Sterling B2B Integrator

UNIX/Linux Non-Cluster Environment Upgrade

Version 5.2.0 - 5.2.2

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IBM

Contents

UNIX/Linux Cluster Environment Upgrade (5.2.0 - 5.2.2)

You can upgrade the IBM® Sterling B2B Integrator software in a cluster (multiple node) UNIX/Linux environment.

These instructions include pre-upgrade and post-upgrade processes.

Clustering is not supported for Sterling B2B Integrator systems that use the MySQL database.

You should also review the following documents:
- System Requirements
- Release Notes
- What's New
- Installation and Upgrade Information

It is important to remember that upgrading involves a full installation of Sterling B2B Integrator. You need to prepare for an upgrade the same way that you would prepare for an installation. It is also recommended that you thoroughly test this process in a test or development environment prior to implementing in a production environment.

This upgrade does not overwrite your current Sterling B2B Integrator directory structure on disk. Instead, it creates a new installation of Sterling B2B Integrator that will point to and upgrade the database of your current installation of Sterling B2B Integrator. This means your original instance will no longer be operational after performing the upgrade. After the upgrade, you will be starting your Sterling B2B Integrator instance only from the newly created directory structure.

For new installations, use the Sterling B2B Integrator *UNIX/Linux Cluster Installation Guide*.

Upgrade Overview

Assumptions for this Guide

The procedures in this guide are accurate as of the publication date and are specific to this version of the document.

Intended Audience

This document is intended for use by:
- System Administrators
- Installation Engineers
- Database Administrators.

Upgrade Scenarios

Upgrade Scenarios (Cluster Environments)

Upgrading to Sterling B2B Integrator can follow several paths. Keep these scenarios in mind as you plan for your upgrade:

Upgrade Scenario	Example
Operating system and the database are the same between the old Sterling Gentran Integration Suite version and this version of Sterling B2B Integrator	If you are upgrading from 4.3 (on HPUX 11.11 and using Oracle 10.1.0.4 RAC) to this version of Sterling B2B Integrator (on HPUX 11.11 and using Oracle 11g RAC), the upgrade steps are as follows: • Export the configuration data. • Back up the database. • Upgrade to this version of Sterling B2B Integrator.
Database upgrade before the upgrade to this version of Sterling B2B Integrator when the old Sterling Gentran Integration Suite database is not supported by this version of Sterling B2B Integrator	If you are upgrading from 4.0 (on Solaris 9 and using DB2 8.1 Fixpack 5) to this version of Sterling B2B Integrator (on Solaris 9 and using DB2 9.2), the upgrade steps are as follows: • Export the configuration data. • Back up the database. • With help from a database administrator (DBA), copy the database to DB2 9.2. • Back up the newly created database. • Upgrade by pointing to the newly created database. If the upgrade stops, and leaves the newly created database in an incomplete state, you can re-start the upgrade using the backup of the database.
Your Sterling Gentran Integration Suite operating system is not supported by this version of Sterling B2B Integrator	If you are upgrading from 4.0 (on RH EL 3.0 and using Oracle) to this version of Sterling B2B Integrator (on RH EL 5.0 and using Oracle), the upgrade steps are as follows: • Export the configuration data. • Back up the database. • Upgrade to this version of Sterling B2B Integrator on the RH EL 5.0 machine while pointing to Oracle.

Upgrade Impacts

Upgrade impacts overview

This documentation provides information about how system behavior changed based on upgrading your system from 4.3 (or later) to this version. Review all of the information before you begin your upgrade.

Upgrade impacts (version 5.2.0 - 5.2.2)

Before you begin an upgrade, review the following information.

Features/services not supported

The following features/services are no longer supported:
- Channels portlet
- Federated Systems
- Community Management (AFT Communities are still available)
- Sterling Community Management (SCM) Integration
- Archive Commandline Service
- Sync Engine Data Clean Manager Service
- Sync Engine Task Manager Service

If you need more information, contact your IBM sales representative.

Port allocation changes in 5.2.0

If you are upgrading to 5.2.0, and you configured the CLA2 or the SWIFTNet HTTP Server adapter, the remote port numbers were changed for 5.2.0. The port numbers are as follows:

Table 1. Remote Port Numbers

Adapter Name	Version 5.2.0 Base Port	Version 5.2.1 Base Port
CLA2	+51	+52
SWIFTNet HTTP Server	+52	+53

Note: Check your adapter configurations and the `sandbox.cfg` file for ports greater than 51 that were changed

For Version 4.3 and Version 5.0, the remote port numbers are the same as the 5.2.1 release.

After you upgrade to 5.2.0, you must change any references to the old remote port numbers. For example, if you have any business processes that use the CLA2 adapter, you must update the remote ports in the business process.

Database table sizes

While you are upgrading, if you encounter any database table size issues, manually adjust the database tables and restart the upgrade process. An upgrade that uses the production database in a test environment can help you determine what tables must be manually adjusted.

Resource tags

If you are using resource tags in your current version, check all of your existing resource tags before you start the upgrade process. Check the following resource tags:
- Adapter Policies
- Agreements

- Sterling Connect:Direct® Netmaps
- Proxy Servers
- Security Tokens
- SSH Resources
- SWIFTNet Copy Service Profiles
- SWIFTNet Service Profiles

You can check the resource tags by running the following SQL query from the SQL Manager page (**Operations > Support Tools)**:

```
SELECT * FROM TAG_RESOURCE_ASSOC WHERE TYPE=41 OR TYPE=42 OR TYPE=43 OR TYPE=44 OR TYPE=45 OR TYPE=52 OR TYPE=53
```

The TAG_NAME column in the SQL results contains the names of any resource tags that must be edited or deleted.

If any of the resource tags contain tagged resources that are using the types that are listed, remove those resources from the resource tags or delete the resource tags that contain these resource types.

Silent installation parameters

The following parameters are new or have an updated definition:

What changed	parameter	Definition
Parameter definition that changed	LICENSE_FILE_PATH	(Required) Full path to `Core_License.xml`.
New parameter	LICENSE_FILE_# (where # is a number 1 - 99)	(Required) This parameter is required for each license you install. You must add an entry for each license file to the silent installation file. The LICENSE_FILE numbering (#) does not need to be sequential. For example: LICENSE_FILE_1= SI_SFG_License.xml LICENSE_FILE_2= Fin_Serv_License.xml LICENSE_FILE_3= SI_SFG_FIPS_License.xml LICENSE_FILE_4= AS2_License_.xml LICENSE_FILE_5= EBICS_License_.xml

Channels and community management tabs (optional)

The Dashboard PSML files are not updated during an upgrade. The PSML file affects any custom tabs that you configured, such as Channels or Operator. The Channels and Community Management tabs are displayed in your browser but are no longer operational.

To remove the Channels and Community Management tabs:

Note: The psmlRestore command gets the 5200 PSML file, which resets all of the custom tabs from the previous release.

1. Navigate to the installation directory.

2. Navigate to the bin directory.
3. Enter this command: `./psmlRestore.sh admin`

Custom BI fact models must be upgraded

Scripts named recreateBITablePKs.cmd.in (Windows) and recreateBITablePKs.sh.in (UNIX) are now provided to upgrade any custom BI fact models that are tied to a separate BI repository.

BI fact models must be upgraded to continue to work with the Entity Framework, which replaced Hibernate usage in the BI framework in version 5.2.0.

Backups not generated during installation, upgrade, application of fix pack or interim fix

Before you begin an upgrade, review the following backup information.

Some of the standard resources that are installed during installation, upgrade, fix pack, or interim fix use the import mechanism available to customers to load the standard resources into the database. By default, the standard import mechanism creates a backup of the table that contains the resource. The backup is created before import to allow for restoration to the previous state if the import must be undone. During the basic installation process this table backup is also created by default. Since the import mechanism is often used multiple times during the installation process, some of the tables are backed up multiple times. Depending on the size of the table, multiple backups add a large amount of time to the installation process. The default behavior was changed to not make the backup by default. If you want these backups, then add SKIPIMPORTBACKUP=false to `sandbox.cfg` file.

Capitalization insensitivity for header value
About this task

Before you begin an upgrade, review the following AS3 information.

For AS3, when you are searching for a header value in a multipart/report, do not consider whether the header value contains any capitalization. The search was enhanced to be capitalization insensitive.

For example, the following searches result in a match:
• Multipart/Report
• Multipart/report
• multipart/Report
• multipart/report

The search would not find the following as a match:
• MulTiPart/RePorT

CA certificates impacts

Before you upgrade, review the following information about CA certificates.

Users might add multiple copies of the same certificates to the database. Having multiple copies of the same certificate in the database is not, in principle, a

problem for the system except for the minor amount of wasted storage. Each copy has a different object ID in the database and is a separate database object.

The specific changes in this release are the ability to easily populate the product database with the set of authority root certificates that are distributed with the JVM.

Installing a perimeter server

About this task

Before you begin an upgrade, review the following perimeter server installation information.

Silent installation is now the default installation mode. If you want to complete the perimeter server installation with an interactive mode, you must use the following command:

```
java -jar ps_4400.jar -interactive
```

Retry logic added to WebSphere MQ suite adapter PUT service

About this task

Before you begin an upgrade, review the following WebSphere MQ Suite adapter PUT Service information.

Retry logic was added to the WebSphere MQ Suite. To accommodate this new functionality, you must configure two new parameters for the PUT service:

- wsmq_send_retryCount
- wsmq_send_retrySleepInterval

To configure the new parameters:

Procedure

1. Log in to Sterling B2B Integrator.
2. From the **Admin Console Home**, start the Graphical Process Model (GPM).
3. Log in to the GPM. You need a **User ID** and **Password**.
4. In the GPM, select **View > Stencil > Services**.
5. Select **File > New**.
6. Drag the **WebSphereMQ Suite Put Message Service** from the **All Services** pane into the center pane.
7. Double-click the **WebSphereMQ Suite Put Message Service**.
8. Select the configuration from the **Config** dropdown.
9. Enter the number of retries in to the **wsmq_send_retryCount** value.
10. Enter the sleep interval in seconds in to the **wsmq_send_retrySleepInterval** value.
11. Save the changes to the service configuration.
12. Exit from the GPM.

Services and adapters - Show Advance State button

Before you begin an upgrade, review the following **Show Advance State** button information.

The **Show Advanced State** check box was removed from the **Services Configuration** search screen. Instead, the default was changed to always show the advanced state without needing to check a check box on the search screen to display it.

Optional certificate fields

About this task

Before you begin an upgrade, review the following certificate field information.

When you are generating certificate keys, the following fields might be missing in the release from which you are upgrading, but the entries are now optional:
- alt.name.dns
- alt.name.IP

Support for multiple AS2 organizations

Before you begin an upgrade, review the following AS2 schema information.

Sterling B2B Integrator now supports multiple sponsoring organizations and multiple partners for AS2. During upgrade, the single organization is flagged as the default organization.

After you upgrade to this version, a prefix designation is used to differentiate between an AS2 organization (AS2_ORG_) and an AS2 partner (AS2_PART_). Each requires the full configuration of a trading partner to allow for a partner to trade with multiple organizations, and an organization that trades with multiple partners.

The AS2_TRADEPART_INFO and AS2_EMAIL_INFO tables were modified and the AS2_PROFILE table is newly introduced. Updates to these tables occur during the Sterling B2B Integrator in-place upgrade process in the following manner:
- Identify the default organization and populates the AS2_PROFILE table with organization information. A default organization is an AS2 organization profile named "profile_ORGANIZATION" present in the system before upgrade.
- Identify partner records and populates the AS2_PROFILE table with partner information.
- Populate the new columns of table AS2_TRADEPART_INFO with the default organization information.
- Populate the new PROFILE_ID column in the AS2_EMAIL_INFO table with the profile id of the AS2 organization profile present in the system.

Web services

Before you begin an upgrade, review the following web services information.

Many of the web services configuration settings that were generated from the WebServices Provider Configuration UI moved from the property files into

database tables. The change was made to allow a single location of these settings in cluster environments and to ensure that these settings would not be reset during fix pack installation.

After you complete your upgrade, run the convertWSSoaProperties script found in the installation bin folder. This script reads the settings from the property file and places them into the appropriate database tables. You can then review the results in the WebServices Provider Configuration UI.

Upgrade Planning Information

Upgrade planning information

Before you begin an upgrade:
- Read and become familiar with this document to understand what the upgrade requires.
- Review upgrade scenarios to determine which scenario you want to use.
- Review and record system configuration information.
- Review and record performance and tuning information.

Upgrade planning checklist

To assist you with your upgrade planning, review the following planning checklist:

#	Upgrade Planning Checklist	Your Notes
1	Read through this entire document so that you have a clear understanding of what the upgrade requires.	
2	Download and review the following information from the Sterling B2B Integrator documentation library. • *System requirements* - With each release, IBM introduces leading-edge technology to improve and enhance its software. Review the *System requirements* to confirm that your system and databases meet the requirements for this release. • *Release notes* - Review the release notes to obtain information about issues and resolutions that are identified for this release. • *What's new in this release* - Review to find out about new features and functionality that is provided in this release. • *Installation and upgrade information* - Lists the installation and upgrade documents available for this version of Sterling B2B Integrator.	
3	Review the Customer Center Knowledgebase and search for any additional information about upgrade issues. **CAUTION:** **Before you upgrade to the latest product version, contact your sales representative to verify that it includes all of your current functionality. Depending on the timing, even though it is in a higher version that the one you installed, a particular mod release or fix pack might not include all the functionality in your current version or fix pack.**	
4	Collect information about third-party libraries that are used for adapter configurations that were added to your current release. You must add each of these libraries to the upgraded system.	

#	Upgrade Planning Checklist	Your Notes
5	Locate any configuration file changes for JDBC adapter or Lightweight JDBC adapter in your current release. You must copy these changes to the upgraded system.	
6	Record your performance tuning configuration. You must restore these settings after the system is upgraded.	
7	Review and note the adapters, business processes, and other configurations in your current release. This information helps you identify the need for updating transport messages, third-party adapters, or configurations to adapters, such as file system or command-line adapters.	
8	Determine whether you edited any of the pre-defined business processes. If you are upgrading from 4.2 or if you are upgrading from 4.3 and are using the 5.0 GA or 5001 Media, the upgrade process overwrites pre-defined business processes. Your customized business processes are preserved in the system, but they are not the default business process after the upgrade. If you are upgrading from 4.3 and are using the 5002 Media or later, customized business processes are preserved in the system and remain as the default.	
9	Determine whether you edited any of the property files (.properties or .properties.in). The upgrade process overwrites these property files, unless these changes were made in the `customer_overrides.properties` file. Your previous property file edits might not be applicable this version of the software.	
10	Determine whether you edited any of the following cdinterop files: • `cdinterop-proxy-records.properties` • `cdinterop-spoe-auth.properties` • `cdinterop-spoe-policy.properties` • `cdinterop-user-records.properties` You must back them up before you upgrade. The cdinterop files do not have initialization (*.in) files. After the upgrade, use the backup version of the files in your upgraded installation.	
11	Determine whether you have LDAP (Lightweight Directory Access Protocol) configuration information in the `security.properties` file. This information is automatically moved to the `authentication_policy.properties` file.	

#	Upgrade Planning Checklist	Your Notes
12	Determine whether Sterling B2B Integrator is using an application server (JBoss™, WebLogic®, or WebSphere®).

Sterling B2B Integrator does not require an application server for installation or at run time.

Sterling B2B Integrator supports integration with JBoss and WebLogic during the installation. You can also integrate with WebSphere, JBoss, or WebLogic by using the Sterling B2B Integrator EJB adapter (this does not represent a WebLogic server for deploying the Application Console). | |
| 13 | If you use a file system as your document storage method, determine and record the path to the file system.

You will need the file system path structure so that after the upgrade, you can copy/mount the documents to the new installation directory. The directory structure (path to the file system) must be the same in the current and in the upgraded system. | |
| 14 | Review the EDI Sequence Check Queue to ensure that no interchanges are in the queue. The EDI Sequence Check Queue is used for X12 and EDIFACT sequence and duplicate checking. | |
| 15 | Determine whether you have any JVM Containers configured.

If yes, you must reconfigure the JVM containers after you upgrade the software. | |

Supporting Information

Accessing the Sterling B2B Integrator knowledgebase
About this task

Before you upgrade, you might want to access the Sterling B2B Integrator knowledgebase. The knowledgebase contains many topics and has a search engine to assist you in finding information. To access the knowledgebase:

Procedure
1. Navigate to the Customer Center website.
2. Enter your **User Name** and **Password**.
3. Click **Support Center**.
4. Under **Self Support Tools**, select **Knowledgebase**.
5. Enter search criteria and click **Find**.

Prepare Your System for the Upgrade

Prepare your system for the upgrade

Before you begin the upgrade, you must do the following things:
- Complete the pre-upgrade system checklist
- Complete the pre-upgrade database checklist
- Complete the pre-upgrade operating system verification checklist

- Download the correct version of the JDKs, JCE, and JDBC drivers required. See the *System Requirements* for information about how to download the correct version of each.

