Sterling File Gateway

IBM

Build 5009 Updates

Version 2.0

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Contents

iii

Chapter 1. What's New in Build 5009

The following enhancements are included in this release:

Support Tool Available in Sterling Integrator

A tool used to check Sterling File Gateway databases has been added to Sterling Integrator and is described in the Sterling Integrator bin directory documentation. The tool is called sfgdbcheck.

WARNING: Do not run sfgdbcheck without direction or assistance from IBM Support.

Resource Tags Used in Migration

In 2.0, if there was a Resource Tag on the target system with the same name as the Resource Tag on the source system, you had to rename the target system Resource Tag before you migrated the source system Resource Tag. This led to multiple Resource Tags that each held a portion of the Sterling File Gateway resources. With the 5009 build the import process merges Resource Tags on the target system so that resources are not split.

Adding Custom Tabs to *myFileGateway*

The procedure for creating new tabs for additional functionality in myFileGateway has been modified. Sample assets are now included in the installation. These assets can be used as the basis to create custom tabs, for example, a custom Welcome Tab.

New Property in filegateway.properties

Property	Description
extensionBPStatusIndicatorElement= *IgnoreThisFault*	Use in conjunction with custom business processes that extend the capabilities of Sterling File Gateway, to override its default behavior when such a business process fails. Normally, a custom business process that encounters a fault causes processing of the associated file to fail. If extensionBPStatusIndicatorElement is set to *IgnoreThisFault* and the custom business process has created an element named *IgnoreThisFault* with value "true", Sterling File Gateway will disregard the fault and attempt to continue processing the arrived file or route. The value *IgnoreThisFault* is suggested for the element name value, but the value can be any string that is a legal element name in XML. By default, this property is not included in filegateway.properties.. Use the following assignment in the custom business process to set the value of the Process Data element: `<assign name="Assign" to="IgnoreThisFault">true</assign>` See *Handling Errors in Custom Business Processes* for how to implement.

Documentation Enhancements
- *Set Up HTTPS for Use with myFileGateway* - Clarification that Sterling File Gateway cannot be deployed on an HTTP adapter.

- *Adding Custom Protocols* - clarification of restriction on editing business process names after implementing custom protocols, more details about the "select" element
- New topic - *Handling Errors in Custom Business Processes* - explanation of new property and how to implement it
- The documentation for using Export and Import to migrate from one version or patch to another has been expanded in the 2.0 documentation. The expanded documentation includes guidelines, requirements, and settings for the major steps in the migration process:
  1. Migrating Sterling Integrator Managed Resources
  2. Migrating Custom Protocols
  3. Migrating a Sterling File Gateway Community
  4. Migrating Sterling File Gateway Configurations

Chapter 2. System Administrators

Adding Custom Tabs to *myFileGateway*

System Administrators can create new tabs for additional functionality in *myFileGateway*. This sample is a starting point for the creation of your own custom tabs. Do not make your changes directly in the <install>/samples directory, as these may be overwritten in a future patch. Instead, you may maintain the WAR file in a directory entirely separate from the <install> directory, as long as the HTTP Server Adapter is configured to find it.

About this task

With this change, every HTTP Server Adapter that hosts myfilegateway.war also must host sampletab.war. In particular, visiting http://<host>:<baseport>/myfilegateway will fail unless sampletab.war is copied to <install>/noapp/deploy. If this condition has not been met, a request to /myfilegateway will fail to load the login page. Use the browser to visit http://<host>:<baseport>/sampletab/welcomepage.js and verify that the content of that file is shown.

One example of a custom tab you can add to *myFileGateway* is a Welcome Tab, which is supplied as a sample in the install. When creating a custom permission like the one in this example, make sure its "Permission Type" is "File Gateway". You can use these assets, which ship with the sample, as the basis for your own implementation:

- <install>/samples/filegateway/sample_myfg_tab/sampletab.war
- <install>/samples/filegateway/sample_myfg_tab/sampletab_imports.xml.in

To create a new Welcome Tab in *myFileGateway*:

Procedure

1. Modify the <install>/properties/customer_overrides.properties and add this line:

   ```
   filegateway_ui.myfilegateway.extension_js_file_1=/sampletab/welcomepage.js
   ```

2. Create a permission named "Custom myFileGateway Sample Tab" with the ID "CUSTOM_MYFG_WELCOME" and an HTTP Server Adapter instance named "myFileGatewayWithSampleTab" by selecting **Tools** > **B2B Console** > **Deployment** > **Resources Manager** > **Import/Export** and importing the file:

   ```
   <install_dir>/samples/filegateway/sample_myfg_tab/sampletab_imports.xml
   ```

   The password for the import file is "password" without the quotes. Import all three assets within the import file.

