Sterling File Gateway for SWIFTNet



Migration Guide

Version 1.0

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Note

Before using this information and the product it supports, read the information in "Notices" on page 31.

This edition applies to version 1.0 of IBM Sterling File Gateway for SWIFTNet and to all subsequent releases and modifications until otherwise indicated in new editions.

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Chapter 1. End of Support

The End of Service date for IBM[®] Sterling Connect:Direct[®] for SWIFTNet for Microsoft Windows and Sterling Connect:Direct for SWIFTNet for UNIX is December 31, 2012. After this date, Sterling Connect:Direct for SWIFTNet will no longer be supported by IBM .

For each production license of Sterling Connect:Direct for SWIFTNet you own, you are entitled to one production license of IBM Sterling File Gateway for SWIFTNet. Sterling File Gateway for SWIFTNet is a feature-restricted, limited-use edition of Sterling File Gateway Financial Edition which is built on IBM Sterling B2B Integrator.

If you are already using Sterling B2B Integrator, you can use it instead of Sterling File Gateway for SWIFTNet.

You have two choices:

- Migrate to Sterling File Gateway for SWIFTNet by the End of Service date.
- Continue using Sterling Connect:Direct for SWIFTNet beyond the End of Service date without continued IBM Support.

Overview

This document is available to help you migrate from Sterling Connect:Direct for SWIFTNet to a Sterling File Gateway for SWIFTNet implementation.

Sterling File Gateway for SWIFTNet supports the use of Society for Worldwide Interbank Financial Telecommunications (SWIFT), a standard for the financial industry from SWIFT[™] that uses the SWIFTNet transport protocol to enable real-time and store-and-forward financial messaging through the FileAct file protocol.

Sterling File Gateway for SWIFTNet, using the SWIFTNet7 Adapter, provides the same functionality as Sterling Connect:Direct for SWIFTNet plus support for the latest SWIFTNet functions which include FileAct Third Party Copy (T and Y Copy) and RMA. Sterling File Gateway for SWIFTNet uses the following Sterling B2B Integrator adapters and components to support SWIFTNet data exchange:

- SWIFTNet Server Adapter
- Sterling Connect:Direct Server Adapter
- File System Adapter
- HTTP Client Adapter
- HTTP Server Adapter
- Command Line Adapter 2
- Mailbox
- Graphical Process Monitor

System Requirements

The following are system requirements to install and run Sterling File Gateway for SWIFTNet:

- Sterling B2B Integrator version 5.2 or later. See *System Requirements* in the Sterling B2B Integrator documentation for more information about installation requirements.
- Sterling B2B Integrator Standards Library 8.0.1 or above.
- SWIFTNet Version 7.x and above

Using SWIFTNet with Sterling B2B Integrator

To use SWIFTNet with the Sterling B2B Integrator, complete the following tasks:

Procedure

- 1. Install Sterling B2B Integrator. See *Sterling B2B Integrator 5.2 Installation and Upgrade* in the Sterling B2B Integrator documentation.
- 2. Install the SWIFTNet Server 7.0 on a machine running either the Oracle Solaris 9 or 10, Windows[®] Server 2008 R2 (Standard or Enterprise Edition), or AIX[®] 6.1 (TL4 SP3 or TL6 SP2) operating system. Follow the Sterling B2B Integrator documentation to install the SWIFTNet Server. The SWIFTNet Server must be installed on the same system as Sterling B2B Integrator, or both the SWIFTNet Server and the Sterling B2B Integrator must be able to access a shared drive. See *SWIFTNet Server Installation* in the Sterling B2B Integrator documentation library.
- 3. Configure the SWIFTNet7 Adapter and SWIFTNet Adapter Scheduler on Sterling B2B Integrator. The SWIFTNet7 Adapter configuration is similar to the Sterling Connect:Direct for SWIFTNet configuration. See Configure the SWIFTNet7 Adapter for SWIFTNet 7 and Configuring the SWIFTNet7 Adapter Scheduler for SWIFTNet 7 in the Sterling B2B Integrator documentation. Refer to the Configuration Comparison spreadsheet, ftp://public.dhe.ibm.com/ software/commerce/doc/mft/swift/Configration_Compare.xlsx, to see how Sterling B2B Integrator for SWIFTNet settings compare to the Sterling B2B Integrator SWIFTNet7 Adapter configuration.
- 4. The business processes that are related to the SWIFTNet workflow must have the Document Tracking option enabled when you check in or edit the business process. Additionally, you need to configure other parameters in the SWIFTNetClient or SWIFTNet7Client business process to support SWIFTNet.
- 5. Install and configure a SWIFT Alliance Gateway (SAG) 7.0. See *SAG Configuration* in your Sterling B2B Integrator for SWIFTNet documentation.

Note: You can use your existing SWIFT Alliance Gateway (SAG) for this solution, but you must upgrade to SAG 7.0 to work with the SWIFTNet7 adpter and services.

Prerequisites for Using SWIFTNet

You should be familiar with the SWIFTNet standard and using FileAct. You should also be familiar with the Sterling B2B Integrator, specifically:

- How to check out a business process. See *Checking Out a Process Model in the Sterling B2B Integrator Interface* in the Sterling B2B Integrator documentation.
- How to modify a business process. See *Modifying a Business Process Model Using the Text Editor* in the Sterling B2B Integrator documentation.
- How to check in a business process. See *Checking In a Business Process Model Using the Text Editor* in the Sterling B2B Integrator documentation.
- How to submit and test a business process. See *Testing a Business Process Model in Sterling B2B Integrator* in the Sterling B2B Integrator documentation.

- How to monitor a business process. See *Business Process Monitoring* in the Sterling B2B Integrator documentation.
- How to manage User Accounts. See *User Accounts* in the Sterling B2B Integrator documentation.

Chapter 2. Setup Procedures

Complete the following procedures to configure Sterling B2B Integrator and Sterling Connect:Direct.

