Perimeter Server has been configured in Sterling Integrator, its name is available to the HTTP Server adapter configuration, in the Perimeter Server Name list on the HTTP Connection Properties page.

To configure *myFileGateway* to run in the DMZ:

1. Set up a perimeter server in the DMZ.
2. Configure a new Perimeter Server in Sterling Integrator. The port specified in the Perimeter Server configuration must *not* be the HTTP listen port (to which trading partners are expected to connect), which is specified in a subsequent stage.
3. Ensure that the remote perimeter server is running.
4. Create a new instance of the HTTP Server Adapter configuration.
 - a. Log into Sterling File Gateway as a system administrator.

- b. Select **Tools > B2B Console**.
 - c. From the Sterling Integrator Admin menu, select **Deployment > Services > Configuration**.
 - d. Under **Create**, next to **New Service**, click **Go!**
 - e. For **Service Type**, open the List View, select **HTTP Server Adapter** and click **Save**, then **Next**.
 - f. Give the adapter a new unique name and description. If you are using a clustered environment, from the **Environment** list, select the node where the remote perimeter server is to be assigned. Click **Next**.
 - g. For the **HTTP Listen Port**, specify the port that the Partner is expected to connect to. This port must not be used by a different application on the computer that the remote perimeter server is installed on. No two HTTP Server adapter configurations can listen on the same port on the same remote perimeter server computer. The default port for Sterling File Gateway is 33, so select a different port number.
 - h. From the **Perimeter Server Name** list, select the name of the Perimeter Server (previously configured) that corresponds to the specific remote perimeter server to be used. The name is in the format *node & name*, where name is what you specified.
 - i. For **Total Business Process queue depth threshold**, enter a number of business processes to allow in queue. The value of this setting has no effect if Sterling File Gateway is the only application hosted on this HTTP Server adapter, because Sterling File Gateway does not initiate business processes.
 - j. For **Document Storage** and **User Authentication Required**, you can accept the default or change to match your system.
 - k. For **Use SSL**, select **Must** to implement stronger security. Click **Next**. See [Implementing SSL](#) for more information about settings for the SSL Settings page. Click **Next**.
 - l. On the Services Configuration page, click **add**, type the URI /myfilegateway.
 - m. Select **War File**. Click **Next**.
 - n. **Enter the War File Path**. The *myFileGateway* War file is located at *<install dir>\SI\container\Applications\myfilegateway.war*. (For UNIX, *<install dir>/container/Applications/myfilegateway.war*.)
 - o. Click **Save**.
 - p. In the **Confirm** page, verify that all parameters are as specified.
 - q. Ensure the **Enable Service for Business Process** check box enabled.
 - r. Click **Finish**.
5. If you have access to the computer on which the remote perimeter server is running, log in to that computer and run the following command:


```
netstat -an | grep <httpListenPort>
```

where *<httpListenPort>* is the port previously specified. If a row is found that reads, LISTEN, the HTTP Server adapter is ready to handle requests from external clients.

6. Verify that the HTTP Server adapter is listening and that *myFileGateway* is configured correctly by pointing an HTTP browser to the following URL:

```
https://<host>:<httpListenPort>/myfilegateway
```

where *<host>* is the IP address or host name of the computer where the remote perimeter server is running and *<httpListenPort>* is the port previously specified. A dialog opens, requesting the user name and password to use with *myFileGateway*. If instead the browser encounters an error, verify that *<httpListenPort>* is being listened on. If it is listening, verify that some other application has not reserved this port. To do this, disable the HTTP Server adapter and verify that this port is not being listened on. If it is, find the application that has the port bound and shut it down. Alternately, select a different HTTP Listen Port and try again.

Get Started

Prepare Communications Adapters for Use with Sterling File Gateway

Sterling File Gateway uses the communications adapters in Gentran Integration Suite to receive connections from and make connections to Partners for the purpose of transferring files. These connections can use various Internet protocols, including FTP, FTPS, HTTP, HTTPS, SFTP, SCP, Connect:Direct, and WebDAV. Before using Sterling File Gateway to route files, configure the communications adapters in Gentran Integration Suite .

