Sterling B2B Integrator

IBM

UNIX/Linux Non-Cluster Environment Upgrade

Version 5.2.3 - 5.2.5

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Note

Before using this information and the product it supports, read the information in “Notices” on page 79.

Contents

UNIX/Linux Non-Cluster Environment Upgrade (V5.2.3 - 5.2.5)

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

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.

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 Non-Cluster Installation Guide*.

Upgrade Overview

Intended audience

This document can be used by different members of your organization.

This document is intended for use by:
- System administrators
- Installation engineers
- Database administrators.

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.

Upgrade Scenarios

Upgrade Scenarios

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 on how system behavior has changed based on upgrading your system from 4.3 (or later) to this version. You need to review all of the information before you begin your upgrade.

Upgrade Impacts

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

Features/Services Not Supported in V5.2

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, please contact your IBM sales representative.

Port Allocation Changes

If you are upgrading to V5.2, and have configured the CLA2 or the SWIFTNet HTTP Server Adapter, the remote port numbers have changed. 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	Version 5.2.2 Base Port	Version 5.2.3 Base Port
CLA2	+51	+52	+53	+54
SWIFTNet HTTP Server	+52	+53	+54	+55

Note: You should check adapter configurations and the sandbox.cfg file for ports greater than 51 which may have changed.

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

After upgrading to 5.2.X, you need to change any references to the old remote port numbers. For example, if you have any business processes that use the CLA2 adapter, you will need to update the remote ports in the business process.

Database Table Sizes

While upgrading if you encounter any database table size issues, you may have to manually adjust the database tables and restart the upgrade process. An upgrade using the production database in a test environment can be used to help you determine what tables need to be manually adjusted.

Resource Tags

If you are using resource tags in your current version, you should check all of your existing resource tags before you start the upgrade process. The resource tags you should check are:
- 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 will contain the names of any resource tags that need to be edited or deleted.

If any of the resource tags contain tagged resources using the types 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 has changed	parameter	Definition
Parameter definition has changed	LICENSE_FILE_PATH	(Required) Full path to Core_License.xml.
New parameter	LICENSE_FILE_# (where # is a number between 1 and 99)	(Required) This is required for each license you install. You must 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

Channels and Community Management Tabs (Optional)

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

To remove the Channels and Community Management tabs:

Warning: 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 Need to be Upgraded

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

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

Upgrade impacts (V5.2.5)

Upgrading to Sterling B2B Integrator V5.2.5 has unique impacts.

Only JDK 7 is supported as of V5.2.5

For more information see:
- System Requirements
- "Upgrading your JDK (Windows and UNIX)" on page 72

JDK 7 does not support the TLS_RSA_WITH_3DES_EDE_CBC_MD5 cipher

If you are using JDK 7 with Sterling B2B Integrator V5.2.5, and you want to use a cipher to secure the Sterling B2B Integrator dashboard, you must set one of the following values in the **`dashboardCipherSuite`** parameter in the `security.properties_platform_asi_ext.in` property file or in `customer_overrides`:
- *JDK* (includes all strong ciphers except the one not supported by JDK 7)
- *Weak*

Do not use *Strong* or *All* with JDK 7 or Sterling B2B Integrator will not start.

Reconciliation of HIPAA Level 5 code lists

When you upgrade to Sterling B2B Integrator 5.2.5, customized HIPAA Level 5 code lists from the previous version are preserved in the system where they were entered, but they are not the default code lists after the upgrade. After the upgrade, you must manually make any customized code lists the default code lists.

For example, you customized the ICD9 or HCPCSCPT code list in the previous version of Sterling B2B Integrator. After the upgrade to version 5.2.5, you must replace the default ICD9 or HCPCSCPT code list with the customized ICD9 or HCPCSCPT code list.