- "Definining a User for the Migration Work"
- "Defining a Remote Sterling Connect:Direct Node" on page 6
- "Defining a Business Process for Sterling Connect:Direct Server Adapter RunTask" on page 6
- "Defining Permissions for the Business Processes" on page 7
- "Granting Business Process Permission to the User ID" on page 7
- "Creating and Configuring a Sterling Connect:Direct Server Adapter" on page 8
- "Defining a Mailbox for the User Defined for the Migration Work" on page 9
- "Defining a File System Adapter" on page 10
- "Defining a Lightweight JDBC Adapter" on page 11
- "Defining a DocumentKeywordReplaceService" on page 11

Definining a User for the Migration Work

Complete the following steps to configure a User Account on Sterling B2B Integrator:

- 1. Log in to Sterling B2B Integrator as an administrator.
- 2. Go to Accounts > User Accounts.
- 3. Click Go! to Create new Account.
- 4. For Authentication Type, select Local.
- 5. Select a user ID for User ID.
- 6. Select a password for Login Password.
- 7. Re-enter the password for Confirm Password.
- 8. Select an available policy or make no selection for Policy.
- 9. Leave the **Session Timeout** blank.
- 10. Select Admin UI from the Accessibility drop-down box.
- 11. Do not change the setting for Dashboard Theme.
- 12. Click Next to continue to the SSH Authorized User Key page.
- 13. Click Next to continue to the Groups page.
- 14. Highlight the desired group and click the arrow button to select it.
- 15. Repeat the previous step to select other groups if needed. This solution was tested with the following groups selected: CD Server Proxy Administrator, CD Server Proxy User, and Alert Notifications.
- 16. Click Next to continue to the Permissions page.
- 17. The Admin Web App Permission and MyAccount are selected by default for new users.
- **18**. If you need to select other groups, selecte **Permission** from the **Available** box and click the down arrow to the **Assigned** list.

Note: After you create the business processes and Services definitions, create permissions for each business process and Services definition, edit the User Account, and add these new permissions to the User Account.

- **19**. Click **Next** to continue to the **User Information** page.
- 20. Complete the User Information on this page.
- 21. Click Next.
- 22. On the Confirm page, click Finish to complete the Account definition.

Defining a Remote Sterling Connect:Direct Node

Create a Sterling Connect:Direct node definition for each remote Sterling Connect:Direct node that communicates with the Sterling Connect:Direct Server Adapter. This is only required for nodes you plan to connect to and for nodes that connect to the Sterling Connect:Direct Server Adapter when you have netmap checking enabled.

About this task

Complete the following steps to define a remote Sterling Connect:Direct node on Sterling B2B Integrator:

Procedure

- Define a remote Sterling Connect:Direct node for the Sterling Connect:Direct Server Adapter. See *Configure a Sterling B2B Integrator Netmap Entry* in the *IBM Sterling Connect:Direct Interoperability Guide* - ftp://public.dhe.ibm.com/ software/commerce/doc/mft/cdsa/si_cdsa_user_guide.pdf.
- 2. Create a netmap entry. See *Configure a Sterling B2B Integrator Netmap Entry* in the *IBM Sterling Connect:Direct Interoperability Guide*.
- **3**. Create a Sterling Connect:Direct netmap. See *Configure a Sterling B2B Integrator Netmap Entry* in the *IBM Sterling Connect:Direct Interoperability Guide*.
- 4. Create a Sterling Connect:Direct netmap cross-reference to add remote Sterling Connect:Direct nodes to your configuration. See *Configure a Sterling B2B Integrator Netmap Entry* in the *IBM Sterling Connect:Direct Interoperability Guide*.

Defining a Business Process for Sterling Connect:Direct Server Adapter RunTask

Complete the following steps to define a business process for the Sterling Connect:Direct Server Adapter Run Task on Sterling B2B Integrator:

Procedure

- 1. Go to Business Processes > Manager
- 2. Click Go! to create the business process.
- 3. Enter RunTaskOnCDSAPassingParameters as the Business Process name.
- 4. Click the Business Process Text Editor button and click Next.
- 5. Enter a description like RunTask default BP.
- 6. Copy and paste the **RunTaskOnCDSAPassingParameters.bp** business process into the **Business Process** window.

Note: You can download the business processes for this solution at ftp://public.dhe.ibm.com/software/commerce/doc/mft/swift/ SwiftMigrationBusinessProcesses.zip.

- 7. Click Validate.
- 8. If the business process is valid, the following message is displayed: Process is valid. Click next to continue.
- **9**. If you receive an error message, correct the business process and validate it again.
- 10. Click Next to go to the next page.
- 11. On the **Process Levels** page, set the **Set Queue** to a high value to meet your SWIFT operation needs. See *Checking In a Business Process Model Using the Text Editor*.
- 12. Accept the default values for the other fields on this page.
- 13. Click Next.
- 14. On the **Deadline Settings** page, click **Next**.
- 15. On the Life Span page, Click Next.
- 16. Click **Finish** to save the business process.

Defining Permissions for the Business Processes

You must define permissions for all business processes and services created for this migration and grant users the permissions that you define.

About this task

Complete the following steps to define a permission for your business process on Sterling B2B Integrator:

Procedure

- 1. Go to Accounts > Permissions
- 2. Select Go! to Create a new Permission.
- 3. Enter a **Permission ID**. It can be the same as the **Business Process name**.
- 4. Enter a Permission Name. It can be the same as the Business Process name.
- 5. Enter a **Permission Type**. Select **BP** from the drop down box.
- 6. Click Next.
- 7. Click **Finish** to save the permission definition.

Granting Business Process Permission to the User ID

Complete the following steps to give the User ID Permission to run your business process on Sterling B2B Integrator:

- 1. Go to Accounts > User Accounts.
- 2. Enter the User Account name (User Id) in the Account Name text box in Search.
- 3. Select Go! next to Account Name in Search.
- 4. Click Edit for the selected account.
- 5. Do not make any changes on the User ID page.
- 6. Click Next.
- 7. Do not make any changes on the SSH Authorized User Key page.
- 8. Click Next.