To configure communications adapters:

1. Determine the communication adapters you require.
2. Review the information needed to configure the adapters you require. The following adapters can be used with Sterling File Gateway without requiring an extension of capabilities:

Protocol	Adapter	References
HTTP, WebDAV	HTTP Server adapter	HTTP Server Adapter
HTTP, WebDAV	HTTP Client adapter and services	HTTP Client Adapter
FTP	FTP Server adapter	FTP Server Adapter
FTP	FTP Client adapter and services	FTP Client Adapter
SSH/SFTP, SSH/SCP	SFTP Server adapter	SFTP Server Adapter
SSH/SFTP	SFTP Client adapter and services	SFTP Client Adapter
Connect:Direct	Connect:Direct Server adapter	Connect:Direct Server Adapter
PGP	Command Line Adapter 2	Command Line Adapter 2 <ul style="list-style-type: none"> • PGP Package Service • PGPUnpackage Service

3. Gather the information needed for the adapters.
4. From the main menu, select Tools > B2B Console.
5. Select Deployment > Services > Configuration.
6. Select the adapters you require.

Sterling File Gateway System Business Processes

There are several business processes delivered with Sterling File Gateway to perform basic tasks. Do not alter these business processes.

In Gentran Integration Suite, a business process is a series of linked software and possibly human activities that accomplishes a business goal. The activities in a business process are primarily performed by components known as services and adapters, and are orchestrated by Gentran Integration Suite integration engine.

The integration engine runs business processes according to the instructions that comprise your business process models. Technically, a business process model is defined by a single, unique BPML document, a .BPML file. BPML is an XML-based language used to describe (model) and run business processes.

The following table contains a list of the system business processes used for Sterling File Gateway operations:

System Business Process	Function
FileGatewayDeliverFTP	Delivers files to consumers using the FTP protocol.
FileGatewayMailboxRoute	Gathers all mailbox messages available for routing.
FileGatewayMailboxRouteArrivedFile	Routes individual messages identified by FileGatewayMailboxRoute as available for routing.
FileGatewayRoutePGPPackageDocument	Routes PGP packaged documents.
FileGatewayRoutePGPUnpackageDocument	Routes PGP unpackaged documents.
FileGatewaySendMessage	Sends messages from File Gateway.

Set Up and View Logs

To troubleshoot problems with file transfers that cannot be analyzed using the Sterling File Gateway user interface, view the activity log. Only Operators and System Administrators can edit log settings and view logs.

New log files are created at midnight each day. If the max log file size is exceeded during the same day, additional log files are created. Old logs are automatically deleted after the pre-determined maximum number of logs is reached. The default maximum number is ten, which can be changed in the log.properties file (systemlogger.maxlogs=10)

To set up logging:

1. From the main menu, select **Tools > Logs**.
2. Scroll down to locate **File Gateway**.
3. Click on the **edit** icon next to **File Gateway**.
4. Select **Logging Level On**.

Note: Logging can affect performance, so should only be turned on while troubleshooting problems.

5. Click **Save**.
6. View the log at **Tools > Logs, File Gateway**.

Prepare to Use the Connect:Direct Protocol

Prior to creating partners to use the Connect:Direct protocol for file transfer, you must:

1. Set up the Connect:Direct Server adapter.
2. Create an appropriate netmap entry in the Connect:Direct Server adapter. For consumers, the Connect:Direct node that the Partner hosts is the SNODE.
3. Proceed with creating partners. When you onboard a listening consumer, specify the netmap information for the Connect:Direct specific parameters.

Prepare to Use PGP

PGP encryption is supported by Sterling File Gateway, in combination with FTP and other protocols.

For producers sending PGP packaged files, files are processed in accordance with the routing channels and their templates when a partner is the producer for the channel. Encrypted files will be decrypted using the router's secret PGP key and signed files will be verified using the producer's public key if it is present in the Public Key Ring.

