

Sterling File Gateway

Operator 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 Gentran 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 "AFTPGProfile" 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*.

System Status

View File Activity

You can view activity status information for the last hour, day, and week.

1. From the main menu, select **Tools > Activity Snapshot**.
2. A new window opens. While this window is open, you cannot perform other actions in Sterling File Gateway. Clicking on any of the numbers on the screen opens the Arrived File search results page.

Note: The system will not time out while the Activity Snapshot is running. You should not leave it unattended.

Metrics for the following activities are displayed for the last day, hour, or week:

- **Total Arrived Files** - Arrived Files are the files that arrive from a producer. This is the total number of arrived files that completed in the specified time period. These are Producer files. For example, a Zip file containing 532 files only counts as one file. Click on this number to display a list of this set of arrived files. If new activity occurs between the snapshot display and the click, the list includes the new arrived files.
 - **Total Payloads** - Payloads are either the arrived files (if non-container type) or files found inside a container type. This is the number of payloads found within completed arrived files. Click on this number to display a list of this set of arrived files they originated from.
 - **Unidentified Files** - This is the number of arrived files that failed because no routing channel could be identified for any of their payloads.
 - **Successfully Routed** - This is the number of payloads that were successfully routed. Click on this number to display a list of arrived files they originated from.
 - **New Failures** - This is the number of payloads that failed to route for any reason other than total route identification failure. Excludes reviewed failures. Click on this number to display a list of arrived files they originated from.
 - **Reviewed Failures** - This is the number of payloads that failed to route for any reason other than total route identification failure. Includes only reviewed failures. Click on this number to display a list of arrived files they originated from.
3. Click on **Total in-flight** to see a list of files currently being processed. These are arrived producer files that have not yet moved to a completed state.
 4. Click on an item in the returned list to request the details about a route.
 5. To view details, close the **Activity Snapshot** window.

Resolve Problems

Monitor the file activity routinely to check for failed transfers.

To resolve problems with file transfers:

1. From the main menu, select **Tools > Activity Snapshot**, and check for **New Failures**.
2. Click on the number in the **New Failures** column to see a list for the most recent hour, day, or week displayed in the main window. Close the **Activity Snapshot** window to view the list.
3. Click on an item in the returned list to see the details.
4. Verify that all business processes involved in processing and transferring the files completed successfully.
5. Correct the conditions that caused the failure. For example, if there was an FTP failure due to an incorrect password, update the Partner's FTP configuration with the correct password.
6. To replay the failed transfer, right-click in the row of the arrived file and select **Replay this Arrived File**.
7. Mark the activity as **Reviewed** to move it to the **Reviewed Failures** list. Right-click and select **Mark as Reviewed**, or click in the checkbox in the Reviewed column. You can remove the check mark by clicking again, or by right-clicking and selecting **Mark as Not Reviewed**. This field is useful for Operators to track their monitoring of file activity and resolving problems.
8. Check for files in Routing State for extended periods of time, in cases that do not show in **New Failures** or in **Successfully Routed**. Below the **Activity Snapshot**, click the **Total in-flight** link.
9. Close the **Activity Snapshot**.
10. Review the list for any files that may have stalled. Click in a row to view the related events.
11. If there is a halted or failed business process, manually restart the business process to resume the transfer.

Search for a File

The **Basic Search** page enables you to search for a file based on criteria you select. The **Advanced Search** page provides more options for criteria.

You can specify more criteria to narrow your results, or fewer criteria to widen your results. For any field, leave blank to select all values.

1. On the **Search Criteria** tab, enter the basic search criteria. This page is useful for finding files in major categories. To search for more-specific files, select **Advanced Search**. All of the criteria on the Basic Search page are also available on the Advanced Search page, along with many more criteria.
2. For **Producer**, select from the list or type the producer name. Leave this field blank to search for files from all producers.
3. For **Consumer**, select from the list or type the consumer name. Leave this field blank to search for files from all consumers.
4. For **Status**, select from:
 - Started - includes Started, Determining Routes, and Routing
 - Succeeded - includes Routed
 - Failed - includes Failed

Leave blank to search for files with any status.

5. For **Protocol**, select from:
 - FTP
 - SFTP
 - Connect:Direct

Leave blank to search for files using any protocol.