- 9. Do not make any changes on the Groups page.
- 10. Click Next.
- 11. On the **Permissions** page, you can narrow your selection by **Filter By Type**: Select **BP** from the drop down box.
- 12. Click the filter sign next to the **By Type** box.
- 13. Select the permission by highlighting RunTaskOnCDSAPassingParameters.
- 14. Click the down arrow for the Assigned box.
- 15. Click Save.
- 16. Click Finish.

Creating and Configuring a Sterling Connect:Direct Server Adapter

The Sterling Connect:Direct Server Adapter is a component of Sterling B2B Integrator. The adapter provides connectivity to other Sterling Connect:Direct nodes. The Sterling Connect:Direct Server Adapter and SWIFTNet7 Adapter work together to provide the same functionality as Sterling Connect:Direct for SWIFTNet.

About this task

Complete the following steps to create the Sterling Connect:Direct Server Adapter on Sterling B2B Integrator. The adapter will act as the local Sterling Connect:Direct node.

- 1. Go to **Deployment** > **Services** > **Configuration**.
- 2. Select Go! to create a New Service.
- 3. Click the Tree view for the Service Type: text box to display the list of services.
- 4. Click All Services to display all services.
- 5. Highlight Sterling Connect:Direct Server Adapter and click Save.
- 6. Enter the following information:
 - a. Name: System name (use the local node name).
 - b. Description: Service description.
 - c. Select a group: Select None.
 - d. Click Next.
 - e. Sterling Connect:Direct Node Name: use the same local node name.
 - f. Sterling Connect:Direct Perimeter Service Option: selecte node 1 & local no perimeter service.
 - g. Sterling Connect:Direct Server port: Port number for remote node connection.
 - h. Firewall Ports: if needed, configure your firewall ports. See Configure a Sterling Connect:Direct Server Adapter in the IBM Sterling Connect:Direct Interoperability Guide - ftp://public.dhe.ibm.com/software/commerce/doc/ mft/cdsa/si_cdsa_user_guide.pdf.
 - i. **Max locally initiated (pnode) sessions allowed**: Number of concurrent pnode sessions needed.
 - j. Max remotely initiated (snode) sessions allowed: Number of concurrent snode sessions needed.
 - k. Document Storage: For this example, choose File System. Do not choose Database or System Default.

- I. Netmap Check: Select one of the three netmap check options.
- m. Buffer-size for Copy: Select a value from the drop down box.
- Number of short-term session retry attempts: Enter short term retry attempts needed.
- **o. Interval between short-term session retry attempts (seconds)**: Enter interval in seconds.
- **p.** Number of long-term session retry attempts: Enter long term retry attempts needed.
- **q. Interval between long-term session retry attempts (minutess)**: Enter interval in minutes.
- r. Retry Remote File Allocation Errors: Select enable or disable retry.
- s. Max Session Establishment Timeout value in Seconds: Enter timeout value.
- t. Max Socket Read Timeout value in Seconds: Enter read timeout value.
- u. Server Start Option: Select Warm or Cold.
- v. Click Next.
- w. RunTask Business Process Name: Select RunTaskOnCDSAPassingParameters (defined previously) from the drop down box.
- x. **RunJob Business Process Name**: Leave value as [**Not Applicable**] for the migration.
- y. Max Run Task Forwarding Timeout value in Seconds: Enter a value that is larger than the time expected for a SWIFT transfer to complete. This example uses 1500 seconds (25 minutes).
- z. Max Run Job Forwarding Timeout value in Seconds: leave this blank. This solution does not use the Run Job.
- aa. Click Next.
- ab. Extractability: Not applicable for the migration.
- ac. Click Next.
- ad. Encryption using Secure+ : Select Disabled or Enabled disable or enable encryption.
- ae. Enable Netmap Node Override: Select Yes or No to enable or disable node override.
- af. Click Next.
- ag. Sterling Connect:Direct Netmap Name: Select the netmap defined earlier from the drop down box.
- 7. Click Next.
- 8. Click **Finish** to save the definition.

Defining a Mailbox for the User Defined for the Migration Work

Complete the following steps to create the mailbox on Sterling B2B Integrator. The source file and the SWIFT parameters file from the Sterling Connect:Direct Pnode are transfered to this mailbox.

- 1. Go to **Deployment** > **Mailbox** > **Configuration**.
- 2. Select Go! to Create a new Mailbox.

- **3**. Highlight the **Parent Mailbox** from the **Select** box. This example uses the "/" root and parent.
- 4. Enter the following information:
 - a. Name: Name for the mailbox.
 - b. Description: Description for the mailbox.
- 5. Click Next to continue to the Assign Groups page.
- 6. Click Next to continue to the Assign Users page.
- **7**. From **Available Users**, highlight the user define earlier and click the right arrow to select the user.
- 8. Click Next to continue to the Confirm page.
- 9. Click **Finish** to save the mailbox definition.

Defining a File System Adapter

Complete the following steps to create the File System Adapter on Sterling B2B Integrator.

- 1. Go to **Deployment** > **Services** > **Configuration**.
- 2. Select Go! to create New Services.
- **3.** Click the Tree view next to the **Service Type:** text box to display the list of services.
- 4. Click All Services to display all services.
- 5. Highlight File System Adapter and click Save.
- 6. Click Next.
- 7. Enter the following information on the Name page:
 - a. Name: Name the adapter SwiftMigrationFileSystemAdapter
 - b. Description: Enter a description for the adapter.
 - c. Select a group: Leave as None.
- 8. Click Next.
- 9. Enter the following information on the Collection page.
 - a. Collection folder: Enter a valid path.
 - b. **Filename filter:** Leave this value blank.
 - c. Collect files from sub folders within and including the collection folder? Select No.
 - d. Use the absolute file path name for the document name? Select No.
 - e. Start a business process once files are collected? Select No.
- 10. Click Next.
- 11. Click Next.
- 12. On the Schedule Type page, select Do not use schedule.
- 13. Click Next.
- 14. Enter the following information on the Extraction page:
 - a. Extraction folder: Enter a valid path.
 - b. Unobscure File Contents? Select No.
 - c. Filenaming convention: Select Assign a specific name.
- 15. Click Next.
- 16. Click Next.