For consumers, you specify in the Create Partner wizard that messages sent to the consumer must be encrypted, signed, or both. The PGP options of compression, text mode and ASCII armor can also be specified for each consumer.

The settings for the producer are independent of the settings for the consumers. If the producer is set to Encryption, regardless of whether the consumer is or is not, only encrypted files can be sent by the producer. If the producer is set to No Encryption, and the consumer is set to Encryption, unencrypted files are sent by the producer and the Router encrypts them before sending to the consumer.

Producers may unilaterally (without prior negotiation) choose to use PGP compression for their files. Consumers may be configured such that Sterling File Gateway also performs compression while it is packaging the PGP file before sending to them.

Prior to creating an community with partners to use PGP, you must do the following:

1. Install one of the supported PGP vendor's products.
2. Start a <install_dir>/client/cmdline2/CLA2Client.jar process on the machine that the PGP vendor's product runs on.
3. Edit the PGPCmdlineService (which is a configuration of the Command Line 2 adapter) in Gentran Integration Suite, or create a new configuration of the Command Line 2 adapter. Set the following parameters:
 - Remote Name - IP address or machine name for the machine where the PGP server is running
 - Remote Port - the port number on the PGP server machine that the CLA2Client.jar is listening on
 - Working directory (optional)
4. If you create a new configuration of the Command Line 2 adapter, edit the customer_overrides.properties file to override the default setting for the ppgCmdline2svcname parameter in the filegateway.properties file to point to the new configuration.
5. Create a PGP profile in Gentran Integration Suite. Name the profile AFTPGPProfile. The Sterling File Gateway Router can only work with a profile that has this name and cannot use any other PGP profiles defined in Gentran Integration Suite.

Prepare to Use SSH/SFTP

Prior to creating a community with Partners to use the SSH/SFTP or SSH/SCP protocol for file transfer, you must:

1. For an SFTP listening consumer, you must first create their remote profile. Select **Trading Partner > SSH > Remote Profile**. Assign this SSH remote profile when you create a listening consumer Partner.
2. For an SSH/SFTP or SSH/SCP producer or initiating consumer an Authorized User Key may be required of them before they can connect. This key can be imported before

configuration and selected when creating the Partner or imported during the Partner creation.

3. The SFTP Server adapter cannot be enabled until an SSH Host Identity Key is created or imported. Select **Deployment** > **SSH Host Identity Key**. This key must be assigned before the adapter is enabled.
4. Configure the SFTP Server adapter.

Exchange Information with Partners

For the FTP, FTPS, WebDAV, and Mailbox protocols, the user name and password, established during the Partner creation, is sufficient to begin exchanging files. For other protocols, additional steps are necessary as follows:

1. The specific details for how a Partner must configure their system, such as the host IP address, port number, certificates, and other specifics, must be communicated to the partners outside of Sterling File Gateway, such as by e-mail.
2. If a particular protocol requires extra parameters specific to the Partner, such as SFTP requiring user keys, set these up in the Gentran Integration Suite Administration menu after creating the AFT partner.

Note: SFTP Authorized User Key can be added before or during Partner creation. Remote profiles must be added before an SFTP listening consumer can be created. These profiles contain a Known Host Key and the User Identity Key. The SSH Host Identify Key (public and private keys) is created or imported before. The public part of this key may be exported and can become a Known Host Key for a Remote Profile for a remote server.

Extend the Capabilities

Extend the Capabilities of Sterling File Gateway

You can customize Sterling File Gateway to support additional functionality in the following areas:

- Protocols
- Consumer identification policies
- Event codes

Add Custom Protocols

You can add support for custom protocols for listening consumers in addition to the ones preconfigured in Sterling File Gateway.

The information you provide in performing this procedure determines the text displayed in the Partner management wizard. That is, after you perform this procedure, new choices are available for protocols offered by Sterling File Gateway when creating a community and when creating a listening consumer in a community that is configured for the custom protocol.