Properties file change to prevent timeout during start (5.1.0.4 to 5.2.5 upgrade)

Before you start Sterling B2B Integrator after you upgrade the application from version 5.1.0.4 to 5.2.5, you must change the values of the following properties in the `centralops.properties` file to `600`. This action prevents the start command from timing out before Sterling B2B Integrator starts. The `centralops.properties` file is in the `properties` subdirectory of the installation directory.
- **`OpsServer.commandTimeout`**

- **PassPhrase.urlTimeout**

jGroups upgrade in V5.2.5 prevents Sterling B2B Integrator from starting for some customers

jGroups is upgraded with V5.2.5. Some of the properties defined in jgroups_cluster.properties have changed. If you modified these files or added custom changes for them to customer_overrides.properties, the upgrade changes are not applied and Sterling B2B Integrator will not start.

This issue is fixed in V5.2.5, Interim Fix 1, where all necessary properties files are changed for you. You can also disable this fix if desired. See APAR IT06654 for more information.

Note: The original and modified properties are output to the noapp.log file. This allows you to see how your properties were modified. Search the log using the value “Initializing jgroups_cluster.property_string" to see the new and changed values for the two affected startup properties. The jgroups_cluster.lock.protocolStack property is also modified with this fix, but is only written to the log when it is used, not at startup.

If you want to manually fix your installation without applying V5.2.5, Interim Fix 1, complete the following steps:

1. Delete the following options (if they exist) from customer_overrides.properties for the jgroups.cluster property file. These occur in the jgroups_cluster.property_sting, jgroups_cluster.distributed_property_string, and jgroups_cluster.lock.protocolStack files:
   - gc_lag
   - up_thread
   - down_thread
   - join_retry_timeout
   - max_xmit_size
   - shun
2. Remove the protocol parameter **VIEW_SYNC** and all of its attributes.
3. In the jgroups_cluster.property_string, replace ‘start_port’ with ‘bind_port’.
4. In the jgroups_cluster.distributed_property_string and jgroups_cluster.lock.protocolStack properties, add the following items:
   - In distribution_property_string the attribute **thread_pool_rejection_policty=run** should be added to the protocol ‘TCP’. For example,

     TCP(bind_port=22261;**thread_pool_rejection_policy=run**)
   - In lock.protocolStack: the protocol and attribute **CENTAL_LOCK(num_backups=2)** should be added to the end of the property. For example,

     lock.protocolStack=UDP(bind_addr=&HOST_ADDR;;bind_port=
     &MULTICAST_NODE_PORT3;;mcast_addr=239.255.166.17;<other
     protocol parameters here>pbcast.GMS(join_timeout=5000;print_local_
     addr=true):**CENTRAL_LOCK(num_backups=2)**

Backups Are Not Generated During Install, Upgrade, or When Applying a Fix Pack or Interim Fix

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

Some of the standard resources installed during install or upgrade use the import mechanism available to customers to load the standard resources into the database. The standard import mechanism by default creates a backup of the table containing the resource prior to importing to provide the ability to restore to the previous state if later it was decided that the import should not have been performed. This table backup was also being performed by default during the basic installation processes. And, since the import mechanism was sometimes used multiple times during the installation processes, some of the tables were backed up several times. Depending on the size of the table, this could add a very large amount of time to the installation process. Since it is recommended that a backup is completed prior to beginning any of these installation processes, the default behavior has changed to not perform the backup by default. If you would like backups to be performed, then `SKIPIMPORTBACKUP=false` should be added to the **sandbox.cfg** file.

Capitalization Insensitivity for Header Value

About this task

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

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

For example, the following searches will 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 on CA certificates.

Users may 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 is the ability to easily populate the product database with the set of authority root certificates distributed with the JVM.

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 has been added to the WebSphere MQ Suite. To accommodate this new functionality, you need to configure two new parameters for the PUT service:

- wsmq_send_retryCount
- wsmq_send_retrySleepInterval

To configure the new parameters:

Procedure

1. Log into Sterling B2B Integrator.
2. From the **Admin Console Home**, you need to start the Graphical Process Model (GPM).
3. Log into the GPM. You will need a **User ID** and **Password**.
4. In the GPM, select **View > Stencil > Services**.
5. Select **File > New**.
6. Drag the **WebSphere MQ Suite Put Message Service** from the **All Services** pane into the center pane.
7. Double click the **WebSphere MQ 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 folllowing Show Advance State button information.