Pre-upgrade system checklist

Before you begin an upgrade:

#	Pre-Upgrade System Checklist	Your Notes
1	Use the system requirements to verify that your system hardware and software meet the requirements that are specified for this release. Verify that you have the correct: - Patches required by Java™ for the operation system - Version of the JDK - JDK Patches - Absolute path to JDK and patches - Database must match the version that is listed in the requirements If any of these requirements are not met, the installation fails and prints/logs a report of all items that were non-compliant.	
2	Review your current system to determine whether you must apply a fix pack before you upgrade. If you recently applied an interim fix, the interim fix might not be included in the latest fix pack. If you are not on the latest fix pack, the upgrade fails. The following are the minimum fix pack levels for upgrading to this release: - Release 4.0 - Fix pack 4.0.3-5 - Release 4.1 - base release or any fix pack - Release 4.2 - base release or any fix pack - Release 4.3 - base release or any fix pack	
3	For systems with multiple IP addresses, verify that the IP address on which Sterling B2B Integrator is located is accessible by any client computer that is running a browser interface. If you do not verify the IP addresses, your system might not operate properly after you install Sterling B2B Integrator.	
4	If you are using a non-English environment, confirm that you are using the appropriate character set.	
5	Verify that the file system has adequate free disk space.	
6	Obtain the upgrade and patch media. Check the Product Updates & Downloads site to ensure that you have the latest version of the media.	

#	Pre-Upgrade System Checklist	Your Notes
7	Back up your Sterling B2B Integrator installation directory and the database. If there are problems with your upgraded system, the only way to ensure that you can roll-back to your previous version is to back up Sterling B2B Integrator and the database.	
8	Archive your data. Archived data must be restored from the same version and fix pack of Sterling B2B Integrator from which it was archived. If you must restore archived data that was archived before you upgraded, then you must have a running instance of Sterling B2B Integrator that matches the version and fix pack from which the archive was taken.	
9	Purge any unneeded data.	
10	Export any business objects that cannot be upgraded. Including business processes, service configurations, trading partners, maps, and so on. The exported business object can be imported into the upgraded system if you need them.	
11	Create a process output log.	
12	Disable the virus protection software on the server. If the virus protection software is enabled, the upgrade fails.	

Pre-Upgrade Operating System Verification Checklist

Before you begin the upgrade, you need to verify your operating system configuration using the following checklist:

For the Operating System	Operating System Configuration Checklist	Your Notes

HP-UX Operating System	Verify these settings:
	• Verify kernel parameters and establish the following minimum settings by running kctune command:
	  – kctune max_thread_proc 1024
	  – kctune maxdsiz 2147483648
	  – kctune maxdsiz_64bit 8589934592
	  – kctune maxssiz 369098752
	  – kctune maxssiz_64bit 536870912
	• Run ulimit utility, verify, and establish the following minimum settings:
	  – ulimit -d = 2097152 (in kilobytes) or higher
	  – ulimit -s = 360448 (in kilobytes) or higher	

For the Operating System	Operating System Configuration Checklist	Your Notes

AIX Operating System	You must specify the name of the installation directory name. The installation process creates the directory and beneath it, a directory called "install".
	
	 To ensure that /*install_dir*/install has the necessary permissions, AIX users must run the following command on the parent directory of /*install_dir*/install before installation:
	
	 `chmod -R a-s <absolute path>/install_dir_parent`
	
	 where *install_dir_parent* is the directory in which /*install_dir*/install will be created.
	
	 For example, to specify
	
	 AIX_1/applications/test1/*my_install* as your installation directory, you could run the command from the AIX_1/applications directory (directly above the test1 directory):
	
	 `chmod -R a-s test1`
	
	 or from another location on the file system:
	
	 `chmod -R a-s /AIX_1/applications/test1`
	
	 This ensures that when the *my_install* directory is created during installation, it inherits the correct permissions from test1.	

Linux Operating System	You need to disable SELinux by enter the following: `/etc/sysconfig/selinux: SELINUX=disabled` Ensure that /etc/hosts has short-names first for all entries. For example, 127.0.0.1localhostlocalhost.localdomain If the base locale is English, verify: • that the LANG variable is en_US • LANG variable is exported	

For the Operating System	Operating System Configuration Checklist	Your Notes

RedHat Enterprise Linux Operating System	Make the following system changes:
	
	• If the base locale for the system is English, edit the /etc/sysconfig/i18n file by changing the SUPPORTED variable from en_US.utf8 to en_US. You can also allow multiple support using the following format: en_US.utf8:en_US
	
	• Save and close the /etc/sysconfig/i18n file. Edit the /etc/security/limits.conf file by adding the following lines:
	  – `* hard nofile 8196`
	  – `* soft nofile 4096`
	  – `* hard memlock 3000000`
	  – `* soft memlock 3000000`
	  – `* hard nproc 16000`
	  – `* soft nproc 16000`
	  – `* hard stack 512000`
	  – `* soft stack 512000`
	This updates the system ulimits. For nofile, the recommended value is unlimited.
	
	• Save and close the /etc/security/limits.conf file.
	
	• Reboot the system.	

Solaris Operating System	Set the following entries in the /etc/security/limits file:
	  `nofiles = 4096` (recommended value is unlimited)
	  `set rlim_fd_max=4096` (limit is 65535) - hard limit
	  `set rlim_fd_cur=4096` - soft limit
	
	• To make the setting effective as the hard limit, reboot the server or run the following command:
	  `kill -1 inetd`
	
	• To make the setting effective as the soft limit, use the parent shell configuration (for example, .profile). Then, reboot the server.	

For the Operating System	Operating System Configuration Checklist	Your Notes

SUSE Linux Operating System	Make the following system changes:
	• If the base locale for the system is English, edit the /etc/sysconfig/i18n file by changing the SUPPORTED variable from en_US.utf8 to en_US. You can also allow multiple support using the following format: en_US.utf8:en_US
	• Save and close the /etc/sysconfig/i18n file. Edit the /etc/security/limits.conf file by adding the following lines:
	  – * hard nofile 8196
	  – * soft nofile 4096
	  – * hard memlock 3000000
	  – * soft memlock 3000000
	  – * hard nproc 16000
	  – * soft nproc 16000
	  – * hard stack 512000
	  – * soft stack 512000
	  This updates the system ulimits. For nofile, the recommended value is unlimited.
	• Save and close the /etc/security/limits.conf file.
	• Reboot the system.	

Pre-upgrade database checklist (cluster environment)

Before you begin an installation:

#	Pre-upgrade database checklist (cluster environment)	Your notes:
1	If required, copy the Microsoft SQL Server 2000 database to an SQL Server 2005 database. This procedure is optional and it is the customer's responsibility to perform it. (IBM Customer Support cannot help with this procedure.)	
2	If you are using Oracle 8i with Sterling B2B Integrator 4.0, upgrade to Oracle 9i before you upgrade to this version of Sterling B2B Integrator.	
3	If you plan to import an Oracle 9 or Oracle 10 database when you upgrade to this version of Sterling B2B Integrator, you must import the database without the indexes. For example, if you are using the Oracle import (imp) tool, use the INDEXES=N option. If you attempt upgrading to this version of Sterling B2B Integrator with indexes turned on, the upgrade fails. If you created any custom indexes in Oracle database, add them after you upgrade as they are not imported.	

#	Pre-upgrade database checklist (cluster environment)	Your notes:

4	If you are using MySQL, a new MySQL database is created in this version of Sterling B2B Integrator and information is copied from the MySQL database in your previous version of Sterling B2B Integrator to the new database.
	
	The MySQL database in your previous version of Sterling B2B Integrator works. When you copy your database, if you encounter Data Overflow or Invalid Time Format errors while you are copying the WORKFLOW_CONTEXT table, run this query:
	
	`UPDATE WORKFLOW_CONTEXT SET ENTERQ = NULL,`
	`EXITQ = NULL where ENTERQ IS NOT NULL OR EXITQ`
	`IS NOT NULL`	

Supporting Information

Verifying that your system meets the system requirements

Before you begin the installation, verify that your system meets the hardware and software requirements that are specified for this release. The hardware requirements that are listed in the *System Requirements* are the minimum that is required. Your system requirements exceed the minimum if you are running other applications on the same system as Sterling B2B Integrator.

The installation strictly enforces the following system requirements:

- Operating system version must match requirement exactly.
- The minimum fix pack level for the operating system is enforced, but you can apply higher fix pack levels.
- JDK version must match requirement exactly.
- The disk space is a minimum for the installation. The system must be separately sized to handle whatever load is going to be put on the system.
- Database version must match exactly.
- JDBC driver version supports exact matches and wildcard matches.

If any of these requirements are not met, the installation fails. If the installation fails, review the installation log for a list of non-compliant items.

Obtaining upgrade media
About this task

Before you upgrade, check the Product Updates & Downloads site to ensure that you have the latest version of the upgrade media.

To obtain the most recent version of upgrade media:

Procedure

1. Go to https://customer.sterlingcommerce.com.
2. Enter your **User Name** and **Password**.
3. Click **Support Center**.

4. Under **Product Support**, select **Sterling Integrator > Product Updates & Downloads**.

5. Select **Sterling Integrator**.

6. Under the **Upgrading Sterling Integrator/GIS**, select **Request Upgrade Jar File - Sterling Integrator Version Number**. Where "Number" is the version you are upgrading to.

7. Enter the following information for a Sterling B2B Integrator/GIS upgrade request form:
   - Company Name
   - Billing Account Name
   - Ship to Contact Name
   - Ship to Street Address
   - Email Address
   - PSP number - The PSP Number (unique number that identifies a licensed software asset in your Sterling B2B Integrator installation) is present in the temporary or previous version of the keyfile you received from IBM.
   - Delivery Method (ground shipment 5 - 7 days or electronic software delivery)
   - Current Software Version
   - IP address
   - License File key
   - Operating System

8. Select the adapter that you are running from the list.

9. Click **Submit**. Your upgrade media is shipped to you with the delivery method that you selected

Creating a process output log
About this task

A log of process activity during the upgrade helps if troubleshooting is required. Output is automatically logged to the upgrade log files (`PreInstallSi.log` and `InstallSi.log`). Use this procedure to generate a separate output log for each process you want to log.

To create a process output log:

Procedure

1. From any directory, run the script to record the processes. Ensure that you create and specify the name of the file in which to save the process output.

   For example, to start recording output to a file named `processoutput.log`, type `script processoutput.log` at the command line. The `processoutput.log` file is created in the directory where you ran the script command.

2. When the upgrade is complete, enter `exit` at the command line to stop recording.

3. You can now retrieve the file that contains the process output.

   The following example shows a session after the script command starts running, specifying the output to be saved to the file named `listing.log`, and typing exit to stop the script:

```
[2]%script listing.log
   Script started, file is listing.log
   [3]%ls
```

```
Custard.Recipe FavoriteRecipes Curry.Recipe
VindalooCurry.Recipe Jelly.Recipe
[4]%exit
 Script done, file is listing.log
```

Copying a Microsoft SQL Server 2000 database to an SQL Server 2005 database
About this task

Attention: This procedure is optional. It is the customer's responsibility to do it.IBM Customer Support cannot help with this procedure.

Before you begin your upgrade, make a backup of your Microsoft SQL Server 2000 database. One way to accomplish this backup is to make a separate copy of your existing database so that you can preserve your current system. If you are moving from a Microsoft SQL Server 2000 database to an SQL Server 2005 database, use the following procedure. Your existing Sterling Gentran Integration Suite instance no longer functions if you upgrade your existing database without making a copy.

After this procedure, you will have two databases:
- A database that you use in your upgraded version of Sterling B2B Integrator.
- A database that you can use in your old version of Sterling B2B Integrator.

Procedure
1. Perform a full database backup to the file system on the source SQL 2000 server of the source database.
2. Copy the resultant backup (.bak) file from the file system on the source server file system to the file system on the SQL 2005 server.
3. Connect to the SQL 2005 database server as a Windows authenticated user with administrative privileges on the database server with SQL Server Management Studio 2005.
4. Make sure that the destination database is not in use (disconnect any connected applications).
5. Restore the backup of the SQL 2000 database over the existing SQL 2005 database with the Tasks|Restore|Database wizard. The restore is from a "device," the file that was previously created. Specify on the Options tab the correct locations for the data and log files (since the locations in the backup might not be the same as the correct locations for files on the on SQL 2005 database server). Select the check box to specify that the existing database is to be overwritten. Confirm that the restore is reported as successful.
6. Check to make sure that existing users in the database match existing users on the server with the command `sp_change_users_login 'report'`. If no rows are returned, go to step 8.
7. If rows are returned, run the command `sp_change_users_login 'update_one'`, `'username'`, `'username'` substituting the unlinked login name in each execution to correct links between existing users in the restored database and existing logins on the server.
8. Examine the users of the database with the SQL Studio or sp_helpuser. If the login (existing on the server) who is working with this database is not currently a user of the restored database, add that login as a user of the database by running the following commands (login_name and user_name are generally the same):

```
USE database_name
Go
EXEC sp_grantdbaccess 'login_name', 'user_name'
Go
EXEC sp_addrolemember 'db_owner', 'username'
Go
CHECKPOINT
Go
USE master
Go
EXEC sp_defaultdb 'username', 'database_name'
Go
```

Note:

Do not include the spaces in the quoted strings in the SQL commands in the final procedure, as spaces are significant to the procedure and the commands fail if they are there (EXEC sp_grantdbaccess 'login_name', 'user_name' should be EXEC sp_grantdbaccess 'login_name', 'user_name').

9. Examine the user tables in the SQL 2005 database to determine which schema they currently are in. Using the SQL Studio, the schema is the prefix before each table listed in the Table tree.

   Note:

   This assumes that the schema of the user objects is not changed, even if it is a schema name with the same name as a user other than the user who is accessing the data.

10. Run the following command in the SQL 2005 database to ensure that the default schema for the user who interacts with the database matches the schema that contains the restored user objects. If the objects are in the dbo schema, use dbo as the schema_name.

```
USE database_name
Go
ALTER USER user_name WITH DEFAULT_SCHEMA = schema_name
Go
```

What to do next

Note: You must configure Snapshot for your Microsoft SQL Server. For more information, see the *Configure Snapshot for Microsoft SQL Server* topic.

Configure Snapshot for Microsoft SQL Server
About this task

The snapshot feature in Microsoft SQL Server allows you to view a read-only copy of the database even when it is locked. Configuring the snapshot feature can also reduce deadlocks.

Enter the following command to enable the snap shot feature:

```
ALTER DATABASE db_name SET READ_COMMITTED_SNAPSHOT ON;
```

Information Gathering Checklist

Information Gathering Checklist for Upgrades (UNIX/Linux Cluster)

Before you begin the upgrade, you should review the information in the Information Gathering Checklist. The checklist contains all of the information that you will need to have while running the upgrade scripts. Supporting information and details are included at the end of this chapter.

The checklist contains:

- Brief descriptions for tasks (detailed procedures are provided after the checklist)
- Information you need to gather to prior the starting the upgrade

You may want to make a copy of the following checklist and use it to record the information you collect.

The cluster environment does not support the following items:

- MySQL database
- AS2 Edition

#	Information Gathering Checklist for Cluster Upgrades	Your Notes
1	Review your IBM contract to determine what software you have licensed.You need to know this License Information so that you can select the correct components/features to install.	
2	Determine which upgrade method you are going to use: • GUI-based • Text-based • Silent Installation	
3	Determine if you are going to run the pre-upgrade checks during the upgrade.	
4	Determine if you are going to use multicast ports.	
5	Decide which type of security certificates you will use: • The default self-signed SSL (Secure Sockets Layer) certificate that is automatically installed. • A Certificate Authority-related certificate that you install before installing the software.	
6	If you are using an Oracle, SQL Server, or DB2 database, decide if you are going to manually or automatically apply Database Definition Language (DDL) Statements (schema) to the database.	
7	If you are using an Oracle 11.1 database, you must set it up for native compilation by allocating space and by setting the plsql_native_library_dir parameter.	
8	Record the Hostname on which you plan to install the software.	

#	Information Gathering Checklist for Cluster Upgrades	Your Notes
9	Determine if you are going to use FIPS (Federal Information Processing Standards) mode.	
10	Record the Directory Name where you plan to install the software.	
11	Record the Login to host machine.	
12	Record the Password to the host machine.	
13	Record the path to the JDBC drivers.	
14	Record the path to the installation wizard and file name.	
15	Record the path to JDK.	
16	Record the path to JCE file.	
17	Record the Host IP address.	
18	Record the Initial Port Number.	
19	Record the System passphase.	
20	Record the Administrative e-mail address to which system alert messages are sent.	
21	Record the SMTP Server IP address used for sending alert messages.	
22	Record the Database vendor name.	
23	Record the Database user name.	
24	Record the Database password.	
25	Record the Database (catalog) name.	
26	Record the Database host name.	
27	For Oracle or Microsoft SQL Server, record the Path and file name for the JDBC Driver.	
28	For DB2, record the Absolute paths and file names for two JDBC drivers.	

Supporting Information

Pre-upgrade check for clusters

Pre-upgrade checks reviews Oracle, SQL Server, and DB2 database environments before the upgrade is started. This tool finds common upgrade errors. Run the pre-check for node 1 only.