1. Write a business process that implements the custom protocol.
2. Use the existing `AFTExtensions.xml` as a guide to create an `AFTExtensionsCustomer.xml` file to describe the protocol. Do not edit the `AFTExtensions.xml` file. The `AFTExtensions.xml` file is located in the following directory: `<install_dir>/container/Applications/aft/WEB-INF/classes/resources/xml`.
3. Save the `AFTExtensionsCustomer.xml` file to the same directory as `AFTExtensions.xml`.
4. Use the existing `AFTExtensions.properties` file as a guide to create the `AFTExtensionsCustomer.properties` file. Do not edit the `AFTExtensions.properties` file. The `AFTExtensions.properties` is located in the following directory: `<install_dir>\container\Applications\aft\WEB-INF\classes\resources`
5. Copy the `AFTExtensionsCustomer.properties` file to both: `<install_dir>\container\Applications\aft\WEB-INF\classes\resources` and `<install_dir>\container\Applications\myaft\WEB-INF\classes\resources`
6. Reference the business process you created in step 1 in a new `AFTExtension` element in the `AFTExtensionsCustomer.xml` file.
7. Stop Sterling File Gateway.

8. Run `<install_dir>/bin/setupfiles.sh`.
9. Run `<install_dir>/bin/deployer.sh`.
10. Start Sterling File Gateway. The additional protocol will be available when adding and editing communities. After this protocol has been chosen for a community, it then becomes available when creating and editing partners in that community.

Add Consumer Identification Policies

The consumer identification policy is the method Sterling File Gateway uses to identify the consumer to receive the file transfer. The consumer identification policy is defined in the routing channel template. To implement a specific policy:

1. Write a business process implementing the consumer identification policy. For example, your business process may contain a map to derive the consumer name. Note the element name in `ProcessData` that will contain the consumer name.
2. When you create a routing channel template, select **Dynamic** for **Template Type**.
3. Under **What will determine the consumer?**, select **Business Process**.
4. Specify the business process name.
5. Specify the element name in `ProcessData` that contains the consumer name.

Add Custom Event Codes

You can add custom events to Sterling File Gateway that are associated with any custom protocols and business processes you create. You will need a code, a name, and a description for each event you want to create, as well as permission and subscription settings.

To add custom event codes:

1. Open or create a file named `<install_dir>/properties/customer_overrides.properties`.
2. Add entries in the `customer_overrides.properties` file with the appropriate details about the custom event codes you are creating. Your new event will be a series of properties describing attributes of the event. Look at the `FGEventCodes.properties` for examples. Do not edit the `FGEventCodes.properties` file). The following is a basic template:

```
filegateway_eventcodes.CUST_0265.name=
filegateway_eventcodes.CUST_0265.attributes=
filegateway_eventcodes.CUST_0265.text=
filegateway_eventcodes.CUST_0265.description=
filegateway_eventcodes.CUST_0265.permissions=
filegateway_eventcodes.CUST_0265.EventNotificationEmailSubject=
filegateway_eventcodes.CUST_0265.EventNotificationEmailContentType=
```