17. Click Finish to save the File System Adapter definition.

Defining a Lightweight JDBC Adapter

Complete the following steps to create the Lightweight JDBC Adapter on Sterling B2B Integrator:

Procedure

- 1. Go to **Deployment** > **Services** > **Configuration**.
- 2. Select Go! to Create New Services.
- **3**. Click the Tree view next to the **Service Type:** text box to display the list of services.
- 4. Click All Services to display all services.
- 5. Highlight Lightweight JDBC Adapter and click Save.
- 6. Click Next.
- 7. Enter the following information on the **Name** page.
 - a. Name: Name the adapter SwiftMigrationLightweightJDBCAdapter.
 - b. Description: Enter a description for the adapter.
 - c. Select a group: Leave as None.
- 8. Click Next.
- 9. On the **Properties** page, select **This Lightweight JDBC Adapter will not start** a new business process for Start a new business process.
- 10. Click Next.
- 11. Enter the following information on the Schedule Type page:
 - a. Run As User: Select admin.
 - b. Schedule: Select Do not use schedule.
- 12. Click Next.
- 13. Click Next.
- 14. Enter the following information on the **Properties: Parameters** page:
 - a. Pool Name: Select the appropriate pool name. This example uses db2Pool.
 - b. XML Result Root Tag: This example uses SwiftRoot.
 - c. XML Result Row Tag: This example uses SwiftTag.
 - d. Query Type: Leave as Select.
 - e. SQL Statement: Enter a SQL statement. This example uses the following: select TRANSFER STATUS FROM SWNET MSG WHERE TRANSACTION ID = 'xxx'

Note: The business process that uses this service will specify a Root Tag, Row Tag, and SQL statement.

- 15. Click Next.
- 16. Click Finish to save the Lightweight JDBC Adapter definition.

Defining a DocumentKeywordReplaceService

Complete the following steps to create a DocumentKeywordReplace Service on Sterling B2B Integrator:

- 1. Go to **Deployment** > **Services** > **Configuration**.
- 2. Select Go! to Create New Service.

- **3**. Click the Tree view next to the **Service Type:** text box to display the list of services.
- 4. Click All Services to display all the services.
- 5. Select Document Keyword Replace Service and click Save.
- 6. Click Next to move to the Name page.
- 7. Enter the following information:
 - Name: Name the adapter SwiftDocKeyworkReplaceService
 - **Description:** Enter a description for the adapter.
 - Select a group: Select None.
- 8. Click Next to navigate to the Instance Properties page.
- 9. Click Next to navigate to the Confirm page.
- 10. Click Finish to save the Document Keyword Replace Service definition.

Chapter 3. Operations with the SAG Interface

Use Sterling B2B Integrator with SWIFTNet adapter and business processes to perform the following operations:

- Transmit data from an internal Sterling Connect:Direct network to a trading partner SWIFT Put
- Download data from a trading partner SWIFT Get
- Route received data from the trading partner through the internal Sterling Connect:Direct network - SWIFT Forward

Note: SWIFTNet7 supports a simple **reception** and **download** directory by removing the requirement to have sub-directories named with the responder-DN and requester-DN. In this example, no sub-directories are defined under **reception** and **download**. The mailbox shown in the following examples does not have sub-mailboxes; just one mailbox where the HeaderInfo and SignatureList files are forwarded if needed. If you want to use subdirectories, the business processes in the following examples must be modified to support sub-directories. This document does not describe these modifications.

Chapter 4. Transmit Data from an Internal Sterling Connect:Direct Network to a Trading Partner - SWIFT Put

Complete the following procedures to transmit data from an internal Sterling Connect:Direct network to a trading partner:

- "Creation of an XML Parameters File"
- "Creation of a Sterling Connect:Direct Process to Put a File" on page 16
- "Checking in the Sterling B2B Integrator Business Processes" on page 17

Creation of an XML Parameters File

The existing Sterling Connect:Direct for SWIFTNet solution uses a Sterling Connect:Direct Process to copy a data file to the Sterling Connect:Direct for SWIFTNet node. The next step in the Process is a Run Task on the Snode that requests the SWIFT Put. The Process also contains a step to delete the destination file on the Snode.

The new SWIFTNet solution also uses a Sterling Connect:Direct Process to initiate the SWIFT Put. This new Process uses two Copy steps to copy a data file and a SWIFT parameters file to a Sterling B2B Integrator Sterling Connect:Direct Server Adapter. The Process also contains two steps to delete the destination files.

The SWIFTNet parameters are stored in an XML parameters file rather than included in the Run Task statement of the Sterling Connect:Direct Process.

Note: You must specify these parameters in an XML parameters file because you cannot specify them in the Sterling Connect:Direct Process.

Sample Sterling Connect:Direct Sample SWIFT Parameters File for a Real-Time PUT

```
<swift name="swift put parameters">
<f>/sci/users/user1/cd38swift/ndm/SwiftNet/Version3</f>
<al>cn=test11,o=ptskusaa,o=swift</al>
<a2>cn=test11,o=ptskusaa,o=swift</a2>
<a3>swift.test.rt.iafa!x</a3>
<a4>admi.xxx.fa.nro.hdo</a4>
<a6>Transfer description</a6>
<a8>User reference</a8>
<a9>/home/user6/test/cdmigdata/rcv small 2</a9>
<a10>rcv small 2</a10>
<all>This is File Description</all>
<a12>SwCompression=None</a12>
<a13>TRUE</a13>
<a18>TRUE</a18>
<a61>SignatureList</a61>
<RND>True</RND>
<a52><ApplSpcfc xmlns="urn:swift:xsd:ApplSpcfc.TxsCntr.01">
<TxsCntr><TtlNbOfTxs>1</TtlNbOfTxs></TxsCntr></ApplSpcfc></a52>
</swift>
```

Sample for an SnF PUT:

<swift name="swift put parameters">
<f>/sci/users/user1/cd38swift/ndm/SwiftNet/Version3</f>
<a1>cn=test11,o=ptskusaa,o=swift</a1>
<a2>cn=test11,o=ptskusaa,o=swift</a2>

```
<a3>swift.test.sf.iafa!x</a3>
<a4>admi.xxx.fa.nro.hdo</a4>
<a6>Transfer description</a6>
<a8>User reference</a8>
<a9>/home/user6/test/cdmigdata/rcv_small_1</a9>
<a10>rcv_small_1</a10>
<a11>This is File Description</a11>
<a12>SwCompression=None</a12>
<a13>TRUE</a13>
<a18>TRUE</a18>
<a28>TRUE</a18>
<a29>ptskusaa_msg11!x</a29>
</swift>
```

The new parameters file is similar to the optional parameter file used with Sterling Connect:Direct for SWIFTNet with a few additional parameters:

The root tag swift is added.
 <swift name="swift put parameters">

</swift>

- 2. HeaderInfo is specified in-line.
 <a52><ApplSpcfc xmlns="urn:swift:xsd:ApplSpcfc.TxsCntr.01"><TxsCntr>
 <TtlNb0fTxs>1</TtlNb0fTxs></TxsCntr></ApplSpcfc></a52>
- **3.** For SnF requests, **<a29>** is needed to specify the queue used to received the notification.
- 4. The new parameter **<RND>** is required if the digest reference values need to terminate on and RND for End-to-End Signature.
- 5. The new parameter **<switchToSnF>** is required if switching to an SnF request is desired when a real time request has failed. Valid values are True or False.
- 6. The parameter **<cdretrycnt>** is supported. The default is three.
- 7. The parameter **<cdretrydelay>** is supported. The default is sixty seconds.

Creation of a Sterling Connect:Direct Process to Put a File

In the following example, you create and submit a Sterling Connect:Direct Process from an internal Sterling Connect:Direct node to the Sterling Connect:Direct Server Adapter node.

```
SUN 2 PROCESS SNODE=triton
 snodeid=(user id,user password)
 &SourceDataFile="SourceFile"
 &DestinationDataFile="DestinationFile"
             "/mailbox/SwiftMailbox/sourceFile"
# example:
 &SourceParmFile="Parameter xml file"
 &DestinationParmFile="Destination Parameter xml file"
# example:
              "/mailbox/SwiftMailbox/parmFile"
CPY1 COPY
 FROM (FILE="&SourceDataFile"
        PNODE
 Τ0
       (FILE="&DestinationDataFile"
        SNODE
 CPY10K IF (CPY1 EQ 0) THEN
    CPY2 COPY
 FROM (FILE="&SourceParmFile"
        PNODE
       )
    Τ0
         (FILE="&DestinationParmFile"
 SNODE
    CPY2OK IF (CPY2 EQ 0) THEN
```

```
SLP1 RUN TASK SNODE (pgm=SWIFTPut)
        SYSOPTS="path of destination file in mailbox, path of destination parm file in mailbox"
# example: "/SwiftMailbox/sourceFile,/SwiftMailbox/parmFile"
# Note: "/mailbox" is not used for the Run Task
     SLP10K IF (SLP1 EQ 0) THEN
        DEL1 RUN TASK SNODE (pgm=SwiftDeleteMailboxMsg)
                SYSOPTS="/SwiftMailbox/sourceFile"
       DEL2 RUN TASK SNODE (pgm=SwiftDeleteMailboxMsg)
                SYSOPTS="/SwiftMailbox/parmFile"
     ELSE
        /* run task to swift for put failed, place user defined error logic here */
        EXIT
     EIF
    ELSE
      /* CPY2 failed, place user defined error logic here */
     EXIT
    EIF
ELSE
  /* CPY1 failed, place user defined error logic here */
 EXIT
EIF
PEND
```

When you run the Sterling Connect:Direct Process to put a file, the following occurs:

- 1. The first Copy step, CPY1, copies the data file to a Sterling B2B Integrator mailbox.
- 2. The second Copy step, CPY2, copies the XML parameters file to the same mailbox.
- **3.** The first Run Task step, SLP1, invokes the SWIFTPut business process on the Sterling B2B Integrator to put the data file.
- 4. The second Run Task step, DEL1, invokes the SwiftDeleteMailboxMsg business process to delete the data file from the mailbox.
- 5. The third Run Task step, DEL2, invokes the SwiftDeleteMailboxMsg business process to delete the XML parameters file from the mailbox.

Checking in the Sterling B2B Integrator Business Processes

The Sterling B2B Integrator installation includes several SWIFTNet business processes.

About this task

Before you can run the Sterling Connect:Direct Process to put a file, complete the following procedure:

- 1. Download and check in the SWIFTPut business process. This business process retrieves the SWIFT parameters file from a mailbox and makes a SWIFT Put request and reports the final result of the request. See step SLP1 in the sample Sterling Connect:Direct Process.
- 2. Download and check in the SwiftDeleteMailboxMsg business process. This business process deletes a message (a file) from a mailbox. See steps DEL1 and DEL2 in the sample Sterling Connect:Direct Put process.

Business Processes Invoked by SWIFTPut and SwiftDeleteMailboxMsg

The following Sterling B2B Integrator business processes are invoked by the SWIFTPut and SwiftDeleteMailboxMsg business processes:

- SwiftSeperateNameAndPath This business process separates the name and path for a file (or message in a Mailbox).
- SwiftLoadParameters This business process loads the SWIFT parameters for the SWIFT request.
- SwiftExtractDataFile This business process extracts the source file from the Mailbox and puts it in the location specified by the SWIFT parameter **a9** (PhysicalFile) for the SWIFT Put request.
- SwiftGetTransferResult This business process waits for the transfer result after the SWIFT request is accepted.

Note: Create Permissions for the business processes, adapters, and services you create. Add these permissions to the User Account you define to do the SWIFT migration work. Also, you must enable document tracking for all business processes you check in.