The pre-upgrade checks ensure:
* SI_VERSION table exists
* Database character set is correct for Oracle and DB2
* Schedule start times are not later than the end times
* The passphrase that is entered matches the existing passphrase in the database
* Database implementation for Oracle Long Raw and BLOB
* User has permission to perform the upgrade
* Collation settings are validated for MS SQL
* OBJECT_NAME is table SCI_ENTITY is no longer than 100 characters

* Default schema that you identified during upgrade matches the existing database

If any of these items are not validated, the upgrade fails. You are provided with an error message and must correct the situations and then restart the upgrade.

License information

IBM provides the license files for each feature of Sterling B2B Integrator that you purchased with the software media. You do not have to contact IBM customer support to get the license files.

A separate license is required for each Sterling B2B Integrator feature that you purchased. During installation, you must choose the license files according to what you purchased. IBM customer support will audit your system after it is in use.

For more information about modifying licenses files, see the topic on License Modification.

Multicast ports: node to node communications

Cluster nodes are configured to communicate with each other using JGroups, an open source toolkit that provides flexibility for protocol configuration. JGroups provides rich open management features, along with multiple protocol support. JGroups supports multicast (UDP) and TCP-based communication protocols.

When JGroups is configured to use multicast (UDP), all cluster nodes communicate with each other on a specific IP address and port. The multicast ports are configured based on the installation base port. All clusters that are on the same subnet that is configured on the same base port send multicasting messages on the same multicast IP address and port.

To avoid this issue, each cluster on the same subnet must be configured on different base ports. Install your clusters on different port ranges or on different network segments with multicast forwarding restricted so that they do not interfere with each other. The default multicast address that is used is 239.255.166.17. This address is configurable, with a port range of 10 ports, starting with the multicast base port for the instance.

All nodes in the same cluster must be installed on the same multicast base port (the multicastBasePort property in the noapp.properties_platform_ifcresources_ext.in file). This port is computed from the system base (non-multicast) port, but can be configured separately in the noapp.properties_platform_ifcresources_ext.in file, to allow different nodes in a cluster to be installed at different (non-multicast) port ranges. Also, install all the nodes in the cluster in the same subnet.

For node to node communications, the properties are defined in jgroups_cluster.properties. The attributes that are used to define communications are:
* property_string - default value is UDP.
* distribution_property_string - default value is TCP. Never set this attribute to UDP.

If you want to change the communication for cluster multicast from the UDP protocol to TCP, you must change the value of the property_string property in the jgroups_cluster.properties.in file (after you back up the file), and then run the **setupfiles** command. You can change this right after the installation or after you

start running the cluster. If you change the file after you start the cluster, you must stop all nodes of the cluster, change the value on each node, and then restart your cluster.

To change the communication for cluster multicast from the UDP protocol to TCP, use the following value for the property_string property in the jgroups_cluster.properties.in file:

```
property_string=TCP(start_port=any_available_port_number):
TCPPING (initial_hosts=this_instance_host_ip[start_port_number],
theothernode_instance_host_ip[theothernode_start_port_number];port_range=2;
timeout=5000;num_initial_members=3;up_thread=true;down_thread=true):
VERIFY_SUSPECT(timeout=1500):
pbcast.NAKACK(down_thread=true;up_thread=true;gc_lag=100;retransmit_timeout=3000):
pbcast.GMS(join_timeout=5000;join_retry_timeout=2000;shun=false;print_local_addr=
true;down_thread=true;up_thread=true)
```

For more information about UDP, TCP, and JGroups communications, refer to the *Sterling B2B Integrator Clustering* documentation.

Security certificates

Before you begin the installation, you must decide which of the following security certificates to use:

- The default self-signed SSL (Secure Sockets Layer) certificate that is automatically generated by the installation.
- A Certificate Authority-related certificate that you generate before you install the software.

If you install with the default SSL certificate, but you later want to switch to a CA-related certificate, you can switch with the sslCert property in the noapp.properties_platform_ifcresources_ext.in file.

UNIX accounts

In a UNIX or Linux environment, create one UNIX administrative account on the host server for all of the installations. For example, if you want to create a test environment and a production environment, create one UNIX account on the host server. For more information about creating UNIX accounts, see your operating system documentation.

Port numbers

During installation, you are prompted to specify the initial port number. Review the following port number guidelines:

- A range of 200 consecutive open ports within the range of 1025 - 65535 are required for this installation.

  Note: Because of RMI, on occasion, a port number outside the range might be assigned.
- The initial port number represents the beginning port number in the range.
- Make sure that port numbers in the port range are not used by any other applications on your system.

After your installation, refer to the */install_dir*/install/properties/sandbox.cfg file for all of the port assignments.

Database Definition Language (DDL) Statements

When you install Sterling B2B Integrator, you can manually apply Database Definition Language (DDL) statements to your database tables instead of requiring the installation process to do it directly.

This feature increases database security by reducing the database permissions of the Sterling B2B Integrator database user. The rights to database objects can be reserved for a secure user like a customer database administrator (DBA). A business can require that only a DBA with the proper permissions can make database changes.

Upgrade the Software

General UNIX/Linux Cluster Upgrade Information

CAUTION: Sterling B2B Integrator should be installed behind a company firewall for security purposes. See the *Perimeter Server* and *Security* topics in the Sterling B2B Integration documentation library for more information on secure deployment options.

Upgrade Methods

Use one of the following methods to upgrade your system:
* Upgrade a Cluster using the GUI-Based method
* Upgrade a Cluster using the Text-Based method
* Upgrade a Cluster using the Silent Install File method

The cluster environment does not support the following items:
* MySQL database (even though it appears as an option in the wizard)
* AS2 Edition

Cluster Upgrade Information

Upgrading Sterling B2B Integrator cluster nodes is similar to upgrading a Sterling B2B Integrator single node, with the following restrictions on all nodes:
* All nodes must use the same database.
* All nodes must use the same passphrase.
* All nodes must use the same operating system.
* When installing nodes on different machines, the initial port numbers must be the same. Installing nodes on different machines helps you take more advantage of the reliability, availability, and scalability features of clustering, including failover.
* When installing nodes on the same machine, you must install nodes 2 and higher in different directories and use different initial port numbers. Each initial port number must be at least 100 higher or lower than other initial port numbers.
* Nodes must be installed sequentially, one at a time, starting with the first node.
* After installing all of the nodes, nodes must be started sequentially, one at a time, starting with the first node.
* The upgrade creates subsequent ports based on the initial port number. For all of the port assignments, see the */install_dir*/install/properties/sandbox.cfg file.

- Before applying an IPv6 address, see IPv6 Capabilities section in Sterling B2B Integrator *System Requirements*.
- If you are installing Sterling B2B Integrator on VMware, provide the IP address of the virtual machine, not the IP address of the VMware host. For example, if 10.251.124.160 is the IP address of the VMware host and 10.251.124.156 is the IP address of the Windows 2003 server it is hosting, you should use 10.251.124.156 as the correct IP address to install Sterling B2B Integrator.
- If you are running the upgrade on an active installation of Sterling B2B Integrator, you will need to run the soft stop command to gracefully stop traffic. For more information on performing a soft stop, see the Soft Stop documentation in the System Administration Guide on the Sterling B2B Integrator 5.2 Information Center.

UNIX/Linux Guidelines

The following are some general guidelines:
- If you are on Linux, do not use any soft or symbolic links in the path to the IBMInstallWizard.jar file.
- If you are using FTP to copy the files, verify that your session is set to binary mode.
- The installation directory must have adequate free disk space.
- The installation directory must not already exist because the installation process creates it.
- If you are using AIX with the DB2 database, the directory path cannot be longer than 108 bytes.
- The directory path to SI.jar cannot include any spaces.

General UNIX/Linux Installation Wizard Information

The installation wizard provides:
- The option of either entering the paths or selecting the paths and files (**Select File**).
- For every screen in the GUI-Based installation wizard, you need to click **Next** to move to the next step the wizard. The click **Next** step is not represented in each step in the procedure.
- For every screen in the Text-Based installation wizard, you need to press **Enter** to move to the next step the wizard. The press **Enter** step is not represented in each step in the procedure.

Guidelines for IPv6 addresses

Before you use an IPv6 address during an installation, see the *IPv6 capabilities* section in *System requirements*.

Consider the following IPv6 address information when you are planning the installation:
- If you use an IPv6 address, use a fully qualified address that includes square brackets around the address, and a zero between colons where there are no other numbers. For example, use [fe80:0:0:0:213:72ff:fe3c:21bf] instead of fe80::213:72ff:fe3c:21bf.
- If you are installing with IPv6 address, comment the host name mapping to IPv4 address and retain the mapping to IPv6 address in the host file in `/etc/sysconfig/networking/profiles/default/hosts` directory.

- You must install with a host name, not an IPv6 address, otherwise the Lightweight JDBC adapter and Graphical Process Modeler (GPM) do not work.
- If you are using an Oracle database, do not use an IP v6 address for the host name.
- If you are using an IPv6 address and are going to configure Sterling B2B Integrator as a dual stack host, after you complete the installation, you must add the IPv6 address (as the admin_host.3 property) to the `noapp.properties_platform_ifcresources_ext.in` file.

Upgrade Using the GUI-Based Method in a UNIX/Linux Cluster Environment

About this task

Before you begin:
- You should have completed the *Information Gathering Checklist for Upgrades*.
- *install_dir* refers to the installation directory where the new software will be installed. Do not use any pre-existing directory name or an old version of the Sterling B2B Integrator installation directory. If you do, you could inadvertently overwrite the existing installation. You should create a new installation directory before you begin the installation.
- *parent_install* is the directory one level above the *install_dir* directory. Ensure that the *parent_install* directory has the proper permissions set using the chmod command.

To upgrade the cluster, starting with node 1:

Procedure

1. From the installation media, copy IBMInstallWizard.jar and SI.jar to a UNIX/Linux directory.
2. Log in to a server where you plan to do the software installation. To run the installation wizard in GUI mode, you need to run some type of windows client tool. For example:
   a. Start X server in your UNIX/Linux server using an X Windows client tool.
   b. Log in to your UNIX/Linux environment.
   c. Set the display to use your server as a client using the following command: export DISPLAY=*server*:0.0
3. Navigate to your working directory. For example, cd *parent_install*.
4. Enter: */path_to_java*/bin/java -jar */absolutePath*/IBMInstallWizard.jar

   The program verifies support for your operating system and JDK. It also verifies that your operating system is patched to the required level.

   The installation wizard is displayed.
5. Click **Next** to start the upgrade.
6. Enter the full path to the JDK directory.
7. Select the Licenses/Features to install. The following list is displayed:
   - IBM Sterling B2B Integrator and/or IBM Sterling File Gateway
   - FIPS Module
   - AS2 Edition Module
   - Financial Services Module
   - EBICS Banking Server Module

Note: Select only the licenses/features that have been defined by your IBM contract. If you are unsure which to select, the installation can proceed without making a selection and will complete successfully. Start up and operation of the software, however, requires one of the licenses to be selected. See *License Modification* to apply licenses post-install.

Note: Sterling File Gateway requires additional installation steps. See the *Sterling File Gateway Installation Guide* for more information.

8. Enter the full path to your JCE file.
9. Enter the path to installation directory. If the directory does not exist, click **Yes** at the prompt *The directory does not exist, create it?*. The installer creates the installation directory.

   This installation directory is referred to as *install_dir*. Below the installation directory, install_dir, the installer creates a directory named install. This directory contains the installation files.
10. Enter the path to the Sterling B2B Integrator install jar file.
11. Enter the explicit IP address for the server or use the default value of localhost.
12. Enter the initial port number or use the default value of 8080.
13. Enter your system passphrase.
14. Re-enter the system passphrase.
15. Enter the administrative e-mail address to which you want system alert messages sent.
16. Enter the SMTP mail server (IP address or host name) that you want to use for system alert messages and other administrative notices.
17. If you want to enable FIPS (Federal Information Processing Standards) mode, select the checkbox. The default is disable FIPS mode.
18. Select the database that you want to use (Oracle, Microsoft SQL Server, DB2, or MySQL).

    Clustering is not supported for Sterling B2B Integrator systems that use the MySQL database, even though it appears as an option.
19. Select all options that apply to this upgrade:

This installation is an upgrade from a prior version	• For node 1: Select this check box. • For node 2 or higher: Do not select this checkbox.
This installation is for a cluster node 2 or higher	• For node 1: Do not select the check box. • For node 2 or higher: Select the check box.
Apply database schema automatically?	If yes, no action required. The default is to automatically apply the DDL statements. If you want to manually create the database schema, clear the **Apply database schema automatically** check box and continue with the remaining installation steps. **Note:** Once the install starts, it will run for a short time and then exit. When the installation stops, you must perform additional actions as given in Step 27 of this procedure.

Verbose install?	By default, the check box is not selected.
	Select the checkbox to generate the installation log.The events that occur during the installation are recorded in InstallSI.log file.

20. Enter the database connection information.
    - Database user name
    - Database password (and confirmation)
    - Database catalog name
    - Database host name
    - Database port
    - (Oracle and Microsoft SQL Server only) Absolute path and file name for one JDBC driver file
    - (DB2 only) Absolute paths and file names for two JDBC driver files

      Use the Type-4 JDBC driver. This type of driver converts JDBC calls into the network protocol used directly by DB2, allowing a direct call from Sterling B2B Integrator to the DB2 server.
    - (Oracle only) Select the check box to select the data type to use for caching. Select either the default BLOB (binary large object) columns data type or the Long Raw data type.

      You can significantly improve performance by enabling the cache on the BLOB data object in Oracle. For more information, refer to the Sterling B2B Integrator documentation for slow performance in Oracle.
21. Review and confirm the database information.
22. Do you want to run the Upgrade Pre-checks?
    - If yes, click **Next**. (Default is Yes) You only need to run the pre-check for node 1 in the cluster. Then you will need to Confirm Running Upgrade Pre-Check.
    - If no, click **No** to skip the pre-check.
23. Review the default **Install Actions**. The following check boxes are automatically selected and you can not clear them:
    - Verify Operating System is supported
    - Verify the selected JDK is supported
    - Install Components
    - Save install files
    - Clean Up Files
24. Select the appropriate JDK. By default, the 64-bit JDK is selected. By default, the 64-bit JDK is selected.
25. If you want to create a desktop icon for launching Sterling B2B Integrator, select the check box . By default, the check box is not selected.
26. Click **Next** to continue.

    The Installation Progress screen appears. You can click **Show Details** to confirm your installation information before starting the installation.
27. Click **Install** to finish the upgrade.

The Installation Progress screen shows the general progress of the installation through different stages. For more information about these stages, click **Show Details**.

Note: If you DID NOT select the option to **Apply database schema automatically** , the installation stops and you must perform additional steps for the installation to complete.

Important: In version 5.2.x of Sterling B2B Integrator, there is a misleading error displayed if manually applying the database schema. Once you start the installation, an error occurs after the SQL scripts are generated. A dialog box appears with the message, `Install failed Error running the install.`

To complete the installation with manual DDL statements:

a. Navigate to your install directory.

b. Locate the PreInstallSI.log file and open it with a file editor.

c. Search the file for these error messages:
    - <SI_Install>/repository/scripts/EFrame_IndexAdds.sql must be applied to the database.
    - <SI_Install>//repository/scripts/EFrame_Sequence.sql must be applied to the database.
    - <SI_Install>//repository/scripts/EFrame_TableChanges.sql must be applied to the database. Exiting installation..."

    Note: If you do not find the above error messages in the log file, the installation failed because of another reason and you must resolve that error and attempt the installation again. If you did find these messages, continue with the remaining steps.

d. Edit each .sql script and make changes appropriate for your database. This may include changing the SQL delimiter or adding tablespace options.

e. Log in to your database as the DB schema user.

f. Execute the SQL files manually in this order:

    Note: When you are executing the scripts, it is important to execute the SQL scripts in the specified order.
    - EFrame_IndexDrops.sql
    - EFrame_TableChanges.sql
    - EFrame_IndexAdds.sql
    - EFrame_TextIndexAdds.sql
    - EFrame_Sequence.sql
    - EFrame_TextIndexModify.sql
    - EFrame_TextIndexUpdates.sql
    - EFrame_TextIndexUpgrade.sql
    - EFrame_Static.sql

g. Exit from the database.

h. Navigate to the parent directory of *install_dir*.

i. Delete (or Rename as a backup) the Sterling Integrator install directory.

j. Restart the installation wizard and provide the same installation options you provided before including clearing the **Apply database schema automatically** check box.