- Event Code: The event code in the template above is CUST_0265. It consists of keyword underscore 4 digit code. It is used to identify all the attributes for a particular event code. Required.
 - Keyword - any text, optimally 4 characters long, but cannot be FG_ nor AFT_
 - 4 digit Code - consists of two 2-digit codes - a category identifier and a unique identifier. No two events can have the same 4-digit code.
 - Category Identifier - The first 2- digit code is a category identifier. See the top of the FGEventCodes.properties file for current category identifiers or use your own that is not listed.
 - Unique Identifier - The second 2-digit code is the unique identifier for the event within the category. 00 to 49 are successful events and 50 to 99 are error events. Error events display in red in Sterling File Gateway.
- <EventCode>.name - This is the name of your event. It will be shown in the subscription UI (**Profile > Notifications**) if subscriptions are enabled, and in the log. Required.
- <EventCode>.attributes - A comma-delimited list of attributes for this event. While any attribute can be passed into the event, only these attributes will be stored in the database, will be searchable through the UI, and are usable in the event text defined below. They are generally indexed with the first one in the list having an index of 0. The attribute names must be names that can be passed as an xml element (no special characters, no spaces). This property is required but the list can be empty.
- <EventCode>.text - This property contains the text that will show up in the UI when this event is viewed. It can contain text and is generally limited by the Java Format rules (for example, in order to have a single quote, you must put two of them right next to each other.) You can also use attributes above by using the notation {#} which will substitute in the UI the value of the attribute at the index of the #. You do not have to use attributes, the user in the UI can click on the event and see all the attributes and they will still be searchable. So you can send in and store more attributes than you might want to show in the UI. Required.
- <EventCode>.description - This description is shown in the subscription UI (**Profile > Notifications**). Required.
- <EventCode>.permissions - This is a comma-delimited list of permissions for this event. There are three possible values to use: producer, consumer, subscription. This property is required but it can be empty. Empty means that only the Operator can see the event, and no one can subscribe for notifications to the event.
 - producer - This event can be seen and subscribed to by the producer for this route.
 - consumer - This event can be seen and subscribed to by the consumer for this route.
 - subscription - This event can be subscribed to. For a producer or consumer to subscribe to an event, the event must have the corresponding producer or consumer permission AND the subscription permission. For a Operator to subscribe to an event, the event requires only to have the subscription permission.

- `<EventCode>.EventNotificationEmailSubject` - This is the subject line for the email notification when the event occurs. The default value is File Gateway Routing Event E-mail Notification [Event Code = {0}], where 0 is the four-digit identifier for the event code.
- `<EventCode>.EventNotificationEmailContentType` - This specifies the content type for the email notification when the event occurs. Valid values are text/plain and html. The default is text/plain.

Note: See the `/<install_dir>/properties/FGEventCodes.properties` file as an example for how to structure your event properties. Do not edit the `FGEventCodes.properties` file. Make all changes in the `customer_overrides.properties` file. See [Using Property Files](#)

3. Save the `customer_overrides.properties` file and restart Sterling File Gateway for the new file to take effect.
4. Edit your business process that generates the new event codes to call the `FileGatewayRouteEventService`, with the proper parameters, including the new custom event codes.
5. Add the `FileGatewayRouteEventService`, with the proper parameters, including the new custom event code. The following example will fire a hypothetical event:

```
<operation>
  <participant name=" FileGatewayRouteEventService "/>
  <output message="Output">
    <assign to="EventCode">CUST_0265</assign>
    <assign to="ExceptionLevel">Normal</assign>
    <assign to="EventAttributes/Directory"
      from="directory/text()" append="true"/>
    <assign to="EventAttributes/Comment" >
      BP changed directories</assign>
    <assign to="." from="*"></assign>
  </output>
  <input message="Input">
    <assign to="." from="*"></assign>
  </input>
</operation>
```

To send attributes to the `FileGatewayRouteEventService`, use the following guidelines. These guidelines only apply to the `EventAttributes`, not to other parameters of the service:

- The attributes will be sent to the service as a series of assigns. They need to be a series of assigns in order to support the advanced event attribute naming of Sterling File Gateway.
- The first assign must have an attribute `append="true"`. This will append the `EventAttributes` the first time. The remaining assigns cannot have the `append` attribute.
 - **Hardcoded Values.** If you want to send a hardcoded attribute value to the service (for example, `IsError=true`, when you know it will be true every time) then use the following assign statement template:

```
<assign to="EventAttributes/IsError"
  from="string('true')" />
```

- **Process Data.** If you want to send an attribute that is copied from another attribute in the service (for example, the results of another service, stored in the ProcessData at MyService/ResultCode) then use the following assign statement template:

```
<assign to="EventAttributes/MyServiceResultCode"
      from="MyService/ResultCode/text()" />
```