6. For **Original File Name**, type the full or partial name of the file the producer sent. This field is case-insensitive. File names containing the string will be matched in the search. Leave this field blank to search for all file names.
7. Click **Find** to initiate the search. The Search Results tab opens and the Arrived File pane is displayed with results matching all of your criteria. A maximum of 1000 files is displayed. The following information is provided for each arrived file:
 - Reviewed
 - Status
 - Producer
 - File Name
 - Discovery Time
8. If more than 1000 files match your criteria, a message is displayed indicating that you have more than 1000 matches and need to narrow your search. The first 1000 files are displayed.
9. Sort the results by clicking on any column header. Click again to change from descending order to ascending order. The default sort is by **Discovery Time**, in descending order.
10. To search for a file with more specific criteria, click on **Advanced Search**.
11. Select criteria in the Arrived File section from the following fields:

Field	Description
Producer	The partner who creates and sends files. Select from the list. Type the producer name to obtain unpurged data for producers who have been deleted. Leave blank to search for files from all producers.
Producer Code	The code for the producer. Select from the list. Type the producer code to obtain unpurged data for producers who have been deleted. Leave blank to search for files from all producers.
Producer Group	The group the producer is a member of. Select from the list. Type the producer group to obtain unpurged data for groups that have been deleted. Leave blank to search for files from all groups.
IP Address	The host IP address of the producer.
User	User ID of the protocol authentication.
Protocol	Select from: <ul style="list-style-type: none"> ○ FTP

Field	Description
	<ul style="list-style-type: none"> ○ SFTP ○ Connect:Direct
Original File Name	Full or partial name of the file the producer sent. This field is case-insensitive.
File Size (Min) (kilobytes)	Smallest file size to search for.
File Size (Max) (kilobytes)	Largest file size to search for.
Status	Select from: <ul style="list-style-type: none"> ○ Started- includes Started, Determining Routes, and Routing ○ Succeeded- includes Routed ○ Failed- includes Failed This is the status of the Arrived File.
Reviewed	Select to: <ul style="list-style-type: none"> ○ Show both reviewed and unreviewed arrived files. ○ Show only unreviewed arrived files. ○ Show only reviewed arrived files. Note: Use these options to manage your review process of file transfers.
Message ID	The numeric message ID of the arrived file.
Mailbox Path	Full or partial name for the mailbox directory path of the arrived file. This field is case-insensitive.
Dataflow ID	The numeric dataflow ID for the file.
Date (From)	Click on the calendar icon to select the date to begin the search.
Date (To)	Click on the calendar icon to select the date to end the search.
Time (From)	The arrival hour, in 24-hour format, to begin the search.
Time (To)	The arrival hour, in 24-hour format, to end the search.

12. Select criteria in the Route section from the following fields:

Field	Description
Consumer	The partner who receives files directly or in a mailbox. Select from the list. Type the consumer name to obtain unpurged data for consumers who have been deleted. Leave blank to search for files from all consumers.
Consumer Code	The code for the consumer. Select from the list. Type the consumer code to obtain unpurged data for consumers who have been deleted. Leave blank to search for files from all consumers.
Consumer Group	The group the consumer is a member of. Select from the list. Type the consumer group to obtain unpurged data for groups that have been deleted. Leave blank to search for files from all groups.
Template Name	Routing Channel Template applied to the file transfer. Note: Finds files that successfully routed based on the template.
Facts	Select from: <ul style="list-style-type: none"> ○ ConsumerCode ○ ConsumerFilename ○ ConsumerName ○ ConsumerPgpExtension ○ ProducerCode ○ ProducerFilename ○ ProducerName Note: The list will also include any custom facts defined by the Integration Architect, with a prefix of "my".
Fact Value	Value for the fact selected above. Required when Fact is selected. This field is case-insensitive.
Status	Select from: <ul style="list-style-type: none"> ○ Started - includes Started, Determining Delivery, and Delivering ○ Succeeded - includes Complete ○ Failed - includes Failed This is the status of the Route.

13. Select criteria in the Delivery section from the following fields:

Field	Description
IP Address	Host IP address for the delivered file. Do not use with In Mailbox specified as the protocol.