The installation completes automatically. When the installation is finished, the system displays a dialog box with the message `Installation Wizard completed. Please see the installation guide for next steps.`

Installation information is in the following log files:

- PreInstallSI.log
- ant.install.log
- InstallSI.log

28. If you are upgrading multiple nodes on the same machine or used different base ports for node 2 onward, you need to complete the following additional steps:

Step	Action	Your Notes
1	Navigate to */install_dir*/install/properties for node 1.	
2	Review the multicastBasePort property in the noapp.properties_platform_ifcresources_ext file and the mcast_port property in the jgroups_cluster.properties file. Record the value of the multicastBasePort and mcast_port.	
3	Navigate to the */install_dir*/install/properties directory of each node (from node 2 onward).	
4	Change the **multicastBasePort** property in the **noapp.properties_platform_ifcresources_ext.in** file to the value of the **multicastBasePort property** in the **noapp.properties_platform_ifcresources_ext** file in the node 1 installation.	
5	Change the **mcast_port** property in the **jgroups_cluster.properties.in** file to the value of the **mcast_port property** in the **jgroups_cluster.properties** file in the node 1 installation.	
6	Enter for each node in the cluster: `/install_dir/install/bin/setupfiles.sh`	

29. On each node, starting with node 1, run the command `startCluster.sh nodeNumber` from the */install_dir*/install/bin directory where nodeNumber is the sequential number assigned to each node starting with 1. For example, on the first two nodes, you would run the following commands:

    For Node 1:

    `./startCluster.sh 1`

    When the cluster environment is configured, you will get the message *BUILD SUCCESSFUL*. **For Node 2:** `./startCluster.sh 2` Enter the passphrase. When the cluster environment is configured, you will get the message *Deployment to application server successful*.

30. After the cluster configuration is complete, go to the `/install_dir/install/bin` directory for each node, starting with the first node, enter: `./run.sh`. When prompted, enter the passphrase that you entered earlier. The final startup processes run, concluding with the following messages: *Open your Web browser to http://host:port/dashboard* Where host:port is the IP address and port number where Sterling B2B Integrator resides on your system. Depending on system

load, it may take several minutes for the UI to be ready. Make a note of the URL address so that you can access Sterling B2B Integrator later. The system returns you to a UNIX/Linux prompt.

To make a dynamic addition of new nodes to the cluster, install new nodes to the cluster as described above and configure the servers for the cluster.

31. Determine if you need to apply a patch to the software. Refer to *System Maintenance* for information on how to install the latest patch.

Upgrade Using the Text-Based Method in a UNIX/Linux Cluster Environment

About this task

Before you begin:
- You should have completed the *Information Gathering Checklist for Upgrades*.
- *install_dir* refers to the installation directory where the new software will be installed. Do not use any pre-existing directory name or an old version of the Sterling B2B Integrator installation directory. If you do, you could inadvertently overwrite the existing installation. You should create a new installation directory before you begin the installation.
- *parent_install* is the directory one level above the *install_dir* directory. Ensure that the *parent_install* directory has the proper permissions set using the chmod command.
- If at any time you need to go back and change any input previously entered, you will have to re-start the installation. Enter `Ctrl + C` and then re-start the upgrade.

To upgrade the cluster, starting with node 1:

Procedure

1. From the installation media, copy IBMInstallWizard.jar and SI.jar to a UNIX/Linux directory.
2. Navigate to your working directory. For example, cd *parent_install*.
3. Enter: `/path_to_java`/bin/java `-jar` `/absolutePath`/IBMInstallWizard.jar

   The program verifies support for your operating system and JDK. It also verifies that your operating system is patched to the required level.

   The installation wizard is displayed.
4. Press **Enter** to start the upgrade.
5. Enter the full path to the JDK directory.
6. Select the Licenses/Features to install. Enter `true` to select the license when prompted. Default is false. You will be prompted for each of the following licenses:
   - IBM Sterling B2B Integrator and/or IBM Sterling File Gateway
   - FIPS Module
   - AS2 Edition Module
   - Financial Services Module
   - EBICS Banking Server Module

   Note: Select only the licenses/features that have been defined by your IBM contract. If you are unsure which to select, the installation can proceed without making a selection and will complete successfully. Start up and

operation of the software, however, requires one of the licenses to be selected. See *License Modification* to apply licenses post-install.

Note: Sterling File Gateway requires additional installation steps. See the *Sterling File Gateway Installation Guide* for more information.

7. Enter the full path to your JCE file.
8. Enter the path to installation directory. If the directory does not exist, click **Yes** at the prompt *The directory does not exist, create it?*. The installer creates the installation directory.

    This installation directory is referred to as *install_dir*. Below the installation directory, install_dir, the installer creates a directory named install. This directory contains the installation files.
9. Enter the path to the Sterling B2B Integrator install jar file.
10. You are prompted on whether to override the default host IP address.
11. Enter the explicit IP address for the server or use the default value of localhost.
12. Enter the initial port number or use the default value of 8080.
13. Enter your system passphrase.
14. Re-enter the system passphrase.
15. Enter the administrative e-mail address to which you want system alert messages sent.
16. Enter the SMTP mail server (IP address or host name) that you want to use for system alert messages and other administrative notices.
17. Do you want to use FIPS (Federal Information Processing Standards) mode? The default is disable FIPS mode.
    - If yes, enter `true` and press **Enter**.
    - If no, press **Enter** (Default value is false).
18. Enter the number of the database that you want to use (Oracle, Microsoft SQL Server, DB2 or MySQL).

    Clustering is not supported for Sterling B2B Integrator systems that use the MySQL database, even though it appears as an option.
19. At the prompt, *This installation is an upgrade from a prior version*:
    - For node 1, enter `true` to continue as an upgrade. (Default value is false.)
    - For node 2 and higher, press **Enter**.
20. At the prompt, *This installation is for a cluster node 2 or higher*:
    - For node 1, press **Enter**. (Default value is false.)
    - For node 2 and higher, enter `true` and press **Enter**.
21. At the *Apply database schema automatically?* prompt:
    - To automatically apply the database schema, press **Enter**. The default is to automatically apply the DDL statements.
    - To manually create the database schema, enter `false` and continue with the remaining installation steps.

        Note: Once the install starts, it will run for a short time and then exit. When the installation stops, you must perform additional actions as given in Step 27 of this procedure.
22. At the *Verbose install?* prompt:
    - If no, press **Enter**. (Default value is false.)
    - If yes, enter `true`. The events are recorded in InstallSI.log file.

23. Enter the database connection information.
    * Database user name
    * Database password (and confirmation)
    * Database catalog name
    * Database host name
    * Database port
    * (Oracle and Microsoft SQL Server only) Absolute path and file name for one JDBC driver file
    * (DB2 only) Absolute paths and file names for two JDBC driver files

      Use the Type-4 JDBC driver. This type of driver converts JDBC calls into the network protocol used directly by DB2, allowing a direct call from Sterling B2B Integrator to the DB2 server.
    * (Oracle only) Select the check box to select the data type to use for caching. Select either the default BLOB (binary large object) columns data type or the Long Raw data type.

      You can significantly improve performance by enabling the cache on the BLOB data object in Oracle. For more information, refer to the Sterling B2B Integrator documentation for slow performance in Oracle. To use the Long Raw data type, enter 2 and press **Enter**.
24. Review and confirm the database information.
25. Do you want to run the Upgrade Pre-checks?
    * If yes, enter 1 (yes) and press **Enter**. (Default is Yes.) You only need to run the pre-check for node 1 in the cluster.

      To confirm that you want to run the upgrade pre-check, press **Enter**.
    * If no, enter 2 (no) and press **Enter** to skip the pre-check.

    If the pre-check generates an error message, you will need to resolve the error situation, before the upgrade can be restarted.
26. Is this a 32 or 64-bit JDK?
    * If you are using a 32-bit JDK, enter 1 and press **Enter**.
    * If you are using a 64-bit JDK (default value), press **Enter**.
27. Do you want to create a desktop icon for accessing Sterling B2B Integrator?
    * If yes, enter true and press **Enter** at the Create Desktop Icons (Windows & Linux) prompt.
    * If no, press **Enter**. (Default value is false.)

    The upgrade automatically continues.

    The screen displays the progress of your upgrade.

    Note: If you DID NOT select the option to **Apply database schema automatically** , the installation stops and you must perform additional steps for the installation to complete.

    To complete the installation with manual DDL statements:
    a. Navigate to your install directory.
    b. Locate the PreInstallSI.log file and open it with a file editor.
    c. Search the file for these error messages:
        * <SI_Install>/repository/scripts/EFrame_IndexAdds.sql must be applied to the database.

- <SI_Install>//repository/scripts/EFrame_Sequence.sql must be applied to the database.
- <SI_Install>//repository/scripts/EFrame_TableChanges.sql must be applied to the database. Exiting installation..."

Note: If you do not find the above error messages in the log file, the installation failed because of another reason and you must resolve that error and attempt the installation again. If you did find these messages, continue with the remaining steps.

d. Edit each .sql script and make changes appropriate for your database. This may include changing the SQL delimiter or adding tablespace options.

e. Log in to your database as the DB schema user.

f. Execute the SQL files manually in this order:

Note: When you are executing the scripts, it is important to execute the SQL scripts in the specified order.

- EFrame_TableChanges.sql
- EFrame_IndexAdds.sql
- EFrame_TextIndexAdds.sql
- EFrame_Sequence.sql
- EFrame_TextIndexModify.sql
- EFrame_TextIndexUpdates.sql
- EFrame_TextIndexUpgrade.sql
- EFrame_Static.sql

g. Exit from the database.

h. Navigate to the parent directory of *install_dir*.

i. Delete (or Rename as a backup) the Sterling Integrator install directory.

j. Restart the installation wizard and provide the same installation options you provided before including clearing the **Apply database schema automatically** check box.

28. When the upgrade is finished, the system displays the following message:

BUILD SUCCESSFUL Total time: nn minutes nn seconds Installation Wizard completed. Please see the installation guide for next steps. Installation information is in the following files:

- PreInstallSI.log
- ant.install.log
- InstallSI.log

29. If you are using the AIX operating system and are using IPv6:

- Navigate to the /*install_dir*/install/properties
- Add the following to the sandbox.config file: IPV4STACK=false
- Navigate to the /*install_dir*/install/bin
- Enter ./setupfiles.sh

30. If you are upgrading multiple nodes on the same machine or used different base ports for node 2 onward, you need to complete the following additional steps:

Step	Action	Your Notes
1	Navigate to /*install_dir*/install/properties for node 1.	

Step	Action	Your Notes
2	Review the multicastBasePort property in the noapp.properties_platform_ifcresources_ext file and the mcast_port property in the jgroups_cluster.properties file. Record the value of the multicastBasePort and mcast_port.	
3	Navigate to the */install_dir*/install/properties directory of each node (from node 2 onward).	
4	Change the **multicastBasePort** property in the **noapp.properties_platform_ifcresources_ext.in** file to the value of the **multicastBasePort property** in the **noapp.properties_platform_ifcresources_ext** file in the node 1 installation.	
5	Change the **mcast_port** property in the **jgroups_cluster.properties.in** file to the value of the **mcast_port property** in the **jgroups_cluster.properties** file in the node 1 installation.	
6	Enter for each node in the cluster: `/install_dir/install/bin/setupfiles.sh`	

31. On each node, starting with node 1, run the command `startCluster.sh` nodeNumber from the */install_dir*/install/bin directory where nodeNumber is the sequential number assigned to each node starting with 1. For example, on the first two nodes, you would run the following commands:

    For Node 1:

    `./startCluster.sh 1`

    When the cluster environment is configured, you will get the message BUILD SUCCESSFUL. **For Node 2:** `./startCluster.sh 2` Enter the passphrase. When the cluster environment is configured, you will get the message *Deployment to application server successful*.

32. After the cluster configuration is complete, go to the `/install_dir`/install/bin directory for each node, starting with the first node, enter: `./run.sh`. When prompted, enter the passphrase that you entered earlier. The final startup processes run, concluding with the following messages: *Open your Web browser to http://host:port/dashboard* Where host:port is the IP address and port number where Sterling B2B Integrator resides on your system. Depending on system load, it may take several minutes for the UI to be ready. Make a note of the URL address so that you can access Sterling B2B Integrator later. The system returns you to a UNIX/Linux prompt.

    To make a dynamic addition of new nodes to the cluster, install new nodes to the cluster as described above and configure the servers for the cluster.

33. Determine if you need to apply a patch to the software. Refer to *System Maintenance* for information on how to install the latest patch.

Silent Installation Method for Upgrades

The silent installation method automates part of the upgrade process and limits your manual interaction with the upgrade program. To use the silent installation method, you will need to first create a silent install file using a text editor.

Create the Silent Installation Upgrade File for a UNIX/Linux Cluster Environment
About this task

The following entries correlate to prompts in the *Upgrade Using the Text-Based Method* procedure. The silent install file must contain the entries marked as required in the following table. Record the file name and location, as you will use this information during the installation.

Create a silent installation file with the following variables:

Silent Install File Entry	Description
ACCEPT_LICENSE	(Required) Indicates if the user accepts the license agreement. Default: YES
JVM_LOC	(Required) Full path to JDK directory.
LICENSE_FILE_PATH	(Required) Full path to Core_License.xml. The Core_License.xml file is located on the same media as the install wizard jar and the installation jar.
LICENSE_FILE_# (where # is a number between 1 and 99)	(Required) This is required for each license you install. You need to add an entry for each license file to the silent install file. The LICENSE_FILE numbering (#) does not need to be sequential. For example: LICENSE_FILE_1= SI_SFG_License.xml LICENSE_FILE_2= Fin_Serv_License.xml LICENSE_FILE_3= SI_SFG_FIPS_License.xml LICENSE_FILE_4= AS2_License_.xml LICENSE_FILE_5= EBICS_License_.xml
SI_LICENSE_AVAILABLE	(Optional) Indicates if a license is being passed in and is required for the installation. Default: YES
JCE_DIST_FILE	(Required) Full path to unlimited strength JCE policy file. If present, this file will overwrite the JCE file in the JDK.
INSTALL_DIR	(Required) Directory that includes the bin subdirectory (where many commands are stored) and the properties subdirectory (where many properties are stored).The INSTALL_DIR property cannot point to a pre-existing directory, or the installation will fail.
REINIT_DB	(Required) Indicates if database should be initialized. • For node 1 of a cluster, this property is true. • For node 2 and higher of a cluster, this property is false. Default: true

Silent Install File Entry	Description
CLUSTER	(Required) Indicates if this is the second or higher node of a cluster installation.
	Valid values:
	• true - This is the second or higher node of a cluster installation.
	• false (default) - This is the first node of a cluster or a single node (non-cluster) installation.
INSTALL_IP	(Required) Host name or IP address.
	Valid values:
	• localhost (default)
	• (your IP address or host name)
	If you are installing Sterling B2B Integrator on VMware, provide the IP address of the virtual machine, not the IP address of the VMware host. For example, if 10.251.124.160 is the IP address of the VMware host and 10.251.124.156 is the IP address of the Windows 2003 server it is hosting, you should use 10.251.124.156 as the correct IP address to install Sterling B2B Integrator.
	CAUTION: **Before applying an IPv6 address, see** *IPv6 Capabilities* **section in the** *System Requirements***.**
	If you use an IPv6 address, use a fully qualified address that includes square brackets around the address, and a zero (0) between colons where there are no other numbers. For example, use [fe80:0:0:0:213:72ff:fe3c:21bf] instead of fe80::213:72ff:fe3c:21bf.
	If you are installing with IPv6 address, comment the Host Name mapping to IPv4 address and retain the mapping to IPv6 address in the host file located in /etc/sysconfig/networking/profiles/default/ hosts directory.
	You must install using a host name, not an IPv6 address, otherwise the Lightweight JDBC adapter and Graphical Process Modeler (GPM) will not work.
PORT1	(Required) Base port for ASI server. Ports are assigned consecutively from this port.
	Default: 8080
APSERVER_PASS	(Required) Passphrase used to secure all encrypted data in database.
SI_ADMIN_MAIL_ADDR	(Required) E-mail address for the administrative user.
	Example: abc@xyz.com
SI_ADMIN_SMTP_HOST	(Required) Valid SMTP host through which the system can e-mail the administrative user.
	Example: mail.xyz.com
FIPS_MODE	(Optional) Indicates if you are using FIPS (Federal Information Processing Standards) mode.
	Valid values:
	• true - Enable FIPS mode.
	• false (default) - Disable FIPS mode.

Silent Install File Entry	Description
DB_VENDOR	(Required) Database vendor. Valid values: • Oracle • MSSQL2005 (use this value for Microsoft SQL 2005 and 2008) • DB2 • MySQL (default)
DB_CREATE_SCHEMA	(Required) Indicates if you want the database schema automatically created. Valid values: • true (default) - Automatically create the schema. • false - Manually create the schema. If you create the database schema manually, restart the installation procedure in a new installation directory. You can delete the installation directory created earlier.
DEBUG	(Optional, highly recommended) Records events that occur during the installation in InstallSI.log file. Valid values: • true - records events that occur during the installation. • false (default) - does not record the events that occur during installation.
DB_USER	(Required) Database user name.
DB_PASS	(Required) Database password.
DB_DATA	(Required) Database catalog name.
DB_HOST	(Required) Database host name. Default: localhost
DB_PORT	(Required) Database port.
DB_DRIVERS	(Required) Full path to JDBC driver files. If DB_VENDOR is: • Oracle or MSSQL, specify one driver. • DB2, specify two drivers. If you specify more than one driver, use colons (:) to separate the file names. Examples: • *JDBC_driver_dir*/db2jdbc.jar • *JDBC_driver_dir*/db2_1_jdbc.jar:*JDBC_driver_dir*/db2_2_jdbc.jar
UPGRADE	(Required) Indicates if you are upgrading. Type true to indicate that you are upgrading. Default: false
DB_CREATE_SCHEMA	(Required) Indicates if you want the database schema automatically created. Valid values: • true (default) - Automatically create the schema. • false - Manually create the schema. **Note:** If you create the database schema manually, restart the installation procedure in a new installation directory. You can delete the installation directory created earlier.