You can combine those two methods to send both types of attributes into the service, adding the append to the first one:

```
<assign to="EventAttributes/IsError"
      from="string('true')" append="true" />
<assign to="EventAttributes/MyServiceResultCode"
      from="MyService/ResultCode/text()" />
```

Example Section in customer_overrides.properties File

Note: Although the example below shows the items displaying on multiple lines, do not do so in your implementation.

```
filegateway_eventcodes.CUST_0265.name=Custom Event -
  File Error
filegateway_eventcodes.CUST_0265.attributes=ConsumerName,
  MyServiceResultCode, IDNumber
filegateway_eventcodes.CUST_0265.text=File Error generated
  during processing:Result code: {1} reported for File ID {2}
  received for Consumer {0}
filegateway_eventcodes.CUST_0265.description=Event from Custom
  BP generated when error occurs
filegateway_eventcodes.CUST_0265.permissions=producer, consumer,
  subscription
```

Example Custom Protocols

The examples below provide a business process, AFTExtensionsCustomer.xml file, and AFTExtensionsCustomer.properties file for adding Connect:Enterprise UNIX or HTTP Send. You can use these as a model for creating the files to add other custom protocols.

The AFTRouteViaCEU and AFTRouteViaHTTP business processes referred to in this section are available in your Sterling Integrator installation at <install>/samples/aft/extensions_sample/ (with the extension .bpml.). Sample AFTExtensionsCustomer.xml and AFTExtensionsCustomer.properties files are included in the same directory. For more information, see <install>/samples/aft/extensions_sample/README.txt.

ProcessData for Business Processes Implementing Custom Protocols

The following elements are available in ProcessData when the business process implementing an custom protocol is executed:

Element	Description
Primary document	The primary document contains the data as it will be delivered to the consumer, so that, if the producer's document required PGP operations (such as decryption) or the consumer required PGP processing, the contents of the primary document contains the results of performing those PGP operations.
PrimaryDocumentId	Document ID for the primary document
DestinationMessage Name	Name of the primary document
TransportBP	Name of the business process that will be executed for the protocol
AFTRouteId	An internal identifier needed if the AFT Route Progress Event Reporting service is called. The value of this element must not be changed by the extensibility business process.
AFTRouteWorkFlowId	An internal work flow identifier needed if the AFT Route Progress Event Reporting service is called. The value of this element must not be changed by the extensibility business process.
ProducerName	Name of the data producer
ConsumerName	Name of the data consumer
Parameters added to AFTExtensionsCustomer.xml	Any parameters you supply as part of your custom protocol are available in process data.

Example Adding an Connect:Enterprise UNIX Extension

For example, if you were adding Connect:Enterprise UNIX as a outbound file transfer mechanism, your business process could be the following:

```
<process name="AFTRouteViaCEU">
<sequence>
  <operation name="CEU Add Service">
    <participant name="CEUServerAdd"/>
    <output message="AddRequest">
      <assign to="." from="*" />
      <assign to="CEUServerAdapterInstanceName"
        from="string(CEUServerAdapterInstanceName)"/>
      <assign to="CEUMailboxId" from="string(CEUMailboxId)"/>
    </output>
    <input message="inmsg">
      <assign to="CEUAddServiceResults" from="*" />
    </input>
  </operation>
</sequence>
</process>
```

```

        </operation>
</sequence>
</process>

```

Note: ProcessData does not include the producer name or consumer name for custom protocol business processes.