Chapter 5. Download Data from a Trading Partner - SWIFT Get

Complete the following procedures to get data from a trading partner and transmit the data to an internal Sterling Connect:Direct node:

- "Creation of an XML Parameters File for Get"
- "Creation of a Sterling Connect:Direct Process to Get a File" on page 20
- "Checking in the Sterling B2B Integrator Business Process for a Get" on page 21

Creation of an XML Parameters File for Get

The existing Sterling Connect:Direct for SWIFTNet solution uses a Sterling Connect:Direct Process. The first step in the Process is a Run Task to get a file from a trading partner. The next step copies the retrieved file to an internal Sterling Connect:Direct node. The third step deletes the retrieved file.

The new SWIFTNet solution also uses a Sterling Connect:Direct Process to initiate the SWIFT Get. This new Process uses two Copy steps to retrieve a data file and copy a SWIFT parameters file to a Sterling B2B Integrator Sterling Connect:Direct Server Adapter. The Process also contains two steps to delete the destination files.

The SWIFTNet parameters are stored in an XML parameters file rather than included in the Run Task statement in the Sterling Connect:Direct Process.

Note: You must specify these parameters in an XML parameters file because you cannot specify them in the Sterling Connect:Direct Process.

Sample SWIFT Parameters File for a Real-Time Get

```
<swift name="swift parameters">
<f>/sci/users/user1/cd38swift31/ndm/SwiftNet/Version3</f>
<al>cn=test11,o=ptskusaa,o=swift</al>
<a2>cn=test11,o=ptskusaa,o=swift</a2>
<a3>swift.test.rt.iafa!x</a3>
<a4>admi.xxx.fa.nro.hdo</a4>
<a9>/home/user6/test/cdmigdata/download.txt</a9>
<a10>download.txt</a10>
<a13>TRUE</a13>
<a61>SignatureList</a61>
<RND>True</RND>
<cdretrycnt>0</cdretrydelay>30</cdretrydelay>
</swift>
```

The new parameters file is similar to the optional parameter file used with Sterling Connect:Direct for SWIFTNet with a few additional parameters:

1. The root tag **swift** is added.

```
<swift name="swift put parameters">
</swift>
```

- 2. The new parameter **<RND>** is required if the digest reference values need to terminate on and RND for End-to-End Signature.
- 3. The parameter **<cdretrycnt>** is supported. The default is three.
- 4. The parameter **<cdretrydelay>** is supported. The default is sixty seconds.

Creation of a Sterling Connect: Direct Process to Get a File

The Get operation will use the Sterling B2B Integrator mailbox and many of the same business processes and services defined under the Put operation.

In the following example, you create and submit a Sterling Connect:Direct Process from an internal Sterling Connect:Direct node to the Sterling Connect:Direct Server Adapter node.

```
SUN 2 PROCESS SNODE=triton
snodeid=(user id,user password)
#
#
 &SourceDataFile="Source file download from swift"
# example
           "/mailbox/SwiftMailbox/downloadFile"
  &DestinationDataFile="DestinationFile"
  &SourceParmFile="Parameter xml file"
  &DestinationParmFile="Destination Parameter xml file"
# example
             "/mailbox/SwiftMailbox/parmFile"
CPY1 COPY
  FROM (FILE="&SourceParmFile"
       PNODE
       )
 Τ0
       (FILE="&DestinationParmFile"
       SNODE
      )
 CPY10K IF (CPY1 EQ 0) THEN
    SLP1 RUN TASK SNODE (pgm=SWIFTGet)
        SYSOPTS="Source file download from swift without the leading '/mailbox', Destination Parameter xml
                 file without the leading '/mailbox'"
        example: "/SwiftMailbox/downloadFile,/SwiftMailbox/parmFile"
# Note: "/mailbox" is not used for the Run Task
    SLP10K IF (SLP1 EQ 0) THEN
    CPY2 COPY
      FROM (FILE="SwiftMailbox/downloadFile"
        SNODE
     TO (FILE="&DestinationDataFile"
        PNODE
       DISP=RPL
       )
    CPY2OK IF (CPY2 EQ 0) THEN
        DEL1 RUN TASK SNODE (pgm=SwiftDeleteMailboxMsg)
         SYSOPTS="SwiftMailbox/downloadFile"
        DEL2 RUN TASK SNODE (pgm=SwiftDeleteMailboxMsg)
SYSOPTS="Destination Parameter xml file without the leading
                                                                                   '/mailbox'"
      ELSE
        /* run task to swift for put failed, place user defined error logic here */
        EXIT
     EIF
    ELSE
      /* CPY2 failed, place user defined error logic here */
     EXIT
    EIF
```

```
ELSE
/* CPY1 failed, place user defined error logic here */
EXIT
EIF
```

```
PEND
```

When you run the Sterling Connect:Direct Process to get a file, the following occurs:

- 1. The first Copy step, CPY1, copies the XML parameters file to a Sterling B2B Integrator mailbox.
- 2. The first Run Task step, SLP1, invokes the SWIFTGet business process on the Sterling B2B Integrator to get the data file from a trading partner.
- **3**. The second Copy step, CPY2, copies the data file from the Sterling B2B Integrator mailbox.
- 4. The second Run Task step, DEL1, invokes the SwiftDeleteMailboxMsg business process to delete the data file from the mailbox.
- 5. The third Run Task step, DEL2, invokes the SwiftDeleteMailboxMsg business process to delete the XML parameters file from the mailbox.

Checking in the Sterling B2B Integrator Business Process for a Get

The Sterling B2B Integrator installation includes several SWIFTNet business processes. This topic describes Sterling B2B Integrator business processes you need to perform the SWIFTNet functionality.

About this task

Before you can run the Sterling Connect:Direct Process to get a file, complete the following procedure:

Procedure

- 1. Download and check in the SWIFTGet business process. This business process retrieves the SWIFT parameters file and make a SWIFT Get request and report the request's final result.
- 2. Download and check in the SwiftCollectDatafile business process. After the Get is successful, SWIFTGet will invoke this business process to collect the file received in the reception directory and put it in a mailbox for the Sterling Connect:Direct Process to copy back to the back-office Sterling Connect:Direct.