Silent Install File Entry	Description
ORACLE_USE_BLOB	(Required if DB_VENDOR=Oracle) Indicates the data type to use for caching. • true (default) - BLOB (binary large object) • false - Long Raw
MSSQL2005	(Required for Microsoft SQL Server 2005) This attribute is case-sensitive. • Set this attribute to the default value of true. • (All other servers) Do not include this attribute.
JDK64BIT	Indicates if a 32-bit or 64-bit JDK is being used. Refer to the *System Requirements* to determine the type of JDK for your operating system. Valid values: • true (default) - 64-bit • false - 32-bit
Icons	(Required) Indicates whether to create a desktop icon for accessing Sterling B2B Integrator. Valid values: • true - Create a desktop icon. • false (default) - Do not create a desktop icon.

The following entries do not directly correlate to prompts in the installation procedure. Use these entries to customize or document your installation.

Silent Install File Entry	Description
IPV4STACK	(Required for AIX) Set this parameter to false. For example: IPV4STACK=false
DB_DRIVERS_VERSION	(Optional) Free form version string for JDBC driver. This is informational only. Example: 8_1_5
LOAD_FACTORY_SETUP	(Optional) Indicates whether factory setup should be loaded during installation. To manually set LOAD_FACTORY_SETUP to false after an installation where LOAD_FACTORY_SETUP=true (the default value), change LOAD_FACTORY_SETUP to false in sandbox.cfg file. Valid values: • true (default).- loads factory setup during installation. • false - does not load factory setup during installation. Run loadDefaults command after installation.
CONFIG_GS	(Optional) Indicates whether integration with Sterling Gentran:Server® should be configured. Default: No
NO_DBVERIFY	(Optional) Valid values are true or false. When set to true during installation and installservice, dbverify will not be run. This means that Sterling B2B Integrator will not generate DDL to make the database like the XML entity repository.

Upgrade with a Silent Installation File (UNIX/Linux Cluster)
About this task

Before you begin:

- *install_dir* refers to the installation directory where the new software will be installed. Do not use any pre-existing directory name or an old version of the Sterling B2B Integrator installation directory. If you do, you could inadvertently overwrite the existing installation. You should create a new installation directory before you begin the installation.
- *parent_install* is the directory one level above the *install_dir* directory. Ensure that the *parent_install* directory has the proper permissions set using the chmod command.

To install Sterling B2B Integrator using a silent installation file:

Procedure

1. From the installation media, copy SI.jar to a UNIX/Linux directory.
2. If you want to run the upgrade pre-check, from the upgrade media, copy IBMUpgradePreCheck.jar to a UNIX/Linux directory.
3. Set up your silent installation file and record the location.
4. Navigate to your working directory. For example, `cd parent_install`.
5. If you want to run the pre-check, enter the following command, which includes paths to the JDK, the IBMUpgradePreCheck.jar file, and the silent installation file:

   `/path_to_java/bin/java -jar /absolutePath/IBMUpgradePreCheck.jar -f /absolutePath/SilentInstallFile`

   The validation starts. If the pre-check generates an error message, you must resolve the error situation, before the upgrade can be restarted. When the pre-check finishes without any errors, the system displays the following message: *SI upgrade pre-check has been completed successfully*
6. To start the upgrade, enter: `/absolutePath/bin/java -jar /absolutePath/SI.jar -f /absolutePath/SilentInstallFile`

   The upgrades starts. You can follow the progress on the screen.

   The installation program verifies support for your operating system and JDK. It also verifies that you have enough space for the installation.
7. When the installation of node 1 is finished, the system displays the following message: `Installation has completed successfully.`

   Note: Select only the licenses/features that have been defined by your IBM contract. If you are unsure which to select, the installation can proceed without making a selection and will complete successfully. Start up and operation of the software, however, requires one of the licenses to be selected. See *License Modification* to apply licenses post-install.

   Note: Sterling File Gateway requires additional installation steps. See the *Sterling File Gateway Installation Guide* for more information.
8. (Skip this step if you are applying database schema automatically.) If you are going to manually create the database schema, the install starts and runs for a short time before exiting.

   Note: After the installation stops, you must perform these additional steps:
   a. Navigate to your install directory.
   b. Locate the PreInstallSI.log file and open it with a file editor.
   c. Search the file for these error messages:
      - <SI_Install>/repository/scripts/EFrame_IndexAdds.sql must be applied to the database.

- <SI_Install>//repository/scripts/EFrame_Sequence.sql must be applied to the database.
- <SI_Install>//repository/scripts/EFrame_TableChanges.sql must be applied to the database. Exiting installation..."

Note: If you do not find the above error messages in the log file, the installation failed because of another reason and you must resolve that error and attempt the installation again. If you did find these messages, continue with the remaining steps.

d. Edit each .sql script and make changes appropriate for your database. This may include changing the SQL delimiter or adding tablespace options.

e. Log in to your database as the DB schema user.

f. Execute the SQL files manually in this order:

Note: When you are executing the scripts, it is important to execute the SQL scripts in the specified order.
- EFrame_TableChanges.sql
- EFrame_IndexAdds.sql
- EFrame_TextIndexAdds.sql
- EFrame_Sequence.sql
- EFrame_TextIndexModify.sql
- EFrame_TextIndexUpdates.sql
- EFrame_TextIndexUpgrade.sql
- EFrame_Static.sql

g. Exit from the database.

h. Navigate to the parent directory of *install_dir*.

i. Delete (or Rename as a backup) the Sterling Integrator install directory.

j. Restart the installation wizard and provide the same installation options you provided before including clearing the **Apply database schema automatically** check box.

When the installation stops, you need to perform the following steps:

a. Log in to your database as the DB schema user.

b. Execute the SQL files manually in this order:

Note: When you are executing the scripts, it is important to execute the SQL scripts in the specified order.
- EFrame_TableChanges.sql
- EFrame_IndexAdds.sql
- EFrame_TextIndexAdds.sql
- EFrame_Sequence.sql
- EFrame_TextIndexModify.sql
- EFrame_TextIndexUpdates.sql
- EFrame_TextIndexUpgrade.sql
- EFrame_Static.sql

c. Exit from the database.

d. Navigate to the parent directory of *install_dir*.

e. Delete (or Rename as a backup) the Sterling Integrator install directory.

    f. Restart the installation and provide the same installation options you provided before including clearing the **Apply database schema automatically** check box.

9. Install each subsequent node, from node 2 onwards. If you are installing nodes on separate machines, enter the same information in the silent installation file that you entered for node 1, with the following exceptions:

   - Set REINIT_DB=false. This prevents the database from being re-initialized.
   - Set CLUSTER=true.

   If you are installing multiple nodes on the same machine, enter the same information in the silent installation file that you entered for node 1, with the following exceptions:

   - Set REINIT_DB=false. This prevents the database from being re-initialized.
   - Set CLUSTER=true.
   - Use a different installation directory for each node (the /*install_dir*/ property in the silent installation file).
   - Use an initial port number that is 200 port numbers higher or lower than the initial port number on other nodes (the PORT1 property). Each node will be configured on a different port range.

   After all the nodes are installed, proceed to the next step.

10. To start the installation of nodes 2 and higher of the cluster, type the following command, which include paths to the JDK directory, the application jar file, and the silent installation file (note the -f parameter).

   /absolutePath/bin/java -jar /absolutePath/SI.jar -f /absolutePath/ SilentInstallFile -cluster The upgrade starts. You can follow the progress of your upgrade on screen.

11. If you are upgrading multiple nodes on the same machine or used different base ports for node 2 onward, you need to complete the following additional steps:

Step	Action	Your Notes
1	Navigate to /*install_dir*/install/properties for node 1.	
2	Review the multicastBasePort property in the noapp.properties_platform_ifcresources_ext file and the mcast_port property in the jgroups_cluster.properties file. Record the value of the multicastBasePort and mcast_port.	
3	Navigate to the /*install_dir*/install/properties directory of each node (from node 2 onward).	
4	Change the **multicastBasePort** property in the **noapp.properties_platform_ifcresources_ext.in** file to the value of the **multicastBasePort property** in the **noapp.properties_platform_ifcresources_ext** file in the node 1 installation.	
5	Change the **mcast_port** property in the **jgroups_cluster.properties.in** file to the value of the **mcast_port property** in the **jgroups_cluster.properties** file in the node 1 installation.	
6	Enter for each node in the cluster: /install_dir/install/bin/setupfiles.sh	

12. On each node, starting with node 1, run the command `startCluster.sh` `nodeNumber` from the */install_dir*/install/bin directory where nodeNumber is the sequential number assigned to each node starting with 1. For example, on the first two nodes, you would run the following commands:

    For Node 1:

    `./startCluster.sh 1`

    When the cluster environment is configured, you will get the message BUILD SUCCESSFUL. **For Node 2:** `./startCluster.sh 2` Enter the passphrase. When the cluster environment is configured, you will get the message *Deployment to application server successful.*

13. After the cluster configuration is complete, go to the `/install_dir`/install/bin directory for each node, starting with the first node, enter: `./run.sh`. When prompted, enter the passphrase that you entered earlier. The final startup processes run, concluding with the following messages: *Open your Web browser to http://host:port/dashboard* Where host:port is the IP address and port number where Sterling B2B Integrator resides on your system. Depending on system load, it may take several minutes for the UI to be ready. Make a note of the URL address so that you can access Sterling B2B Integrator later. The system returns you to a UNIX/Linux prompt.

    To make a dynamic addition of new nodes to the cluster, install new nodes to the cluster as described above and configure the servers for the cluster.

14. Determine if you need to apply a patch to the software. Refer to *System Maintenance* for information on how to install the latest patch.

Validate the Upgrade

Validate the Cluster Upgrade Checklist

As part of the upgrade, you need to run the following tests to ensure that the software upgrade was successful. Complete the following tasks:

Number	Validate Cluster Upgrade Task	Completed
1	Configure the Nodes in the Cluster Environment.	
2	Verify the Cluster Environment Settings in Property Files.	
3	Start the Cluster Environment.	
4	Access Sterling B2B Integrator.	
5	Validate the Installation (Sample Business Process).	
6	Verify the Cluster is Running from the User Interface.	
7	Stop Sterling B2B Integrator in a Cluster Environment: • Stop a Node in a Cluster Environment (Soft Stop) • Stop a Node in the Cluster Configuration (Hard Stop) • Stop the Cluster	

Configuring the nodes in the cluster
About this task

The first time that you configure a cluster, you must use the **startCluster** command with true option (startCluster.sh nodeNumber true). Initial configuration is the only time that you must use the **startCluster** command. However, if you must use the command again, use the **startCluster** command with the false

option (**startCluster.sh nodeNumber false**). The false option prevents any configuration changes from affecting the system, especially after installation of a fix pack or interim fix.

To configure the nodes, starting with node 1:

Procedure

1. Navigate to */install_dir*/install/bin.
2. Enter ./startCluster.sh <nodeNumber> <true or false>. Where *<nodeNumber>* is the number of the node, true runs database updates and false prevents database updates. For example, for node 1, enter ./startCluster.sh 1 true
3. If you are starting node 2 or higher, enter your passphrase. For node 1, you are not prompted to enter your passphrase.
4. After the cluster starts, the following message is displayed:
   ```
   BUILD SUCCESSFUL
   Total time nn minutes nn seconds
   Done with ant script
   Running setup files
   ```
   You can proceed to the next node after the command-line prompt is displayed.

What to do next

After all the nodes are configured, the following message is displayed:

```
Deployment to application server successful.
```

Verifying the cluster environment settings in property files
About this task

To verify the cluster environment is correct, check these property settings on node 2.

Note: If these property settings are not in place, then add them to the appropriate property file.

Procedure

1. Navigate to */install_dir*/install/properties.
2. Verify that CLUSTER=true is in the sandbox.cfg file.
3. Verify that cluster=true is in the centralops.properties file.
4. Verify that cluster=true is in the noapp.properties_platform_ifcresources_ext file.
5. Verify that clustered_env=true is in the ui.properties file.

Starting the cluster
About this task

You must do this task for each node.

To start the cluster:

Procedure

1. Navigate to */install_dir*/install/bin.
2. Enter **./run.sh**.
3. Enter your passphrase.
4. The final startup processes run, concluding with the following message: Open your Web browser to http://*host:port*/dashboard

   Where *host:port* is the IP address and port number where Sterling B2B Integrator is located on your system.

   Depending on system load, it might take several minutes for the UI to be ready.
5. Record the URL address so that you can access Sterling B2B Integrator.

What to do next

If you must release all the locks in a cluster and both nodes are down, use the restart parameter for node 1.

Note: The restart parameter can be used on node 1 and cannot be used on any other nodes.

For example:

For node 1, enter:

./run.sh restart

For nodes 2 and higher, enter:

./run.sh

Accessing Sterling B2B Integrator
About this task

To log in to Sterling B2B Integrator:

Procedure

1. Open a browser window and enter the address that is displayed at the end of startup. The login page displays.
2. Enter the default user ID and password. The default login is at an administrative level. One of your first tasks as an administrator is to change the administrative password and to register other users with other levels of permission.

Testing a sample business process to validate the installation
About this task

Validate the installation by testing a sample business process:

Procedure

1. From the **Administration Menu**, select **Business Process > Manager**.
2. In the **Process Name** field, enter Validation_Sample_BPML and click **Go!**
3. Click **execution manager**.
4. Click **execute**.

5. Click **Go!** The `Status: Success` message displays in the upper left side of the page.

Verifying that the cluster is running from the user interface
About this task

To verify that the cluster is running from the user interface (UI):

Procedure
1. From the UI, from the **Administration Menu**, select **Operations > System > Troubleshooter**. Ensure you can view the Queue information for each node.
2. From the UI, from the **Administration Menu**, select **Operations > System > Troubleshooter**. Ensure you can view the JNDI Tree for each node.
3. From the UI, from the **Administration Menu**, select **Operations > System > Troubleshooter**. Ensure you can view the host, state, status, adapters, and memory usage information for each node.
4. From the UI, from the **Administration Menu**, select **Operations > System > Troubleshooter**. Ensure you can view the adapter status for each node.

Stopping a node in a cluster environment (soft stop)
About this task

A soft stop halts the system after all the business processes finish running. In a cluster environment, you must do this task on each node, starting with node 1.

Running the soft stop command in a clustered environment suspends all of the scheduled business processes. Run the hard stop command when you are stopping individual nodes of a cluster.

To soft stop in a UNIX or Linux environment:
- You can select **Operations > System > Troubleshooter** and click **Soft Stop**.
- You can run the soft stop from the command-line interface.

For more information, see the Performance Management documentation.

To run a soft stop, from the command line:

Procedure
1. Navigate to */install_dir*/install/bin.
2. Enter `./softstop.sh`.
3. Enter your passphrase.

Stopping a node in a cluster configuration (hard stop)
About this task

You can stop a single node Sterling B2B Integrator in an UNIX or Linux cluster environment.

To run a hard stop, do this task for each node:

Procedure

1. Navigate to */install_dir*/install/bin.
2. Enter ./hardstop.sh.

Stopping the cluster
About this task

To stop the cluster:

Procedure

1. From the **Administration** menu, select **Operations > System > Troubleshooting**.
2. Click **Stop the System**.

Post Upgrade Configuration

Post Upgrade Configuration Checklist

The upgrade is complete. You need to now perform some post upgrade procedures. Review all of the procedures in the checklist. Some procedures may not be required.

#	Post Upgrade Configuration Checklist	Your Notes
1	For security purposes, change all default user ID passwords immediately after installation is completed. See the *Update My Account Information* task in the documentation library.	
2	Determine if You Need to Apply a Maintenance Patch to the Cluster	
3	Change the Administrative Password	
4	Update Custom Configurations	
5	Update the Database (dbupdate) with the startCluster Command	
6	Configure Shared File System as Document Storage	
7	Changes to Network Interface Bindings	
8	Disable Services	
9	Download Sterling B2B Integrator Tools	
10	Enable Business Processes	
11	Configure Property Files	
12	Add cdinteropfiles	
13	Add Third-Party Libraries	
14	Configure Services and Adapters	
15	Configure JDBC Adapter and Lightweight JDBC Adapter	
16	Configure File System Adapter and Command Line2 Adapters	
17	Configure Odette FTP Adapter	
18	Restore Performance Tuning Configuration	

#	Post Upgrade Configuration Checklist	Your Notes
19	Add Advanced File Transfer Tab	
20	Reconfigure Archive Settings	
21	Review the EDI Sequence Check Sequence	
22	Correct Missing Manager ID	
23	Configure Document File Systems	
24	Configure ActiveMQ for a Cluster Environment	
25	Add host[port] From all the Nodes to the jgroups_cluster.property.in for Each Node	
26	Configure JVM Containers	

Determine if You need to Apply a Maintenance Patch in UNIX/Linux Cluster Environment

About this task

Patches contain cumulative fixes for a specific version of Sterling B2B Integrator.