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

Some Certificate Fields Are Optional

About this task

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

When generating certificate keys, the following fields may have been missing in the release you are upgrading from, 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 will be flagged as the default organization.

Once you have upgraded to this version, a prefix designation is used to differentiate between an AS2 organization (AS2_ORG_) and an AS2 partner (AS2_PART_). Each of these will require the full configuration of a trading partner to allow for a partner to trade with multiple organizations as well as an organization that trades with multiple partners.

The AS2_TRADEPART_INFO and AS2_EMAIL_INFO tables have been modified and the AS2_PROFILE table is newly introduced. Updates to these tables will occur during the SI 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 have moved from the property files into database tables. This 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 a fix pack installation.

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

Perimeter Server Installation

About this task

Before you begin an upgrade, review the following Perimeter Server installation information.

Silent install is the **now** the default installation mode. If you want to complete the Perimeter Server installation using an interactive mode, you need to use the following command:

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

MySQL Upgrade Impacts

The MySQL database is no longer bundled with Sterling B2B Integrator software. Therefore, you will need to install and configure an external version of the MySQL database prior to upgrading to the new version of Sterling B2B Integrator.

Upgrade MySQL Checklist (External MySQL)

This checklist assumes you are upgrading from a previous version of Sterling Gentran Integration Suite or Sterling B2B Integrator directly to Sterling B2B Integrator 5.1 and higher and you are knowledgeable on the MySQL database.

If you need additional MySQL database information, see the documentation provided by the vendor at http://dev.mysql.com/doc/refman/5.0/en/.

If you are moving from a version of MySQL earlier than MySQL 5.0, you will need to export the data from the earlier version to the MySQL 5.0 version using the following procedure. Your existing Sterling Gentran Integration Suite instance will no longer function if you upgrade your existing database without making a copy. After this procedure, you will have two databases:

- A database that you will use in your upgraded version of Sterling B2B Integrator (Sterling B2B Integrator 5.1 and higher).
- A database that you can use in your old version of Sterling B2B Integrator.

Task	Which database	MySQL Upgrade Checklist	Your Notes
1	New external database	Install an external MySQL database. Refer to MySQL documentation for information about installing the database. Be sure to install the correct version and patches. See System Requirements for supported version information.	
2	New external database	Update the MySQL Parameters.	
3	New external database	Create the database. For example, you can run the following command to create the database: `CREATE DATABASE database_name` Refer to MySQL documentation for information about creating the database.	
4	New external database	Create a user account and grant permissions.	
5	New external database	Install the JDBC Driver for MySQL.	
6	Previous database	Rename the SCHEMAS table to XMLSCHEMAS to avoid reserved word collision: • Only required when moving from MySQL version earlier than 5.0 • Use the following command: `Alter table SCHEMAS rename to XMLSCHEMAS`	
7	Previous database	Perform a MySQL database export. As part of the export, you will have a backup copy of the database.	
8	Previous database	If you renamed the SCHEMAS table in task 6, you need to rename the SCHEMAS table, so that your older version of Sterling B2B Integrator will be operational. Use the following command: `Alter table XMLSCHEMAS rename to SCHEMAS`	
9	New external database	Import the exported data for MYSQL into the new external database.	

Update the MySQL Parameters

Sterling B2B Integrator requires the following parameter settings in your MySQL database.

The parameter values recommended are minimum values. You can increase the values based on your requirements or if the database server is used by more than one instance of Sterling B2B Integrator.

It is recommended to configure a data file for auto extension (innodb_data_file_path = ibdata1:400M:autoextend).