Field	Description
User	User ID of the protocol authentication. Do not use with In Mailbox specified as the protocol.
Protocol	Delivered file protocol. Select from: <ul style="list-style-type: none"> ○ FTP ○ Inbound FTP ○ Outbound FTP ○ SFTP ○ Inbound SFTP ○ Outbound SFTP ○ Connect:Direct ○ Inbound Connect:Direct ○ Outbound Connect:Direct ○ In Mailbox (for files that have not been retrieved)
Delivered File Status	Select from: <ul style="list-style-type: none"> ○ Started - includes Transforming, Delivering, and Redelivery ○ Succeeded - includes Complete ○ Failed - includes Failed <p>This is the status of the delivered file.</p>
Delivered File Name	Full or partial name of the delivered file. This field is case-insensitive.
File Size (Min) (kilobytes)	Smallest file size to search for.
File Size (Max) (kilobytes)	Largest file size to search for.
Message ID	The numeric message ID of the delivered file.
Mailbox Path	Full or partial name for the mailbox directory path of the delivered file. This field is case-insensitive.
Date (From)	Click on the calendar icon to select the date to begin the search.
Date (To)	Click on the calendar icon to select the date to end the search.
Time (From)	The delivery hour, in 24-hour format, to begin the search.
Time (To)	The delivery hour, in 24-hour format, to end the search.

Note: Searches using the characters `_` and `%` (underscore and percent) may produce more results than expected, because these characters are interpreted as wildcards. Specify more characters to narrow your search, or visually search for the matches within the returned results.

View Route Information

The Search Results tab provides the Arrived Files that meet the criteria specified for your search.

To view the detailed route information:

1. Sort the results by clicking on the header of any column. Click again to change from ascending to descending order.
2. Under Arrived Files, click in the row of the file you are interested in. Arrived file events are displayed in the right pane, with the time and description. Select the hyperlinks within the description to view more information about any event. Error events are displayed in red.
3. Click in the row of an event you are interested in to get details about the event.
4. To view routing channel template details, select the routing channel, right-click, select View associated template.
5. Sort the results by clicking on the header of any column. Click again to change from ascending to descending order.

Mark Activity as Reviewed

On the search results page, Operators can use the Reviewed checkbox to track when arrived files are reviewed.

To mark activity as reviewed:

1. On the Search Results page for Arrived Files, right-click in the Reviewed checkbox on the row of the file you want to mark as reviewed and select Mark as reviewed. Shift-click to select multiple files to mark at once.
2. To remove the reviewed check mark, right-click again and select Mark as not reviewed.

Activity History for Deleted Objects

After a partner, group, routing channel, or routing channel template is deleted, you can still access the history of the activities, if the activity has not been purged.

To view the history, type the value for the deleted object in the appropriate search field and click Find. Results displayed include activity for the deleted partner.

Generate Reports

Several standard reports are defined in Sterling File Gateway.

To generate reports:

1. From the main menu, select Tools > Reports.
2. Select the information you would like the report to contain. Leave any field blank to select all possible values. Options are:

Field	Description
Producer	Select a producer for the arrived files to report on. Do not use if Producer Group is specified.
Producer Group	Select a producer group for the arrived files to report on. Do not use if Producer is specified.
Consumer	Select a consumer for the arrived files to report on. Do not use if Consumer Group is specified.
Consumer Group	Select a consumer group for the arrived files to report on. Do not use if Consumer is specified.
Status	Select from: <ul style="list-style-type: none"> ○ Started - includes Determining Delivery and Delivering ○ Succeeded - includes Complete ○ Failed - includes Failed
Date (From)	Click on the calendar icon to select a starting date.
Date (To)	Click on the calendar icon to select an ending date.
Time (From)	Specify a time in the format hh:mm:ss. Note: Query in server time. Report results will be in server time, regardless of the header label.
Time (To)	Specify a time in the format hh:mm:ss. Note: Query in server time. Report results will be in server time, regardless of the header label.
Group By	Select from: <ul style="list-style-type: none"> ○ Producer ○ Consumer