3. Modify the HTTP Server Adapter Instance by selecting **Tools** > **B2B Console** > **Services Configuration** and finding the HTTP Server Adapter that you created in the previous step. Make these modifications:

   a. On the first page, set the Group to None.

   b. On the second page, change the port to one that does not conflict with another port on the instance.

   c. Enable the adapter instance by clicking the "Enable Service for Business Processes" box on the confirmation page.

4. Select **Tools** > **B2B Console** > **Accounts** > **Groups** and verify that the "File Gateway Partner Users" group includes the permission named "Custom myFileGateway Sample Tab". Custom permissions relating to the custom tabs must be of the "File Gateway" type.

5. Restart the server:
   a. <install_dir>/bin/hardstop.sh
   b. <install_dir>/bin/run.sh

6. Login to *myFileGateway* using the port specified in Step 3 to verify that the new tab named "Custom Welcome Page" is visible. The custom tab web application may need to know the name of the user that is logged into *myFileGateway*. You can determine this by retrieving the HTTP Session attributes "dlssoAuthenticated" and "autho". If the visitor to the custom tab web application authenticated to *myFileGateway*, the value of the "dlssoAuthenticated" attribute will be the string "true" and the value of the "autho" attribute will be the name of the logged in user as a string.

filegateway.properties (Build 5009 and Later)

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

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

Important: 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.pgpCmdline2svcname=CUSTOM
```

substituting CUSTOM with the name of your Command Line 2 adapter. See *Using Property Files* in the Sterling B2B Integrator 5.0 online library.

Property	Description
ignoreFilename*x*	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. Specify one or more file name patterns to ignore in the following format: • filegateway.ignoreFilename1=<regex expression> • filegateway.ignoreFilename2=<regex expression> • filegateway.ignoreFilename3=<regex expression> • filegateway.ignoreFilenamex=<regex expression> For example: `filegateway.ignoreFilename1=.+[.]tmp$` would have the effect of ignoring all files with an extension of .tmp. **Note:** The regex pattern must match the file name in its entirety. Partial matches are not recognized.

Property	Description
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 time. The second set will activate for longer-running processes and will consume less processor time.
	
	First probe 120 times with 100 Milliseconds between, for a total of 12 seconds. Default is:
	
	`bpCompletionProbes.1=120`
	`and bpCompletionSleepMsec.1=100`
	
	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`

pgpCmdline2svcname	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`
fgRoutePGPCmdLineSocketTimeout	Timeout value, in milliseconds, for PGP package and unpackage operations invoked by Sterling File Gateway. Default value is 240000 milliseconds (4 minutes)
required_si_build_ver	The build number (version) of Sterling B2B Integrator that Sterling File Gateway requires. This is checked at system start up. If the current version of Sterling B2B Integrator does not equal the required_si_build_ver, a warning is issued and the system is shut down. Required. Do not change or override this property.
fgmaxBroadcastListSize	Maximum allowed size of the consumer list used for broadcast. If the returned list of consumers exceeds this size, the file is not routed. By default, the maximum size of a broadcast list is set to 100.
grantIntermediateMailboxPermissions	Controls permissions granted to intermediate mailboxes (those between a partner user's virtual root and the leaf mailbox). These mailboxes are created during routing channel creation or dynamic routing. Setting this property to true grants View & Execute rights to the intermediate mailboxes to eligible partner users. View rights are required to list mailbox contents. Execute rights are required to 'log in' to a mailbox. Setting both rights allows users of the FTP and SFTP protocol adapters to traverse through any intermediate mailboxes to reach the leaf. The default is false. For example: grantIntermediateMailboxPermissions=false

Property	Description
extensionBPStatusIndicatorElement= *IgnoreThisFault*	Use in conjunction with custom business processes that extend the capabilities of Sterling File Gateway, to override its default behavior when such a business process fails. Normally, a custom business process that encounters a fault causes processing of the associated file to fail. If extensionBPStatusIndicatorElement is set to *IgnoreThisFault* and the custom business process has created an element named *IgnoreThisFault* with value "true", Sterling File Gateway will disregard the fault and attempt to continue processing the arrived file or route. The value *IgnoreThisFault* is suggested for the element name value, but the value can be any string that is a legal element name in XML. By default, this property is not included in filegateway.properties.. Use the following assignment in the custom business process to set the value of the Process Data element: `<assign name="Assign" to="IgnoreThisFault">true</assign>` See *Handling Errors in Custom Business Processes* for how to implement.

Setting Up HTTPS for myFileGateway

About this task

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 data management zone (DMZ), an HTTP Server adapter must be configured that uses a remote perimeter server.

After a Perimeter Server has been configured in Sterling B2B Integrator, its name is available to the HTTP Server adapter configuration, in the Perimeter Server Name list on the HTTP Connection Properties page.

Restriction: You cannot deploy Sterling File Gateway on an HTTP server adapter. Only myFileGateway can be installed on an HTTP server adapter.

To configure *myFileGateway* to run in the DMZ:

Procedure

1. Set up a perimeter server in the DMZ.
2. Configure a new Perimeter Server in Sterling B2B 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 B2B 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 depend upon the HTTP Server Adapter to initiate business processes.

j. For **Document Storage** and **User Authentication Required**, you can accept the default or change to match your system. If **User Authentication Required** is chosen, the user will have to login twice, once entering their username and password in a pop up browser dialog and a second time through the standard myFileGateway login page.

k. For **Use SSL**, select **Must** to implement stronger security. Click **Next**. See *Implementing SSL in the* Sterling B2B Integrator 5.0 online library for more information about settings for the SSL Settings page. Click **Next**.

l. On the Services Configuration page, click **add**, type the URI /myfilegateway. To accomplish multiple different custom versions of myFileGateway, specify URI names that match their skin names ("/department1", "/department2", and so forth), all linked to myfilegateway.war.

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.

What to do next

If you have many concurrent users, you may find some degradation of performance. All HTTP server adapters in your Sterling B2B Integrator installation share the setting for maximum number of threads that they will consume. To increase the maximum number of threads running at the same time, edit customer_overrides.properties to modify the following property:

```
http.numOfmaxThread=X
```

where X is the number of threads. The default value is 10. If your users experience slow response when many concurrent connections have been made to the same port, increase this value to 50. Continue tuning this value until the system response is acceptable for the number of concurrent connections that must be supported. Setting this value too high could be detrimental to system stability when too many concurrent connections are made.

Adding Custom Protocols

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

About this task

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.

Procedure

1. Write a business process that implements the custom protocol. The business process name must be unique for each custom protocol. Do not use an underscore character (_) in the name of the business process.
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`. For the Element "AFTExtensions", the following attribute is required:

   • bp - The business process created in step 1 that implements the custom protocol

   Important: The value for bp cannot be edited after it is set. Sterling File Gateway does not read the AFTExtensionsCustomer.xml file at run time to obtain a new value. Do not edit the value of the bp attribute. Create a new protocol with a different name if you must use a different business process.

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` The user interface elements to describe the protocol are specified in the htmlType parameter. Valid values are:

   - text

   - password

   - select - When "select" is chosen for htmlType, the UI presents a list whose contents are derived from an "options" class. An example of an "options" class list is in the AFTExtensions.xml file (the text starts with "<OPTION name="SSHRemoteProfiles" class="

5. Copy the AFTExtensionsCustomer.properties file to: `<install_dir>/container/Applications/aft/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.

Handling Errors in Custom Business Processes (Build 5009 and Later)

When using custom business processes to extend the capabilities of Sterling File Gateway, you can override the default error handling.

About this task

Sterling File Gateway uses custom business processes in the following scenarios:
- Dynamic consumer identification - a custom business process identifies the consumer in each file transfer
- Custom layers - a custom business process defines how to handle a custom layer
- Delivery protocols - a custom business process implements the delivery of a file to a listening consumer

For consumer identification, the business process returns the name of the consumer in a Process Data element. If the business process does not return a valid value for the consumer name, the route will fail and the solution presented in this procedure cannot override the failure.

Normally, for custom layers and delivery protocols, a custom business process that encounters a fault causes processing of the associated file to fail. If filegateway.extensionBPStatusIndicatorElement is set to *IgnoreThisFault* and the custom business process has created an element named *IgnoreThisFault* with value "true", Sterling File Gateway will disregard the fault and attempt to continue processing the arrived file or route. To set this property:

Procedure

1. Stop Sterling File Gateway.
2. In the <install_dir>/properties directory, locate customer_overrides.properties.

   Important: Do not edit the filegateway.properties file. Make all changes in the customer_overrides.properties file.
3. In a text editor, open customer_overrides.properties.
4. Add the following lines:

   ```
   filegateway.extensionBPStatusIndicatorElement=extensionBPStatusIndicatorElement
   ```

   IgnoreThisFault is a suggested value for extensionBPStatusIndicatorElement, but the value can be any string that is a legal element name in XML.
5. Save the customer_overrides.properties file with the same name in the same location.
6. Restart Sterling File Gateway.
7. Use the following assignment in the custom business process to set the value of the Process Data element:

   ```
   <onFault> : <assign name="Assign" to="extensionBPStatusIndicatorElement">true<
   /assign> :  <onFault>
   ```

   The value of the property should match with the value of business process tied with the Dynamic Channel. The applicable values from the business process side for this property is true and false. All other values, including incorrect match of business process element with property name, default to false behavior.
8. All Sterling File Gateway custom business processes that raise faults that must be disregarded must be edited to set filegateway.extensionBPStatusIndicatorElement=IgnoreThisFault (or whatever the property value actually is) to true in the appropriate condition. If you want a business process to disregard some faults and for other faults to terminate the route; set this element when the fault must be disregarded.

Results

If the custom business process encounters a fault, Sterling File Gateway does not immediately terminate processing the file but attempts to continue as if the business process had not encountered a fault.

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