Parameter	**Value**
max_connections	500
max_allowed_packet	100M
default-table-type	INNODB
wait_timeout	31536000
max_write_lock_count	500000
transaction-isolation	READ-COMMITTED
character-set-server	utf8
binlog_format	mixed
table_open_cache	512
key_buffer_size	384M
sort_buffer	512K
connect_timeout	15
innodb_data_file_path	ibdata1:400M:autoextend
innodb_data_home_dir	/*install_dir*/mysql/var/
innodb_log_group_home_dir	/*install_dir*/mysql/var/
innodb_flush_log_at_trx_commit	1
innodb_mirrored_log_groups	1
innodb_log_files_in_group	3
innodb_file_io_threads	4
innodb_lock_wait_timeout	600
innodb_log_file_size	5M
innodb_log_buffer_size	8M
innodb_buffer_pool_size	128M
innodb_additional_mem_pool_size	32M

Review the innodb_buffer_pool_size and the innodf_additional_mem_pool_size in the /*install_dir*/install/mysql/data my.cnf. If the values from the previous Sterling B2B Integrator tuning.properties are larger than what is in your new my.ini file, you need to adjust them accordingly.

Create User Account and Grant MySQL Database User Privileges

About this task

You must grant all privileges on the MySQL database to the Sterling B2B Integrator administrative user. The following example creates and grants all privileges to the user in the MySQL database:

```
GRANT ALL PRIVILEGES ON database_name.* TO user@localhost IDENTIFIED BY 'password'
WITH GRANT OPTION
```

Where:
- database_name - refers to the name of the database created.
- user - refers to the database user account that will be used by Sterling B2B Integrator.
- password - refers to the password associated with the database user account.

Once you have granted all the privileges, you will need to FLUSH the privileges to complete the setup. For example, run this command from the SQL prompt:

```
FLUSH PRIVILEGES;
```

Install the JDBC Drivers for MySQL

About this task

Sterling B2B Integrator requires appropriate JDBC driver for MySQL database. These drivers are platform independent and architecture independent drivers. See *System Requirements* for supported version information.

After obtaining the correct JDBC driver, record the absolute path to its location on your system. You must supply this absolute path when installing Sterling B2B Integrator.

Perform a MySQL Database Export

About this task

The full backup can be performed using the mysqldump utility. The details on the usage of this MySQL utility can be found in the MySQL reference documentation. Since there are many options that are provided with this utility, the following are the minimum recommendations:
- Specifying the db_name on the mysqlcommand will prevent the subsequent import from creating a new database. You should specify the db_name of the Sterling B2B Integrator database.
- --extended-insert: Use multiple-row INSERT syntax that include several VALUES lists. This results in a smaller dump file and speeds up inserts when the file is reloaded.
- --quick: This option is useful for dumping large tables. It forces mysqldump to retrieve rows for a table from the server a row at a time rather than retrieving the entire row set and buffering it in memory before writing it out.
- --disable-keys: This makes the dump file faster because the indexes are created after all rows are inserted.

To export the database:

Procedure

1. Perform a backup of the database. For example, enter:
   ```
   myysqldump –u <internal_mysql_username> -p<password> <db_name>
   --host=<internal_mysql_host> --port=<internal_mysql_port> > <dump_file_name>
   ```
2. Make a copy the resultant dump file (.dmp) file from the file system on the source server file system to the file system on the MySQL destination server.

   If the MySQL database was created as part of a Sterling B2B Integrator installation, you can determine the port number by reviewing the MYSQL_PORT entry in the sandbox.cfg that is in the Sterling B2B Integrator install directory.

Import the Data to the New Version of MySQL Database

About this task

Before you begin:

- Make sure the new version of the MySQL database is not in use.
- Know the name of the new database.

To import the exported data:

Procedure

Enter:

```
mysql -u <external_mysql_username> -p<password> <db_name>
--host=<external_mysql_host> --port=<external_mysql_port> < <dump_file_name>
```

Where database_name is the name of the new database created in task 3 of the checklist.

Upgrade Planning Information

Upgrade Planning Information

Before you begin an upgrade you should:

- Read and become familiar with this document so that you have a clear understanding of 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 which have been identified for this release. • *What's New in this Release* - Review this guide to find out about new features and functionality provided in this release. • *Installation and Upgrade Information* - Lists the installation and upgrade documents available for this version of Sterling B2B Integrator.	