Patch files are available at:

https://customer.sterlingcommerce.com.

Because each patch contains the fixes from previous patches, you only need to install the most recent patch. Patch files are named using the following naming convention:

si_<release number>_build_<build number>.jar

Information about a patch is located in a PDF file with a similar name. The naming convention for PDF files containing information about a particular patch is:

si_<release number>_build_<build number>_patch_info.pdf

Before you install the patch, review the following items:
- Preserve your custom changes to system resources.
- The patch installation may use one or more patch property override files. These files will be named *propertyFile_patch*.properties. Do not alter these files.
- Property changes made directly in *.properties or *.properties.in files may be overwritten during the patch installation. Properties overridden using the customer_overrides.properties file are not affected. Sterling Commerce recommends that you maintain property file changes using (when possible) the customer_overrides.properties file. For more information about this file, refer to the property file documentation.
- If you edited any of the cdinterop files, you must back them up before applying the patch. The cdinterop files do not have initialization (*.in) files. After applying the patch, use the backup version of the files in your patched installation. These files include the following files: cdinterop-proxy-records.properties; cdinterop-spoe-auth.properties; cdinterop-spoe-policy.properties; and cdinterop-user-records.properties.
- Information about the patch installation is automatically logged to /*install_dir*/install/logs/InstallService.log.

- If you would need to rollback a patch, see the *Patch Changes Report*.
- During patch installation, the dbVerify utility compares the list of standard indexes with those present in the database and drops the custom indexes. You should recreate the custom indexes after the patch installation is complete.

Change the administrative password

This upgrade changes the administrative password to the default password. After the upgrade, change the password to minimize security risks. This password is the admin password for logging in to the user interface.

Update Custom Configurations

About this task

As part of a default cluster configuration, certain values in the database for service or adapter configurations, default document storage type, etc., are updated to get the cluster working. The default settings include no shared or mounted file system available with "line of sight" from all cluster nodes, etc. Certain service or adapter configurations are forcibly deployed on node1 and default document storage type is set up to "Database" for all business processes.

After you install the cluster and evaluate the customer configurations and requirements, the above conditions might change and custom configurations will be incorporated. To keep these custom configuration changes from being overwritten, the following cluster configuration script has an option to update the database:

```
startCluster.sh nodeNumber true/false
```

Where:
- `nodeNumber` is the cluster node number
- `true` to perform database update
- `false` to prevent any database updates

The first time you configure a cluster, run startCluster.sh with the database update option set to true to have all cluster-related configurations take effect.

```
startCluster.sh nodeNumber true
```

For cluster configurations after the first configuration, you can execute the startCluster.sh command with the database update option turned off. This prevents any configuration changes from affecting the system, especially after installing patches/hot-fixes.

```
startCluster.sh nodeNumber false
```

Updating the database (dbupdate) with the startCluster command

About this task

The `startCluster.sh nodeNumber` command on node 1 automatically updates the database, unless you use the command `startCluster.sh 1 false`. The `startCluster.sh nodeNumber` command on all other nodes does not update the database.

When you configure Sterling B2B Integrator cluster for the first time, run the startCluster.sh command with the database update value set to true (startCluster.sh 1 true). Running this command enables all cluster-related configurations. The database update synchronizes the scheduled jobs between the nodes by assigning them all to node 1.

The startCluster.sh command with the database update value turned off (startCluster.sh 1 false) prevents any configuration changes from affecting the system, especially after you install fix packs or interim fixes.

For current database updates, the following services are tied to node 1:
- Schedule
- FileSystem
- CmdLine
- CDServerAdapter
- CDAdapter
- CDRequesterAdapter
- CEUServerAdapter
- HttpServerAdapter
- B2B_HTTP_COMMUNICATIONS_ADAPTER
- HTTP_COMMUNICATIONS_ADAPTER
- HTTPClientAdapter
- FTPClientAdapter
- FtpServerAdapter
- SFTPClientAdapter

The following services have storage that is set to the database:
- HttpServerAdapter
- CEUServerExtractServiceType
- CDSERVER_ADAPTER

The default storage of all workflows is set to the database.

Configure Shared File Systems as Document Storage
About this task

To configure the shared file systems as document storage:

Procedure
1. Navigate to /*install_dir*/install/properties.
2. Open the jdbc.properties.in file.
3. Update the value of the *document_dir* attribute to point to the shared files system directory where you store documents.
4. Save and close the file.
5. Navigate to /*install_dir*/install/bin.
6. Enter ./setupfiles.sh.
7. Restart Sterling B2B Integrator.

Changes to network interface bindings

To increase the security of the Administrator Console User Interface, the system binds to specific network interfaces. After the installation, if the URL returns the error message **Page cannot be displayed**, you can adjust property settings to correct the problem.

Updating property file for network interface binding changes
About this task

On the server where the system is located, edit the `noapp.properties_platform_ifcresources_ext.in` file.

Procedure
1. Locate the **admin_host** parameter. The default settings are as follows:
   - *hostname1* is the name of primary network interface, the one given highest priority by the system.
   - *localhost* is the name of the network interface on the server where the system is located.
   - Default entries: admin_host.1 = hostname1 and admin_host.2 = localhost
2. Correct the parameters as necessary.
3. If no interface is being displayed, edit *hostname1* so that it correctly identifies the primary network interface that accesses the system.
4. If an extra network interface must access the system, add an extra *admin_host* entries. For example: admin_host.3 = hostname2
5. Stop Sterling B2B Integrator.
6. Navigate to the *install_dir*.
7. Navigate to the bin directory.
8. Run the `setupfiles.sh` (UNIX) or `setup.cmd` (Windows).
9. Start Sterling B2B Integrator.

Updating the dashboard for network interface binding changes
About this task

For the Dashboard user interface, the system provides unrestricted binding to network interfaces through the perimeter server. To restrict access to the Dashboard user interface, you can adjust property settings so that only one network interface accesses the system.

On the server where the system is located, edit the `perimeter.properties.in` file.

Procedure
1. Locate the `localmode.interface` parameter. The default setting is unrestricted. Unrestricted Setting (Default) localmode.interface=*
2. To restrict access to the Dashboard, enter the network interface that you want to support. Restricted Setting localmode.interface=hostname1
3. Stop Sterling B2B Integrator.
4. Navigate to the *install_dir*.
5. Navigate to the bin directory.
6. Run the `setupfiles.sh` (UNIX) or `setup.cmd` (Windows).
7. Start Sterling B2B Integrator.

Disabling services

About this task

The upgrade process enables services that were disabled before the upgrade. If you want to disable these services again, you must disable them in after the upgrade process.

Download Sterling B2B Integrator Tools

Sterling B2B Integrator includes tools that run on a desktop or personal computer. After you install Sterling B2B Integrator, you can install the following tools:

- Map Editor and associated standards
- Graphical Process Modeler (GPM)
- Web Template Designer
- (If licensed) MESA Developer Studio plug-ins, including, MESA Developer Studio Software Development Kit (SDK) and MESA Developer Studio Skin Editor
- (If licensed) Reporting Services, which requires MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports.

Conflicting IP addresses can cause problems when you download a desktop tool.

Enabling business processes

About this task

During the upgrade process, your customized business processes are preserved, but they might not be the default business processes. Review the business processes and enable the customized versions.

Property files configuration

Property files contain properties that control the operation of Sterling B2B Integrator. For example, the REINIT_DB property in the `sandbox.cfg` file controls whether a database is initialized when you install Sterling B2B Integrator.

By modifying the values of these properties, you can customize Sterling B2B Integrator to suit your business and technical needs. Most property files are in the following places:

- For UNIX, `/install_dir/install/properties` directory
- For Windows, `\install_dir\install\properties` directory

After you installSterling B2B Integrator, most property files and scripts do not need any further configuration for basic operation. However, if you want to customize any specific operations, such as setting a different logging level, you must edit (or in some cases, create) certain property or .xml files.

Before you change any property files, refer to *Working with property files* documentation for general information about how to work with Property Files.

Areas where you might make specific property files changes after an installation include:

- LDAP user authentication
- Prevention of cross-site script vulnerabilities

- Logging configuration
- Process-specific property file settings

Adding cdinterop files
About this task

During the upgrade, the cdinteropt files were replaced. Copy the customized version into the upgrade.

Adding third-party libraries
About this task

If you added third-party libraries to configure adapters for the previous release, you must add each of the libraries again after you complete the upgrade. See the documentation for each third-party adapter you use.

Configuring services and adapters
About this task

You might have to reconfigure services and adapters after an upgrade. During an upgrade, packages for services and adapters are reprocessed to update the service configurations.

After an upgrade, the configurations of default adapters and services are reset to their default configurations. The reset includes directory paths, which are restored to their default paths. You must reconfigure those adapters and services, which include, but are not limited to the following list:
- All default FTP adapters
- All default SFTP adapters
- Connect:Enterprise UNIX Server adapter
- OdetteFTP adapter
- SAP Suite adapter
- SWIFTNet Client Service
- SWIFTNet Server adapter

If you modified the standard configuration for a service or adapter, you must reconfigure or reactivate the service or adapter after an upgrade. You must reconfigure adapters that used directories or scripts in the installation directory of your previous release.

Examples of services and adapters that commonly must be reconfigured following an upgrade:
- FTP adapter
- System services such as the Alert service and the BP Fault Log adapter

The following adapters need special consideration after an upgrade:
- JDBC adapter and Lightweight JDBC adapter
- File system adapter and Command Line2 adapters
- Odette FTP adapter

Configuring the JDBC adapter and Lightweight JDBC adapter

About this task

Storage locations of the database pool properties that allow the JDBC adapter and the Lightweight JDBC adapter to communicate with your external database were streamlined. The `poolManager.properties` file was eliminated and some of its pool properties are now included in the `jdbc.properties` file, along with some new properties. You must manually update your existing `jdbc_customer.properties.in` file to add some new database pool properties. If you do not have a `jdbc_customer.properties.in` file, create one since `customer.properties` is not affected by product updates.

Configuring the file system and Command Line2 adapters

About this task

You must configure your file system and Command Line2 adapters before you remove the previous release directory. Reconfigure any file system and Command Line2 adapters that were configured to use directories or scripts in the installation directory for the previous release. Ensure that you create new directories and save scripts outside of the current installation directory and edit each configuration to use the appropriate directories and scripts.

Consider:

- If you are using the Command Line2 adapter and the `CLA2Client.jar` file is located anywhere other than the default location, you must replace it with the new version. For information about the default location and how to start the Command Line2 adapter, see the section *Command Line2 adapter*.
- If you are upgrading to this version of Sterling B2B Integrator from a version lower than 4.0.1 and are using the Command Line2 adapter, you must update the `CLA2Client.jar` file with the version in the */install_dir*/install/client/ cmdline2 UNIX directory or in the *\install_dir*\install\client\cmdline2 for Windows. If you installed the `CLA2Client.jar` file anywhere other than the default location, you must replace each copy of the file with the new version. If you only installed it in the default location, the update occurs automatically during the upgrade process.
- If you are upgrading to this version of Sterling B2B Integrator from a version before 4.0 and are using the Command Line adapter, you must update the `CLAClient.jar` file with the version in the */install_dir*/install/client/ cmdline2 UNIX directory or in the *\install_dir*\install\client\cmdline2 for Windows. If you installed the `CLAClient.jar` file anywhere other than the default location, you must replace each copy of the file with the new version. If you only installed it in the default location, the update occurs automatically during the upgrade process.

The CLA instances are now pointing to the CLA2 Service definition. After you import the old service instances of CLA onto Sterling B2B Integrator, you must reconfigure the imported CLA services to reset the Remote Name and Remote Port service configuration parameters. For more information, see the documentation for the Command Line adapter and Command Line2 adapter.

Configuring the Odette FTP adapter

About this task

If you use the Odette FTP adapter and are using the Partner Profile XML file version 2.00 that is used in Sterling Gentran Integration Suite 4.3, you must modify it to match the new Partner Profile version 3.00. To modify the XML file, refer to the following table:

Section	Name of structure or field	Action	Comment
Partner Profiles	<GeneralParameters> <PartnerProfileVersion>3.00 </PartnerProfileVersion> </GeneralParameters>	Use correct version label of the Partner Profile.	New Version label: 3.00
Physical Partner	Description	Add field and description content	Mandatory in OFTP Partner database
Physical Partner	SubMailbox	Add field, if used.	Optional
Physical Partner	<AuthenticationCertificate type ="..."> <Subject>string</Subject> <Issuer>string</Issuer> <Serial> Bignumber_string </Subject> </AuthenticationCertificate>	Add Structure, if used.	OFTP 2.0: Mandatory for security only. Structure might be repeated.
Physical Partner	<AuthenticationCertificate type ="Private Key"> <Subject>string</Subject> <Issuer>string</Issuer> <Serial>Bignumber_string </Subject> </AuthenticationCertificate>	Add Structure, if used.	OFTP 2.0: Mandatory for security only.
Physical Partner/ CAPI	DWindowSize	Delete field	
Physical Partner/ IP	IPFilter		Uses IPv4 or IPv6 addresses.
Physical Partner IP	SSL	Add field, if used.	OFTP 2.0: Mandatory for security only.
Physical Partner IP	CipherStrength	Add field, if used.	OFTP 2.0: Mandatory for security only.

Physical Partner IP	`<SSLCertificate`
	
	`type ="..">`
	
	`<Subject>string</Subject>`
	
	`<Issuer>string</Issuer>`
	
	`<Serial> Bignumber_string`
	
	`</Subject>`
	
	`</SSLCertificate>`
		Add structure, if used.	OFTP 2.0: Mandatory for security, only. Structure might be repeated.

Physical Partner Contract	Description	Add field and description content.	Mandatory in OFTP Partner database.
Physical Partner Contract	MultipleLoginSessions		Now used.
Physical Partner Contract	DuplicateFilePeriod	Rename DuplicateFileProcessingTestings To DuplicateFilePeriod	
Physical Partner Contract	SessionLogLevel	Add fields.	Optional
Physical Partner Contract	GroupNameList	Add fields, if used.	Optional
Physical Partner Contract	SecureAuthentication	Add fields.	OFTP 2.0: Mandatory
Physical Partner Contract	`<TimeScheduleTable>` ... `<TimeScheduleTable>`	Delete structure and create schedules in the Scheduler.	Initiator Business Process and Business Process user fields are still used.
Physical Partner Contract	OdetteFTPAPILevel	Rename OdetteAPILevel to OdetteFTPAPILevel	
Logical Partner	Description	Add field and description content.	Mandatory in OFTP Partner database.

Logical Partner	`<FileServiceCertificate`
	
	`type ="..">` `<Subject>string</Subject>`
	
	`<Issuer>string</Issuer>`
	
	`<Serial>string</Subject>`
	
	`</FileServiceCertificate>`
		Add structure, if used.	OFTP 2.0: Mandatory for security, only. Structure might be repeated.

Logical Partner Contract	Description	Add field and description content.	Mandatory in OFTP Partner database.
Logical Partner Contract	FileTransmissionRetries	Rename FileTransmitRetries to FileTransmissionRetries	
Logical Partner Contract	SignedEERPRequest	Add field, if used.	

Logical Partner Contract	EERP/NERPSignatureCheck	Add field, if used.	
Logical Partner Contract	File Signing	Add field, if used.	
Logical Partner Contract	File Encryption	Add field, if used.	
Logical Partner Contract	CipherSuite	Add field, if used.	
Logical Partner Contract	File Compression	Add field, if used.	
Logical Partner Contract	CharEncoding	Add field, if used.	
Logical Partner Contract	Receive VitualFilenamePattern	Add field, if used.	
Logical Partner Contract	EERPTimeout	Rename WaitForEERP to EERPTimeout	
Logical Partner Contract	FileScheduleTimeout	Add field, if used.	
Logical Partner Contract	InboundBusinessProcess	Add field, if used.	Optional
Logical Partner Contract	InboundBusinessProcessUser	Add field, if used.	Optional, if no Inbound business process is specified.

After you change the Partner Profile for version 3.00, import the Partner Profile into the new Odette FTP Partner Profile database. For more information, see Odette FTP Partner Profile.

Restoring the performance tuning configuration
About this task

Before you begin this procedure, you must add the Advanced File Transfer Tab.

To restore the performance tuning configuration:

Procedure
1. From the **Administration Menu**, select **Operations** > **System** > **Performance** > **Tuning**.
2. Next to **Edit Performance Configuration**, click **Go!**
3. Click **Edit settings**.

Adding the Advanced File Transfer tab
About this task

The Advanced File Transfer tab will not be enabled by default after an upgrade. If you have a license for Advanced File Transfer, do the following steps to add the Advanced File Transfer tab:

Procedure

1. Log in as **Admin**.
2. Click **Manage Layout**.
3. Click **Add Pane**.
4. Enter the following name: `Advanced File Transfer`
5. Click **Apply**.
6. Click the **customize** icon for the new **Advanced File Transfer** tab.
7. Click **Add Portlet**.
8. Select the **Add box** for **Advanced File Transfer Management**.
9. Click **Apply**.
10. Select **Clear Borders and Title** from the **Decoration** menu.
11. Click **Save and Apply**.