Note: Create Permissions for the business processes, adapters, and services you create. Add these permissions to the User Account you define to do the SWIFT migration work. Also, you must enable document tracking for all business processes you check in.

Chapter 6. Route Received Data From the Trading Partner Through the Internal Connect:Direct Network – SWIFT Forward

The existing Sterling Connect:Direct forward Process example only copies the received file. The new solution uses a Sterling B2B Integrator business process to copy the received file and optionally look for HeaderInfo and SignatureList in the request; if these are in the request, the business process will extract this information and send it to the back-office Sterling Connect:Direct as a file.

The SWIFTFWD_sample Process is configured in the Process.Info section of the Sterling Connect:Direct for SWIFTNet configuration file. The SimpleSwiftForward or SwiftForward business process is configured in a Sterling B2B Integrator SWIFTNet routing rule. When a file received from SWIFT matches the routing rule, the rule invokes the business process to send the received file back to the back-office Sterling Connect:Direct node defined in the business process.

The existing Sterling Connect:Direct for SWIFTNet Process uses one Copy step to send the received data file to a back-office node. The new SWIFTNet solution uses three Copy steps to copy the received data file, copy the HeaderInfo file (if it is available), and copy the Signature List file (if available).

The existing Sterling Connect:Direct for SWIFTNet Process contains one Run Task step to delete the received data. The new SWIFTNet solution uses three Run Task steps to delete the received data file, HeaderInfo file, and Signature List file.

Procedures

Complete the following procedures to forward data file received from SWIFT to an internal Sterling Connect:Direct network:

- "Check In SimpleSwiftForward Business Process Do not Forward HeaderInfo and Signature List Files"
- "Check In SwiftForward and Modify Business Processes Forward HeaderInfo and Signature List Files" on page 24
- "Creating a Routing Rule" on page 27

Check In SimpleSwiftForward Business Process - Do not Forward HeaderInfo and Signature List Files

Before you can run the Sterling Connect:Direct Process to Forward a file, download and check the SimpleSwiftForward business process into Sterling B2B Integrator:

This business process does not forward the HeaderInfo and Signature List files. Check in and use this business process, rather than the SwiftForward business process, if you do not need to forward the HeaderInfo and Signature List files.

Check In SwiftForward and Modify Business Processes - Forward HeaderInfo and Signature List Files

If you need to forward the HeaderInfo and Signature List Files in addition to the data file received from SWIFT to an internal Sterling Connect:Direct network, check in and modify the following business processes:

SwiftForward Business Process

The SwiftForward business process has a hard-coded mailbox path for handling the HeaderInfo and Signature List files:

<!-- change the value of mailBox to the mailbox for your implementation --> <assign to="mailBox">/SwiftMailbox</assign>

Change the value of this assign statement to the mailbox you set up for the migration work.

Check in the following business processes and make that same change to them:

- SwiftExtractHeaderInfoAndSignatureList This business process saves the HeaderInfo and SignatureList files from the incoming Server Request to the mailbox for the SWIFTForward business process.
- SwiftCleanupHeaderInfoAndSignatureList This business process cleans up the saved HeaderInfo and SignatureList files when the transfer fails.

Note: Create Permissions for the business processes, adapters, and services you create. Add these permissions to the User Account you define to do the SWIFT migration work.

The HeaderInfo and Signature List are in the SWIFT Server Request presented to the handleSWIFTNet7FileActRequest business process or to the handleSWIFTNet7FileActSnFRequest business process. These two business processes are included with Sterling B2B Integrator. If you want to forward the HeaderInfo and Signature List file, modify these business processes to save the HeaderInfo and Signature List to a mailbox for the SwiftForward business process.

Changes to the handleSWIFTNet7FileActRequest Business Process

Add the following rules to the top of the business process:

```
<!-- for CD Swiftnet migration to SI Swiftnet for signature list and header info handling -->
    <rule name="isPut">
        <condition>SwiftServerRequest/swiftOp = 'Put'</condition>
        </rule>
        <rule name="isAccepted">
```

<condition>SwiftServerResponse/Status = 'Accepted'</condition>
</rule>

Between the existing "Send the response" step:

```
<!-- this is to construct the server response message back to GIS Server application -->
    <operation name="Send the response">
        <participant name="SWIFTNet7ServerService"/>
        <output message="handleServerResponse">
            <assign to="." from="*"/>
            <assign to="." from="swiftServerRequest/Status/text()"/>
            <assign to="Status" from="SwiftServerRequest/Status/text()"/>
            <assign to="Description" from="SwiftServerRequest/Description/text()"/>
            <assign to="Info" from="SwiftServerRequest/Info/text()"/>
            </output>
```

Insert the following step which invokes the SwiftExtractHeaderInfoAndSignatureList business process to save the HeaderInfo and Signature List to a mailbox for SwiftForward.

<!-- for CD Swiftnet migration to SI Swiftnet for signature list and header info handling -->

```
<choice>
 <select>
   <case ref="isPut" activity="putEvent"/>
  </select>
  <sequence name="putEvent">
    <choice>
     <select>
       <case ref="isAccepted" activity="putEventAccepted"/>
      </select>
      <sequence name="putEventAccepted">
        <!-- invoke extract header info and signature list for put and accepted request -->
        <operation name="extractInfoAndList">
          <participant name="InvokeBusinessProcessService"/>
          <output message="Invoke In">
            <assign to="." from="*"/>
            <assign to="INVOKE MODE">ASYNC</assign>
            <assign to="WFD_NAME">SwiftExtractHeaderInfoAndSignatureList</assign>
          </output>
          <input message="Invoke Out">
            <assign to="." from="*"/>
          </input>
        </operation>
      </sequence>
    </choice>
 </sequence>
</choice>
```

<!-- end for CD Swiftnet migration to SI Swiftnet for signature list and header info handling -->

Make the same changes to the handleSWIFTNet7FileActSnFRequest business process.

handleSWIFTNet7FileActEvent Business Process

This business process is included with Sterling B2B Integrator. If the HeaderInfo and Signature List files need to be forward via SwiftForward, modify this business process. This modification enables this business process to delete the HeaderInfo and SignatureList files in the mailbox if the transfer fails.