AFTEExtensionsCustomer.xml Adding Connect:Enterprise UNIX

The following is an example AFTEExtensionsCustomer.xml adding Connect:Enterprise UNIX for outbound file transfer:

```

<AFTEExtensions>
  <AFTEExtension name="ceu-protocol" type="consumer-delivery-protocol"
    label="cdp.protocol.label.ceuprotocol" bp="AFTRouteViaCEU">
    <GROUP title="ceu.instance.group1.title">
      <VARDEF varname="CEUServerAdapterInstanceName" type="String" htmlType="text"
        validator="ALPHANUMERIC" size="30" maxsize="250"
        label="cdp.label.ceuprotocol.ceuseradapterinstancename" defaultVal="BP"
        required="yes"/>
      <VARDEF varname="CEUMailboxId" type="String" htmlType="text"
        validator="ALPHANUMERIC" size="30" maxsize="250"
        label="cdp.label.ceuprotocol.ceumailboxid" required="no"/>
    </GROUP>
  </AFTEExtension>
</AFTEExtensions>

```

AFTEExtensionsCustomer.properties Adding Connect:Enterprise UNIX

The following is an example AFTEExtensionsCustomer.properties adding Connect:Enterprise UNIX for outbound file transfer:

```

#####
# Connect:Enterprise UNIX
#####
cdp.protocol.label.ceuprotocol = Connect:Enterprise UNIX
ceu.instance.group1.title = Connect:Enterprise UNIX
cdp.label.ceuprotocol.ceuseradapterinstancename = CEU Server Adapter
Instance Name
cdp.label.ceuprotocol.ceumailboxid = Connect:Enterprise UNIX Mailbox Id

```

Example Adding an HTTP Send Extension

The following is a business process that adds the HTTP protocol:

```

<process name="AFTRouteViaHTTP">
  <sequence>
    <operation name="HTTP Client Begin Session Service">
      <participant name="HTTPClientBeginSession"/>
      <output message="HTTPClientBeginSessionServiceTypeInputMessage">
        <assign to="." from="*"/>
        <assign to="HTTPClientAdapter">HTTPClientAdapter</assign>
        <assign to="RemoteHost" from="string(RemoteHost)"/>
        <assign to="RemotePasswd" from="revealObscured(RemotePasswd)"/>
      </output message>
    </operation>
  </sequence>
</process>

```

```

        <assign to="RemotePort" from="string(RemotePort)"/>
        <assign to="RemoteUserId" from="string(RemoteUserId)"/>
        <assign to="UsingRevealedPasswd">true</assign>
    </output>
    <input message="inmsg">
        <assign to="." from="*" />
    </input>
</operation>
<operation name="HTTP Client POST Service">
    <participant name="HTTPClientPost"/>
    <output message="HTTPClientPostServiceTypeInputMessage">
        <assign to="." from="*" />
        <assign to="DocumentId" from="string(DocumentId)"/>
        <assign to="RawRequest">false</assign>
        <assign to="RawResponse">true</assign>
        <assign to="ResponseTimeout">60</assign>
        <assign to="SessionToken" from="string(SessionToken)"/>
        <assign to="ShowResponseCode">true</assign>
        <assign to="URI" from="string(URI)"/>
    </output>
    <input message="inmsg">
        <assign to="." from="*" />
    </input>
</operation>
<operation name="HTTP Client End Session Service">
    <participant name="HTTPClientEndSession"/>
    <output message="HTTPClientEndSessionServiceTypeInputMessage">
        <assign to="." from="*" />
    </output>
    <input message="inmsg">
        <assign to="." from="*" />
    </input>
</operation>
</sequence>
</process>

```

Notice the process above uses the `revealObscured(RemotePasswd)` Xpath function. This is needed because every parameter defined in `AFTEExtensionsCustomer.xml` of `htmlType="Password"` is stored either encrypted (if the parameter name has a suffix of `"_ENCRYPTED"`) or obscured (for all other parameters of `htmlType="Password"`). In this specific case, the password is passed into the BP as an obscured value but the HTTP Client Adapter requires a password that is not obscured (because `UsingRevealedPasswd` is set to `"true"`).

When extending protocols and using passwords consider how the service or adapter you plan to use accepts passwords.