Reconfiguring archive settings
About this task

The upgrade does not automatically reconfigure the archive configuration. You must reconfigure the **Backup Directory** setting in archive manager after an upgrade.

To reconfigure your archive settings, use the following procedure:

Procedure

1. From the **Administration Menu**, select **Operations** > **Archive Manager**.
2. Next to **Configure Archive Settings**, click **Go!**
3. If a message displays about the UI Lock, click **OK** to continue.
4. Click **Next**.
5. Update the **Backup Directory** field with the correct path information:
6. Click **Save**.
7. Confirm the settings and click **Finish**.

Reviewing the EDI sequence check queue
About this task

The EDI sequence check queue is used for X12 and EDIFACT sequence and duplicate checking. You can check the contents of the queue through the UI (**Trading Partner > Document Envelopes > EDI Sequence Check Queue**). Any interchanges that are in the queue will not be able to be processed after upgrade because the EDI compliance report serialized format changed.

If you installed the 5005 media or upgrade to 5005 and higher, the EDI Post processor displays the following error:

```
The compliance report for interchange <interchange document ID> could not be
deserialized because the format has changed. The entry for this interchange
should be manually removed from the EDI Sequence Check Queue through the UI,
and the inbound deenvelope workflow should be rerun (WF ID <wfid>).
```

If you receive this error, follow the instructions in the error message to correct the situation.

Correcting missing manager IDs

About this task

If you created a manager ID with no corresponding user ID in your previous version, the Manager ID might be missing after the upgrade. If the ID is missing, create a user in the system with a user ID that matches the missing manager ID.

Configuring document file systems

About this task

If you use a file system as your document storage method, determine and record the path to the file system.

You must have the file system path structure so that after the upgrade, you can copy/mount the documents to the new installation directory. The directory structure (path to the file system) must be the same in the current and in the upgraded system.

JMS cluster configuration for failover

To allow correct JMS execution and failover in the Sterling B2B Integrator cluster environment, you must configure an external ActiveMQ by following the steps that are outlined in the*Configure ActiveMQ for a cluster environment* task.

The following diagram illustrates how the ActiveMQ can be configured to increase availability and failover.
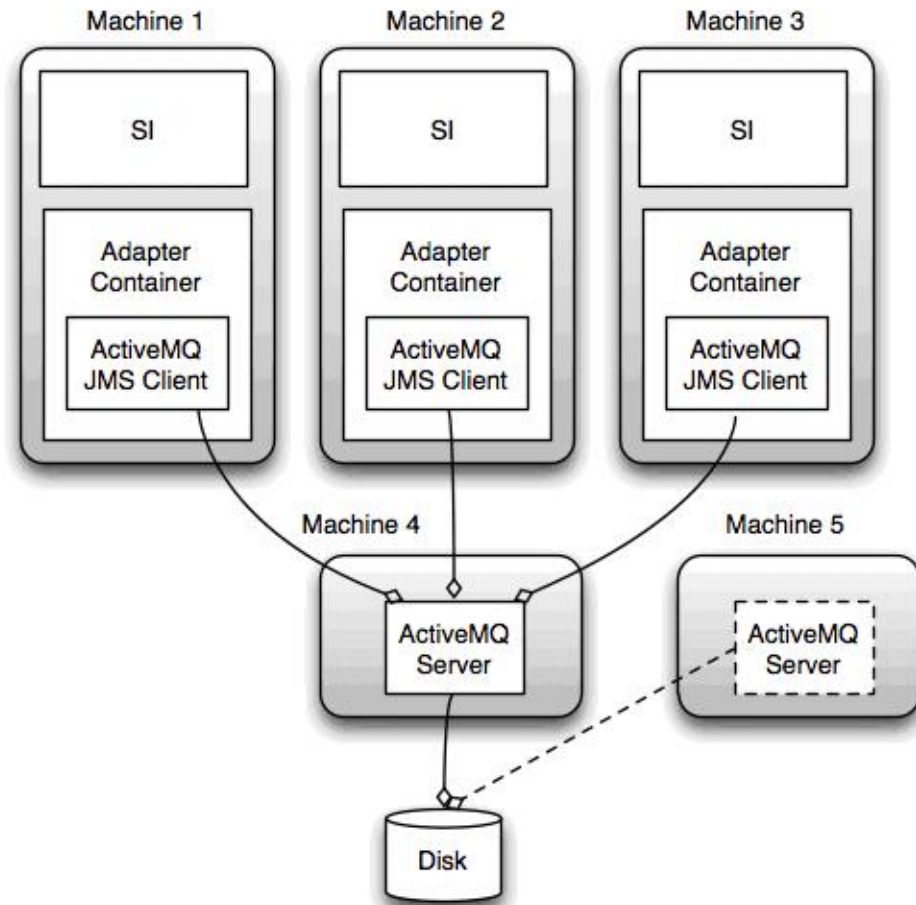
Configuring ActiveMQ for a cluster environment

About this task

To configure ActiveMQ for a cluster environment:

Procedure

1. Download ActiveMQ 5.2 from http://activemq.apache.org/activemq-520-release.html for the appropriate OS.
2. Deploy an instance of ActiveMQ 5.2. The installation can be on the same system as Sterling B2B Integrator or on a separate system.
3. Navigate to */install_dir*/install/properties.
4. Copy the activemq.xml file to the AMQ conf directory. This file configures ActiveMQ to:
   - Use failover clustering
   - Use the Sterling B2B Integrator database for storage
   - Configures the AMQ port usage

   By default, ActiveMQ is configured to listen at the Sterling B2B Integrator base port + 64 and the ActiveMQ interface is at base port + 65 (http://server:base port + 66/admin). The port can be changed by editing the configuration file.
5. Navigate to */install_dir*/install/properties.

6. On each Sterling B2B Integrator application node and each Sterling B2B Integrator container node, the queue configuration must be redirected to use the ActiveMQ cluster. In each node, add the following to the `customer_overrides.properties`:

For FIFO Processing:

```
fifo.broker.username=
fifo.broker.password=
fifo.broker.url=failover:(tcp://amq_master_hostname:amq_master_port,
tcp://amq_slave_hostname:amq_slave_port)
```

For adapters that are running in separate JVM containers:

```
iwfcqueue.username=
iwfcqueue.password=
iwfcqueue.protocol_config=failover:(tcp://amq_master_hostname:amq_master_port,
tcp://amq_slave_hostname:amq_slave_port)
```

7. Start the ActiveMQ instances. To start ActiveMQ, it is necessary to supply the **activemq.hostname** property with the host name for the current system. For example:

```
activemq -Dactivemq.hostname=ExampleHostname
```

For more information about running an ActiveMQ instance, see http://activemq.org.

8. Start Sterling B2B Integrator.

Adding host[port] from all the nodes to the jgroups_cluster.property.in for each node

About this task

Complete this task for both vertical and horizontal clusters. You must complete this task for each node, starting with node 1.

Before you begin, it is important that you never override mcast_addr in the `jgroup_cluster.properties` file.

To add the host [port] to the `jgroups_cluster.property.in` file:

Procedure

1. Navigate to the properties file directory for the node.
2. Determine the initial_hosts port for each node:
   * Navigate to the properties file directory for the node.
   * Find the initial_hosts from the jgroups_cluster.property (initial_hosts=host{port}).
   * Record the value from the initial_hosts for each node.
3. Open the jgroups_cluster.property.in file.
4. Add the initial_hosts property to the file.

   For example, if node 1 is on host1 and node 2 is on host2. For node 1, you would add:

   ```
   initial_hosts=host1[port1],host2[port2]
   ```

   For node 2, you would add:

   ```
   initial_hosts=host2[port2],host1[port1]
   ```

5. Save and close the file.

Configuring JVM containers

About this task

After you upgrade the system, you must reconfigure the JVM containers.

Before you reconfigure the JVM containers, you must know the container numbers from the previous installation.

For example, if you configured the container with the command, `setupContainer.sh` (or `cmd`) 1, then the container number is 1.

Use one of the following tasks to reconfigure your containers:
* *Setting up an adapter Container - iSeries*
* *Setting up an adapter Container - UNIX/Linux*
* *Setting up an adapter Container - Windows*

System Maintenance

Cluster Maintenance Overview

From time to time, you may need to perform system maintenance activities. These activities might include any or all of the following:
* Applying a Patch
* Applying a Hot-fix
* Performing a Checksum
* Generating a Patch Change Report
* Adding or Removing a License

Fix pack or interim fix for a UNIX/Linux cluster environment

From time to time, you must apply either a fix pack or an interim fix to your installation:
* All nodes in the cluster must be patched to the same level. You must stop all nodes in the cluster before you install a fix pack, then install the fix pack on each node.
* Fix packs contain cumulative fixes for a specific version of Sterling B2B Integrator. Because each fix pack contains all of the fixes from previous fix packs, installing the most recent fix pack is sufficient. Periodically check the website to verify that you have the most recent patch.
* An interim fix is one or more fixes that are applied to a specific existing fix pack.

It is possible to apply fix packs to nodes while other nodes are processing. However, a fix pack that contains any of the following, requires the entire cluster to be down:
* Critical cluster functionality
* Engine-related changes
* Changes to the database

You can preserve your custom changes to system resources (like workflow definitions and maps) when you update your system. During updates, the system can identify when you make a custom change versus when the system is changed through an upgrade or fix pack.

When a fix pack, installation or upgrade is performed, a baseline record of system resources is created. This baseline is not affected by any subsequent customer changes. When another fix pack is installed, the resources in this baseline are compared to the resources in the existing system. If a baseline and existing resource are not the same, it means that the existing resource was customized and is not overwritten by the fix pack.

During an update, the baseline is updated with new system resource information, but not with custom changes to resources.

Installing a fix pack in a UNIX/Linux cluster environment
About this task

You will need to install the fix pack on each node in the cluster.

To install the latest fix pack for Sterling B2B Integrator in a UNIX/Linux cluster environment:

Procedure
1. Navigate to the Support Center website.
2. Login using your email address and password.
3. Download the most recent fix pack for your version of Sterling B2B Integrator and record the absolute path to the downloaded file. Do not rename the file. If you use FTP, you must use Binary mode.
4. Verify that the database server is up and ready to accept connections.
5. Log in to the server where Sterling B2B Integrator is installed with the user ID and password that was used for the installation.
6. Stop Sterling B2B Integrator.
7. Perform a full backup of the Sterling B2B Integrator installation directory, including all subdirectories.
8. Perform a backup of the database.
9. If you edited any property files, ensure that the associated properties.in files have the most current changes. Property files will be overwritten with the contents of the associated properties.in files during the fix pack installation.
10. Is the database password encrypted? If Yes, decrypt the password.
11. Navigate to the bin directory where Sterling B2B Integrator is installed. Enter: `cd /install_dir/install/bin`
12. Enter: `./InstallService.sh <path>/si_<release number>_build_<build number>.jar`

    If the fix pack attempts to modify the database schema and the modification fails, you will receive an error message about the failure. The message will provide the error message code from the database and the SQL command that failed. The failure information is also logged to the system.log file (in the /install_dir/install directory) and to the patch.log file.
13. Press **Enter** to continue.
14. If you want to accept the license agreement, enter Y.
15. Enter the passphrase.

Information about the fix pack is displayed. After the fix pack has been applied, the following message is displayed: Deployment to application server successful

16. If you decrypted the database password, re-encrypt the password.

17. Enter ./startCluster.sh 1 to reconfigure the cluster after installing the fix pack.

18. Start Sterling B2B Integrator.

    If you are using a perimeter server in the DMZ, you will to need to review the information on how to apply a fix pack to the perimeter server.

Preserving custom configuration changes in the cluster environment (startCluster.sh)
About this task

As part of a default cluster configuration, certain values in the database for service or adapter configurations, and default document storage, must be updated to get the cluster to work. The default settings do not include a shared or mounted file system with a line of sight from all cluster nodes. Certain service or adapter configurations are forcibly deployed on node 1 and the default document storage type is set up to "Database" for all business processes.

To keep these custom configuration changes from being overwritten, you can run the following cluster configuration script:

./startCluster.sh nodeNumber true/false

Where:
- nodeNumber is the cluster node number
- True runs database updates (True is the default)
- False prevents database updates

The first time that you configure a cluster, you must set the option to true. After the first configuration, you can use the false option. The false option prevents any configuration changes from affecting the system, especially after installation of a fix pack or interim fix.

Apply a critical fix pack (stopping the whole cluster)
About this task

You will need to install the fix pack on each node in the cluster.

To apply a critical fix pack, where the entire cluster needs to be down:

Procedure

1. Stop the cluster.

2. Navigate to /*install_dir*/install/bin.

3. Enter the following command for each node, starting with node 1:
   ./InstallService.sh *fixpack_dir*/*fixpackFilename*.jar.

   Attention: Running **InstallService.sh** removes any previously installed interim fix to prevent conflicts with what is being installed.

4. Open the sandbox.cfg file and change REINIT_DB as follows:
   - For node 1, REINIT_DB=True

- For node 2 or higher, REINIT_DB=False, this prevents the database updates from repeating during the fix pack installation on each node.
5. Configure the node in the cluster, enter `./startCluster.sh nodeNumber false`
6. Start the cluster.

Apply a critical fix pack (stopping one node at a time)
About this task

To apply a fix pack, where the you stop one node at a time:

CAUTION:
Only use this update method if there are no database changes in the fix pack. Check the release notes for each fix pack for this information.

Procedure
1. Starting with node 1, navigate to /*install_dir*/install/bin.
2. Stop the node.
3. After the processes stop, enter the following command: `./InstallService.sh` *fixpack_dir*/*fixpackFilename*.jar.

   Attention: Running **InstallService.sh** removes any previously installed interim fix to prevent conflicts with what is being installed.
4. Navigate to /*install_dir*/install/properties.
5. Open the `sandbox.cfg` file and change REINIT_DB as follows:
   - For node 1, REINIT_DB=True
   - For node 2 or higher, REINIT_DB=False, this prevents the database updates from repeating during the fix pack installation on each node.
6. Configure the node in the cluster, enter `./startCluster.sh nodeNumber false`
7. Repeat steps 1 to 6 for each node.

Applying a critical fix pack (stopping the whole cluster, starting one node at a time)
About this task

You must install the fix pack on each node in the cluster.

To apply a critical fix pack, where the entire cluster must be down:

Procedure
1. Stop the entire cluster.
2. Starting with node 1, do the following for each node:
   a. Navigate to /*install_dir*/install/bin.
   b. Enter the following command for each node, starting with node 1: `./InstallService.sh` *fixpack_dir*/*fixpackFilename*.jar

      Attention: Running **InstallService.sh** removes any previously installed interim fix to prevent conflicts with what is being installed.
   c. Open the `sandbox.cfg` file and change REINIT_DB as follows:
      - For node 1, REINIT_DB=True
      - For node 2 or higher, REINIT_DB=False, this setting prevents the database updates from repeating during the fix pack installation on each node.

    d. Configure the node in the cluster enter `./startCluster.sh nodeNumber false`

Installing an interim fix in a UNIX/Linux cluster environment
About this task

After you install Sterling B2B Integrator you might be required to install an interim fix. An interim fix is one or more fixes that are applied to a specific existing fix pack. In a cluster environment, you must apply the interim fix to node 1 first and then to the subsequent nodes.

Before you can install an interim fix developed for your company, you must complete the following:
- Receive the file name of the `ccaseid.jar` to install from IBM Customer Support
- Create a full backup of Sterling B2B Integrator
- Create a full backup of your database
- Preserve your custom changes to system resources.

To install an interim fix:

Procedure
1. Log in to the computer on which you are installing the interim fix.
2. If the database password was encrypted, decrypt the password.
3. Stop Sterling B2B Integrator.
4. Navigate to */install_dir*/`install/bin`.
5. Enter `./installService.sh /absolutePath/ccaseid`.jar to install the interim fix.

   You might be required to complete this step twice depending on the fix pack. Read the output from the InstallService.sh script carefully to see whether you must complete this step twice.

   Attention: Running **`InstallService.sh`** removes any previously installed interim fix to prevent conflicts with what is being installed.
6. If you decrypted the database password, re-encrypt the password.
7. Open the `sandbox.cfg` file and change REINIT_DB as follows:
   - For node 1, REINIT_DB=True
   - For node 2 or higher, REINIT_DB=False, this setting prevents the database updates from repeating during the interim fix installation on each node.
8. Configure the node in the cluster, enter `./startCluster.sh nodeNumber false`.
9. Start Sterling B2B Integrator.
10. In the */install_dir*/`install/bin` directory, enter `./dump_info.sh` to verify that the interim fix was successfully installed.
11. Repeat steps 1 - 10 for the remaining nodes.

Uninstalling an interim fix
Uninstalling an interim fix is a manual process. IBM support must first determine what is included in the interim fix you want to remove, and then manually backout the changes one at a time. The complexity of this process, therefore, can vary greatly.