Field	Description
Format	Select from: <ul style="list-style-type: none"> ○ HTML ○ PDF ○ XLS
Report Type	Select from: <ul style="list-style-type: none"> ○ Detailed - includes a Producer ID (assigned by the system), Consumer, Discovery Time, Completion Time, Status, Original File Name, and File Size ○ Summary - includes Total File Size and Total Count by Success, Error, In Progress, and Failure Reviewed <p>Note: Error count is the number in Failed status that have not been reviewed.</p>
Sort By	Select from: <ul style="list-style-type: none"> ○ Status ○ File Name ○ File Size

3. Select Generate Report. Depending on your selections, the report has the following contents:

Field	Definition
Created On	Date and time report was requested
Created By	User ID that requested the report
Group By	How the data is grouped
Report Config	Selections made for report
Filters	How the data is ordered
Producer ID	ID assigned by the system for the producer that created and sent the file
Consumer	Partner that received the file
Discovery Time	Time file first entered system, in the server time zone, regardless of the header label
Completion Time	Time file transfer was completed, in the server time zone,

Field	Definition
	regardless of the header label
Status	Status when report was generated
Original File Name	Name given to the file by the producer
File Size	Size of the transferred file
Summary <ul style="list-style-type: none"> ○ Producer ○ Total File Size ○ Total Count ○ Success ○ Error ○ In Progress ○ Failure ○ Reviewed 	<p>For each producer, the total file size transferred in the report period, total count of files transferred in the report period, and a count for each status category.</p> <p>Note: Error count is the number in Failed status that have not been reviewed.</p>

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

Event Code	Name	Description
		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 redelivering the consumer file to the consumer
FG_0501	ProducerMailboxRouteCandidatesFound	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

Event Code	Name	Description
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
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

Event Code	Name	Description
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

Event Code	Name	Description	Notifies Producer, Consumer, or Both
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
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
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

Parameter	Description	Example
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: 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

Subscribe to Notifications

Subscribe to notifications to receive email about Sterling File Gateway activity.

You can subscribe to certain events in Sterling File Gateway. When you subscribe to an event, a notification is emailed to you whenever that event occurs, if you have permission on the event. Event permissions are managed by the System Administrator. Your user account must be configured with a valid email address to receive notifications. To subscribe to events:

1. From the main menu, select Profile.
2. Select the Notifications tab.
3. Drag an event from the left pane to the right pane to enable notifications.

When an event that has been subscribed to occurs, an email notification is sent to the email address in your user account.

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**.

Replay Routes

Replay from the Beginning of a Transfer

Replay a successful or a failed route to have the file transferred again from the beginning.

To replay a route:

1. From the Search page, enter criteria for the file to replay.
2. Click **Find** to initiate the search.
3. On the Search Results page, right-click next to the file you want to replay.

Note: 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. You cannot replay messages that have been purged.

4. You can enter a new name to rename the file for the replay. Do not use the following characters: !%*?<>"^|:.
5. You can add a comment about the replay. Up to 255 characters are allowed for the comment. The selected file is replayed and added to the list of arrived files, with a special icon to indicate it is a replay. You can replay a route any number of times.
6. When you replay a route, the reviewed box is automatically checked. Right-click and select **Mark as Not Reviewed** to remove the check.

Redeliver a Processed File

Redeliver a successful or a failed route to have the processed file delivered again.

Only files that have had a previous delivery attempt, successful or failed, can be redelivered.

1. From the Search page, enter criteria for the file to redeliver.
2. Click **Find** to initiate the search.

Note: 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. You cannot redeliver messages that have been purged.

3. Select the file, select the **Route** tab, and select the route.
4. On the **Delivery** tab, right-click on the delivery and select **Redeliver this Arrived File**.
5. You can add a comment about the redelivery. Up to 255 characters are allowed for the comment. The selected file is redelivered. Information about the redelivery is added to the delivery details of the original delivery. You can redeliver a route any number of times.

Note: The redeliveries create additional events for the original delivery, and do not display as separate routes in the search results page.

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The JBoss Software was modified slightly in order to allow the ClientSocketFactory to return a socket connected to a particular host in order to control the host interfaces, regardless of whether the ClientSocket Factory specified was custom or not. Changes were made to org.jnp.server.Main. Details concerning this change can be found at http://sourceforge.net/tracker/?func=detail&aid=1008902&group_id=22866&atid=376687.

Source code for the modifications completed by Sterling Commerce on August 13, 2004 is located at:

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