AFTExtensionsCustomer.xml for HTTP Send

The following is an example AFTExtensionsCustomer.xml file to add HTTP Send support to AFT:

```
<AFTExtension name="http-protocol" type="consumer-delivery-protocol"
  label="cdp.protocol.label.httpprotocol" bp="AFTRouteViaHTTP">
  <GROUP title="http.instance.group1.title">
  <VARDEF varname="RemoteHost" type="String" htmlType="text"
    validator="ALPHANUMERIC" size="20" maxsize="20"
    label="cdp.label.httpprotocol.httpip" required="yes"/>
  <VARDEF varname="RemotePort" type="String" htmlType="text"
    validator="ALPHANUMERIC" size="20" maxsize="20"
    label="cdp.label.httpprotocol.httpport" required="no"/>
  <VARDEF varname="RemoteUserId" type="String" htmlType="text"
    validator="ALPHANUMERIC" size="20" maxsize="20"
    label="cdp.label.httpprotocol.httpuser" required="no"/>
  <VARDEF varname="RemotePasswd" type="String" htmlType="password"
    validator="ALPHANUMERIC" size="20" maxsize="20"
    label="cdp.label.httpprotocol.httppassword" required="no"/>
  <VARDEF varname="URI" type="String" htmlType="text"
    validator="ALPHANUMERIC"
    size="20" maxsize="20" label="cdp.label.httpprotocol.uri"
    required="no"/>
  </GROUP>
</AFTExtension>
```

The mandatory parameter for this example is Remote Host. Optional parameters include Remote Port, Remote User Id, Remote Password, and URI.

AFTExtensionsCustomer.properties for HTTP Send

The following is an AFTExtensionsCustomer.properties file to add HTTP Send support to AFT:

```
#####
HTTP Send
#####
cdp.protocol.label.httpprotocol = HTTP Send
http.instance.group1.title = HTTP Send
cdp.label.httpprotocol.httpip = HTTP IP Address
cdp.label.httpprotocol.httpport = HTTP Port
cdp.label.httpprotocol.httpuser = HTTP User
cdp.label.httpprotocol.httppassword = HTTP Password
cdp.label.httpprotocol.uri = URI
```

The user interface created by this example AFTExtensionsCustomer.properties file adds the attribute for cdp.protocol.label.httpprotocol in the Protocol list.

In the next page of the Create Partner wizard, the following elements and attributes are added:

- cdp.protocol.label.httpprotocol is at the top of the white screen

- `http.instance.group1.title` is title in parameter box
- `cdp.label.httpprotocol.httpip` parameter label
- `cdp.label.httpprotocol.httpport` parameter label
- `cdp.label.httpprotocol.uri` parameter label

In the next page of the Create Partner wizard, the following elements and attributes are added:

- `cdp.protocol.label.httpprotocol` is at the top of the white screen
- `http.instance.group2.title` is the title in parameter box
- `cdp.label.httpprotocol.httpuser` parameter label
- `cdp.label.httpprotocol.httppassword` parameter label

Encrypted Passwords

If you include an "_ENCRYPTED" suffix on a parameter it causes the user-entered values to be encrypted when saved (use only for fields of `htmlType="Password"`). Do not use the `revealObscured()` function with passwords that are encrypted. Rather, use the encrypted password only if the particular service to be invoked can accept an encrypted password and decrypt it internally.

If a value is declared to be of type "password" and does not have an "_ENCRYPTED" suffix, the value is saved into the database obscured and delivered to `ProcessData` obscured. Call the `revealPassword (XPath) XPath` function to reveal the password, immediately before using the password.

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The ICE Software was modified slightly in order to fix a problem discovered by Sterling Commerce involving the RegistryKey class in the RegistryKey.java in the JNIRegistry.jar. The class was modified to comment out the finalize () method and rebuild of the JNIRegistry.jar file.

Source code for the bug fix completed by Sterling Commerce on January 8, 2003 is located at: *install_dir* /jar/jniregistry/1_2/RegistryKey.java. Source code for all other components of the ICE Software is located at <http://www.trustice.com/java/jnireg/index.shtml>.

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