Add the following rules to the top of the business process:

Between the existing "Receive the request" step:

```
<operation name="Receive the request">
    <participant name="SWIFTNet7ServerService"/>
    <output message="handleServerRequest">
        <assign to="." from="*"/>
        </output>
        <input message="testing">
            <assign to="." from="*"/>
        </input >
        </input>
        </input>
        </operation>
```

and the following " Do backend processing " step:

```
<!-- Do backend processing -->
    <choice>
     <select>
       <case ref="ActionInvokeWorkflow" activity="DoInvokeWorkflow"/>
        <case ref="ActionStoreInMailbox" activity="DoStoreInMailbox"/>
        <case ref="ActionStoreInFSystem" activity="DoStoreInFSystem"/>
      </select>
     <!-- Invoke Workflow: 'WFD NAME' and 'INVOKE MODE' already in ProcessData -->
      <operation name="DoInvokeWorkflow">
        <participant name="InvokeSubProcessService"/>
        <output message="Xout">
          <assign to="." from="*"/>
        </output>
       <input message="Xin">
          <assign to="." from="*"/>
        </input>
      </operation>
```

Insert the following step which invokes the SwiftCleanupHeaderInfoAndSignatureList business process if the transfer fails, to delete the HeaderInfo and Signature List files in the mailbox.

```
<!-- for CD Swiftnet migration to SI Swiftnet for signature list and header info handling -->
    <!-- clean up header info and signature list -->
    <choice>
      <select>
        <case ref="isStatusFailed" activity="checkForIncoming"/>
     </select>
      <sequence name="checkForIncoming">
        <choice>
          <select>
            <case ref="isIncoming" activity="checkForPutOrFetch"/>
          </select>
          <sequence name="checkForPutOrFetch">
            <!-- invoke delete header info and signature list for accepted but failed request -->
            <operation name="cleanUpInfoAndList">
              <participant name="InvokeBusinessProcessService"/>
              <output message="Invoke In">
                <assign to="." from="*"/>
                <assign to="INVOKE MODE">SYNC</assign>
                <assign to="WFD NAME">SwiftCleanupHeaderInfoAndSignatureList</assign>
              </output>
              <input message="Invoke Out">
                <assign to="." from="*"/>
              </input>
```

```
</operation>
</sequence>
</choice>
</sequence>
</choice>
</choloe>
```

The Forward operation will use the Mailbox and many of the business processes and services you define for the Put and Get operations.

Check in the following business processes:

- SwiftExtractMailboxMsg Business Process The SWIFTForward business process invokes this business process to extract the HeaderInfo or the Signature List file from the mailbox.
- SwiftCleanupMailboxMsg Business Process The SWIFTForward business process invokes this business process to clean up the HeaderInfo or the Signature List file from the mailbox after sending it to a back-office Sterling Connect:Direct.

Note: Create Permissions for the business processes, adapters, and services you create. Add these permissions to the User Account you define to do the SWIFT migration work. Also, you must enable document tracking for all business processes you check in.

Creating a Routing Rule

After you check in the SimpleSwiftForward Sterling B2B Integrator business process or check in and modify the SWIFT Forward business processes, complete the following steps to create a routing rule on Sterling B2B Integrator:

- 1. Go to Deployment > Adapter utilities > SWIFTNet > SWIFTNet Routing Rule.
- 2. Click Go! to create a new SWIFTNet routing rule.
- 3. Enter a name for the SWIFTNet routing rule, such as SimpleSwiftForward.
- 4. Enter a Requester DN.
- 5. Enter a **Responder DN**.
- 6. Enter a SWIFT service or wildcard for the Service Name.
- 7. Enter a SWIFT request type or wildcard for the **Request Type**.
- 8. Click Next.
- 9. On the **Priority** page, you can select the priority of this routing rule compared to other routing rules.
- 10. Click Next.
- 11. On the Action page, select Invoke Business Process.
- 12. For **Business Process**, enter the name of the business process. In this example, it is SimpleSwiftForward or SwiftForward.
- 13. For Invoke Mode, select Synchronous mode.
- 14. Click **Next** to continue to the **Confirm** page.
- 15. Click **Finish** to save the routing rule.

Chapter 7. Additional Copy Procedure

This Sterling Connect:Direct Process copies a file from your back-office Sterling Connect:Direct for UNIX node to the download directory of the Sterling B2B Integrator SWIFTNet Server.

Copying a File from a Back-Office Sterling Connect:Direct for UNIX Node to the Download Directory of the Sterling B2B Integrator SWIFTNet Server

The Sterling Connect:Direct for SWIFTNet Process uses one Copy step to copy the file.

About this task

To copy the file from a back-office Sterling Connect:Direct for UNIX node to the download directory of the Sterling B2B Integrator SWIFTNet Server, you must:

Procedure

1. Download and check in the SwiftWritePrimaryDocumentToDisk business processs.

Note: Change the value of the *downloadDir* value in this business process to the actual download director of your installation.

2. Create and submit a Sterling Connect:Direct Process. See the following sample Process:

```
SUN 2 PROCESS SNODE=triton
 snodeid=(user id,user password)
 &SourceDataFile="/home/nis01/dshiu1/cdtest/data/smallfile"
 &DestinationDataFile="/businessprocess/SwiftWritePrimaryDocumentToDisk/smallfile"
CPY1 COPY
  FROM (FILE="&SourceDataFile"
        PNODE
       )
 Τ0
       (FILE="&DestinationDataFile"
        SNODE
       )
 CPY10K IF (CPY1 EQ 0) THEN
    EXIT
 ELSE
    /* copy to swift failed, place user defined error logic here */
    EXIT
  EIF
PEND
```

Note: Create Permissions for the business processes, adapters, and services you create. Add these permissions to the User Account you define to do the SWIFT migration work.

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