If you must remove an interim fix, contact IBM support by creating a PMR (Problem Management Record)

DB checksum tool

A checksum is a simple redundancy check used to detect errors in data. In Sterling B2B Integrator, a verification process is used to compare the checksum between the existing default resource and the resource that was added after application of a fix pack or upgrade. The DB checksum tool generates a granular report of the changes in the system that could not be set as defaults.

The DB checksum tool generates the difference in resource checksum between the default resource and the latest system resource from the database.

Perform a checksum
About this task

To run the DB Checksum tool:

Procedure

1. Navigate to */install_dir*/install/bin.
2. Enter:

   `./db_checksum_tool.sh [-d] [-i [1 | 2 | 3 | 4 | 5]] [-r [wfd | map | schema | sii | template]] [-o <output file>] [-g]`

   Where:

   -d is the mode to dump the difference of resource checksum between the default resource and latest system resource.

   -i is the resource type integer.

   1 is WFD.

   2 is MAP.

   3 is SCHEMA.

   4 is SII.

   5 is TEMPLATE.

   -r is the resource name. For example, wfd, map, schema, sii, or template.

   -o is the file name to output all the messages.

   -g is the file name that lists all the ignored resources.

   -h is the help screen.

   The DB Checksum tool runs the relevant checksum operation that is based on the command options that are selected and generates the output message.

Patch changes report

The patch changes report is used to obtain information if you must roll back a fix pack. The patch changes report can be found in the installation directory patch_reports folder. The report contains the following fix pack information:
- Fix pack ID
- Fix pack changes
- Number of files deleted
- Number of JARs removed
- Number of JARs added
- Number of files added
- Number of files changed
- Number of properties added
- Number of business processes added

- Number of service instances added
- Number of service definitions added
- Number of templates added
- Number of reports added
- Number of maps added
- Number of schemas added
- Number of business rules added

For example, the installation directory patch_reports folder contains the file Patch_Report.html. When you open this html file, you can view the patch information.

Example: patch changes report

The following is an example of a patch changes report.

```
Summary of Changes
Patch ID: Platform_2.0
Patch Changes: 1287
Number of Files Deleted: 0
Number of JARs Removed: 2
Number of JARs Added: 0
Number of Files Added: 3
Number of Files Changed: 3
Number of Properties Added: 4
Number of BPs Added: 4
Number of Service Instances Added: 2
Number of Service Definitions Added: 3
Number of Templates Added: 0
Number of Reports Added: 0
Number of Maps Added: 3
Number of Schemas Added: 3
Number of Business Rules Added: 0
_____
List of JARs Removed:
JAR Removed: /SAMPLE_INSTALL_1/jar/jaf/1_0_2/activation.jar
Time: Wed May 13 15:23:08 EDT 2009
JAR Removed: /SAMPLE_INSTALL_1/jar/commons_logging/1_0_3/commons-logging-api.jar
Time: Wed May 13 15:23:08 EDT 2009
_____
List of Files Added:
File Added: /SAMPLE_INSTALL_1/bin/sql/fix_db2_schema.sql
Time: Wed May 13 15:21:30 EDT 2009
File Added: /SAMPLE_INSTALL_1/bin/sql/fix_db2iseries_schema.sql
Time: Wed May 13 15:21:30 EDT 2009
File Added: /SAMPLE_INSTALL_1/bin/errorQueueManager.sh.in
Time: Wed May 13 15:21:30 EDT 2009
_____
List of Files Changed:
File Changed: /SAMPLE_INSTALL_1/properties/lang/en/Reports_en.properties
File Changed: /SAMPLE_INSTALL_1/properties/lang/es/Reports_es.properties
File Changed: /SAMPLE_INSTALL_1/properties/lang/fr/Reports_fr.properties
_____
List of Properties Added:
Property Added: /SAMPLE_INSTALL_1/properties/filesToRemove.txt
Property Added: /SAMPLE_INSTALL_1/properties/filesToRemove.txt.in
Property Added: /SAMPLE_INSTALL_1/properties/csr.properties.sample
Property Added: /SAMPLE_INSTALL_1/properties/csr.properties.sample.in
_____
List of BPs Added:
BP Added: Schedule_AssociateBPsToDocs.bpml version: 4
Time: Wed May 13 15:23:07 EDT 2009
BP Added: Recovery.bpml version: 17
Time: Wed May 13 15:23:07 EDT 2009
```

```
BP Added: Schedule_AutoTerminateService.bpml version: 10
Time: Wed May 13 15:23:07 EDT 2009
BP Added: Schedule_DBMonitorService.bpml version: 1
Time: Wed May 13 15:23:08 EDT 2009
_____
List of Service Instances Added:
Service Instance Added: RetentionProcessor version: 2
Time: Wed May 13 15:23:28 EDT 2009
Service Instance Added: MESAHttpServerAdapter version: 1
Time: Wed May 13 15:25:11 EDT 2009
_____
List of Service Definitions Added:
Service Definition Added: LockServiceType
Time: Wed May 13 15:22:58 EDT 2009
Service Definition Added: XAPIServiceType
Time: Wed May 13 15:22:59 EDT 2009
Service Definition Added: CleanLockServiceType
Time: Wed May 13 15:22:59 EDT 2009
_____
List of Templates Added:
Template Added: Normalize
Time: Wed May 13 15:23:26 EDT 2009
Template Added: Derive
Time: Wed May 13 15:23:26 EDT 2009
_____
List of Maps Added:
Map Added: IBMPutResponseToXML
Time: Wed May 13 15:24:05 EDT 2009
Map Added: http_headers
Time: Wed May 13 15:24:36 EDT 2009
Map Added: OracleHttpHeaders
Time: Wed May 13 15:24:51 EDT 2009
_____
List of Schemas Added:
Schema Added: E5_V20_Acknowledge_Result.dtd from file: E5_V20_Acknowledge_Result
Time: Wed May 13 15:24:36 EDT 2009
Schema Added: E5_V20_Acknowledge_Submit.dtd from file: E5_V20_Acknowledge_Submit
Time: Wed May 13 15:24:36 EDT 2009
Schema Added: E5_V20_APIs_Result.dtd from file: E5_V20_APIs_Result
Time: Wed May 13 15:24:36 EDT 2009
```

License modification

If after the installation is finished, you must modify the software licenses you
loaded, you can do that by using the AddLicenseSet command. The AddLicenseSet
command is in the bin directory of your UNIX or Windows installation. After the
initial installation, the license files are at:

- UNIX: */install_dir*/install/properties/licensefiles
- Windows: *install_dir*\install\properties\licensefiles
- iSeries: */install_dir*/properties/licensefiles

You can add licenses or review the license list from the UI. Go to the
**Administration Menu > System >B2B Console > Operations > System >
Licenses**.

AddLicenseSet command parameters

The AddLicenseSet command can modify a single license file or the entire license
file directory.

To use the AddLicenseSet command:

- Navigate to the bin directory

- Include the absolute path to the license file directory or to a license file

The AddLicenseSet command has the following parameters:

AddLicenseSet Parameters	Description
-reload	Use this parameter to reload the license files. This parameter deletes all of the license files from the database before the new files are loaded. The old license files are saved to the following location: - UNIX: /install_dir/install/logs/security/old_licenses - Windows: \install_dir\install\logs\security\old_licenses - iSeries: /install_dir/logs/security/old_licenses
-upgrade	Use this parameter during an upgrade only. This parameter deletes all of the old license files from the database and installs the new license files. The old license files are saved to the following location: - UNIX: /install_dir/install/logs/security/upgrade - Windows: \install_dir\install\logs\security\upgrade - iSeries: /install_dir/logs/security/old_licenses

License Modification: UNIX Example

For example:

Scenario	Command usage (UNIX example)
Reload a single license file	./AddLicenseSet.sh -reload /install_dir/install/properties/licensefiles/SI_SFG_License.xml
Reload two license files	./AddLicenseSet.sh -reload /install_dir/install/properties/licensefiles/SI_SFG_License.xml /install_dir/install/properties/licensefiles/EBICS_License_.xml
Reload all of the license files in the directory	./AddLicenseSet.sh -reload /install_dir/install/properties/licensefiles/
Upgrade all of the license files	./AddLicenseSet.sh -upgrade /install_dir/install/properties/licensefiles/
Upgrade a single license file	./AddLicenseSet.sh -upgrade /install_dir/install/properties/licensefiles/SI_SFG_License.xml

User Documentation

Sterling B2B Integrator user documentation

The user documentation is available on the online documentation site on the web. Providing the documentation in an online environment allows for frequent updates of content that is based on user feedback and usability.

We also understand the need for a printed copy of documentation. You can print topics of information with your Internet browser, or you can download documents in PDF format. You can also request a documentation CD.

To access the documentation site from within Sterling B2B Integrator or one of its tools, select the **Help** ⓘ icon. For the link to the documentation site to work, the system must support internet access and an internet browser.

Online documentation tips
About this task

After you are in the documentation library, you can do the following things:
- Enter a word or phrase and search the entire library for information.
- Move through a hierarchy of contents pages to identify the topic you want to read or print.
- Print topics by using your browser's Print function.
- Download entire documents in PDF format.

Requesting a documentation CD
About this task

You can request a CD that contains all the documentation found on the documentation site. To submit a request, open a support case.

Uninstall the Software in a Cluster Environment

Uninstalling Sterling B2B Integrator from a UNIX/Linux cluster environment
About this task

When you uninstall Sterling B2B Integrator, the software is automatically removed from the server.

Additionally, you can do the following tasks:
- Manually remove the JDK that was installed
- Manually remove any desktop tools that were downloaded
- Free any database space in Oracle, Microsoft SQL Server, or DB2 databases

To uninstall Sterling B2B Integrator from a UNIX/Linux cluster environment, do the following procedure on each node, starting with node 1:

Procedure
1. Stop Sterling B2B Integrator and wait for shutdown to complete. If you begin removing files before all business processes and Sterling B2B Integrator are stopped, you might be unable to remove Sterling B2B Integrator successfully.

   To stop Sterling B2B Integrator, navigate to *install_dir*/install/bin and run the following command:

   ./hardstop.sh
2. Optional: Back up the file system and database.

   By backing up the file system and database, you ensure that Sterling B2B Integrator is recoverable.
3. Remove the installation directory by entering the following command in the parent directory of your installation directory: rm -rf *install_dir*

4. If you use an Oracle, Microsoft SQL Server, or DB2 database, the database remain intact even after you remove Sterling B2B Integrator from the server. If you no longer want to reference the data, contact your database administrator about removing unwanted tables and recovering the database space where Sterling B2B Integrator used to be located.

5. Optional: To remove the JDK, review and do the uninstall procedure for the JDK you are using.

6. After you remove Sterling B2B Integrator from the server, you can remove Eclipse, and any tools that were downloaded to the desktop:

    • Map Editor and associated standards

      Refer to the *Map Editor Guide* for information about removing the Map Editor.

    • Graphical Process Modeler

      Refer to the *Graphical Process Modeler Guide* for information about removing the Graphical Process Modeler.

    • Web Template Designer

      Refer to the *Web Extensions Guide* for information about removing the Web Template Designer.

    • (If licensed) MESA Developer Studio plug-ins:

      – MESA Developer Studio Software Development Kit (SDK)

      – MESA Developer Studio Skin Editor

      Refer to the *MESA Developer Studio* guide for information about removing MESA Developer Studio.

    • (If licensed) Reporting Services, which require MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports.

      Refer to the *MESA Developer Studio* guide for information about removing Reporting Services.

Troubleshooting Tips

Troubleshooting tips for a cluster environment

Situation	Message or Symptom	Explanation/Resolution
Installing	You encounter errors or problems during installation.	**Explanation** The installation creates several log files that you can use to diagnose problems like the failure of an installation. **Resolution** Examine the log files that are generated during installation: • `ant.install.log` (in the *parent_install* directory) • */install_dir*/PreInstallSI.log • */install_dir*/InstallSI.log

Situation	Message or Symptom	Explanation/Resolution
Installing	When you entered an absolute path during installation, a message indicated that the command was not found.	**Explanation** You entered an incorrect path. Check the information that you entered. **Resolution** Enter the correct path.

Installing a desktop tool or resource	Cannot download any of the following:
	• Map Editor and associated standards
	• Graphical Process Modeler
	• Web Template Designer
	• (If licensed) MESA Developer Studio plug-ins:
	  – MESA Developer Studio Software Development Kit (SDK)
	  – MESA Developer Studio Skin Editor
	• (If licensed) Reporting Services, which require MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports.
		Explanation
		
		When you install Sterling B2B Integrator, system files are created that contain an internal IP address. If you install Sterling B2B Integrator behind a firewall, and your firewall is configured to accept an external IP address from a client computer, you might not be able to download the desktop tools and resources. The firewall rejects the internal IP address from a client that is located outside of the firewall.
		
		Resolution
		
		Modify the system files that contain the invalid IP address. Follow these steps:
		1. Navigate to */install_dir*/install/bin.
		2. Stop Sterling B2B Integrator.
		3. Enter the following command followed by the external IP address:
		   `./patchJNLP.sh external_IP_address`
		4. Restart Sterling B2B Integrator.

Installing	Memory and ulimit errors.	**Explanation** The installation fails with memory and ulimit errors. **Resolution** • Refer to the *Viewing and editing performance configuration settings* in the *Performance Management* documentation. Modify your memory setting accordingly. • Refer to the *Operating system configuration checklist* and tune the ulimit settings.
Accessing the URL	Attempts to access the URL for Sterling B2B Integrator display the message: Page cannot be displayed	**Resolution** See the information about *Changes to network interface bindings* to update either the property file or the dashboard.

Situation	Message or Symptom	Explanation/Resolution
Node status on a dual-stack system	Displays Node went down status in Node Status page, but the node is up and running.	**Explanation** Sterling B2B Integrator is configured using an IPv4 address on a dual-stack system. The Node Status page displays Node went down status, but the node is up and running. **Resolution** Modify the `noapp.properties_platform_ifcresources_ext.in` and `jgroups_cluster.properties.in` files by performing the following steps: 1. Identify the IPv6 address of the host system from the `/etc/hosts` file. 2. Navigate to the `/install_dir/properties` directory. 3. Edit `noapp.properties_platform_ifcresources_ext.in` file and add the IPv6 address: admin_host.2 = <IPv6 address> 4. Edit `jgroups_cluster.properties.in` and modify the following entries: &HOST_NAME=<IPv6 address> mcast_addr=FFFF::<IPv4 address 5. Run the `./setupfiles.sh` script to apply the changes.
Installing (HP-UX 11.31)	When you enter your email address the @ key is not recognized.	**Explanation** The @ key is being mapped to kill or eol, it must be mapped to another character. **Resolution** This resolution applies to HP-UX 11.31. Map the @ key to another character. Note: If you need want to see what the key is mapped to, use the **stty -a** command.

Situation	Message or Symptom	Explanation/Resolution
Cluster Installation	Cluster is not working properly and your system is running dual-stack - ipv4 and ipv6.	**Explanation** You can see the node went down from User Interface, but the node is running. **Resolution** • Find your ipv6 address in the /etc/hosts file and update noapp.properties.in file admin_host.2 = <ipv6_address>. • Edit jgroups_cluster.properties.in file and replace &HOST_NAME with the ipv6 address string and change mcast_addr=FFFF::239.255.166.17. • Enter setupfiles.sh.
Cluster Installation or Upgrade	When you configure TCPS the following warning can be found in the activemqbroker.log: sun.security.provider.certpath. SunCertPathBuilderException: unable to find valid certification path to requested target.	**Resolution** Add the system certificate to the truststore with the KeyTool command.
Cluster Installation or Upgrade	When you configure TCPS the following warning can be found in the activemqbroker.log: oracle.net.ns.NetException: Invalid cipher suites specified.	**Resolution** Do not mention any SSL cipher in the ActiveMQconfig.xml.

Situation	Message or Symptom	Explanation/Resolution
e-Invoice Upgrade: Oracle Add Constraint Error	When you upgrade Sterling e-Invoicing and are using an Oracle database, the upgrade might fail with the error message `name is already used by an existing object`. The failure occurs because the default behavior for the `drop constraint` command was changed in Oracle 10. The index that is used to support the constraint is now only removed if the index was generated by the `create constraint` command. The indexes for Sterling e-Invoicing are always generated from constraints during an installation. If you receive this error during a Sterling e-Invoicing upgrade, it is because of how the database was restored, the version of Oracle you are using, and because the Oracle `imp` command exported the indexes and constraints separately. There is no way to determine when the imp command does not add a create index command to the export file if it was generated by a constraint – but if it does add the command, the database restore process loses the association of the constraint and its underlying index. The database script that runs during a Sterling e-Invoicing upgrade runs two steps: 1. First, it drops the unique constraint so the next step can redefine it using extra columns. However, the drop constraint command does not remove the underlying index if the association with its index was lost. 2. The next command that redefines this constraint requires a different index definition, but in this scenario the name of the index the constraint wants to use exists, which causes the `name is already used by an existing object` error.	**Resolution** If you receive this error message, the solution for this problem is to drop the index and rerun the Sterling e-Invoicing upgrade. The drop index command that you should use is `drop index UNQ_EINV_CANON`

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