#	Upgrade Planning Checklist	Your Notes
3	Review the Customer Center Knowledgebase and search for any additional information on upgrade issues. **CAUTION:** **Before upgrading 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's in a higher version that the one you have installed, a particular mod release or fix pack might not include all the fiunctionality in your current version or fix pack.**	
4	Collect information on third-party libraries used for adapter configurations that were added to your current release. You will need to add each of these libraries to the upgraded system.	
5	Locate any configuration file changes for JDBC adapter or Lightweight JDBC adapter in your current release. You will need to copy these changes to the upgraded system.	
6	Record your performance tuning configuration. You will need to restore these settings after the system has been upgraded.	
7	Review and note the adapters, business processes, and other configurations in your current release. This information will help 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 if you have 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 if you have edited any of the property files (.properties or .properties.in). The upgrade process overwrites these property files, unless these changes were made using the customer_overrides.properties file. Your previous property file edits might not be applicable this version of the software.	

#	Upgrade Planning Checklist	Your Notes
10	Determine if 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 upgrading. 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 if you have LDAP (Lightweight Directory Access Protocol) configuration information in the security.properties file. This information will automatically be moved to the authentication_policy.properties file.	
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 runtime. 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 if you have any JVM Containers configured. If yes, you will have to reconfigure the JVM containers after you have upgraded the software.	

Supporting Information and Detailed Procedures

Access the Sterling B2B Integrator Knowledgebase

About this task

Before you upgrade, you may 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 web site.
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 need to :

- 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 on how to download the correct version of each.

Pre-Upgrade System Checklist

Before you begin an upgrade, you need to:

#	Pre-Upgrade System Checklist	Your Notes
1	Use the system requirements to verify that your system hardware and software meet the requirements specified for this release. Verify 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 listed in the requirements If any of the above requirements are not met, the installation will fail and print/log a report of all items that were non-compliant.	
2	Review your current system to determine if you need to apply a fix pack prior to upgrading. If you have recently applied an interim fix, it might not be included in the latest fix pack. If you are not on the latest fix pack, the upgrade will fail. The following are the minimum levels for upgrading to this release: • Release 4.0 - Patch 4.0.3-5 • Release 4.1 - base release or any patch • Release 4.2 - base release or any patch • Release 4.3 - base release or any patch	

#	Pre-Upgrade System Checklist	Your Notes
3	For systems with multiple IP addresses, verify that the IP address on which Sterling B2B Integrator resides is accessible by any client computer that is running a browser interface. If you do not verify the IP addresses, your system may not operate properly after installing Sterling B2B Integrator.	
4	If you are using a non-English environment, confirm that you are using the appropriate character set.	
5	Verify the file system has adequate free disk space.	
6	Obtain the upgrade media. It is a best practice to check the Product Updates & Downloads site to ensure you have the latest version of the media.	
7	Backup 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 can only be restored from the same version of Sterling B2B Integrator from which it was archived. If you need to restore archived data that was archived prior to performing the upgrade, then you must have a running instance of Sterling B2B Integrator that matches the version from which the archive was taken.	
9	Purge any unneeded data.	
10	Export any business objects that can not be upgraded. Including business processes, service configurations, trading partners, maps, etc. The exported business object can be imported into the upgraded system if you need them.	
11	Create an process output log.	
12	Disable the virus protection software on the server. If the virus protection software is enabled, the upgrade will fail.	

Pre-Upgrade Database Checklist

Before you begin an installation, you need to:

#	System Verification Tasks	Your Notes
	If required, copy the Microsoft SQL Server 2000 Database to an SQL Server 2005 Database. This is an optional procedure, and it is the customer's responsibility to perform it. (IBM Customer Support can not help with this procedure.)	
	If you are using Oracle 8i with Sterling B2B Integrator 4.0, upgrade to Oracle 9i before upgrading to this version of Sterling B2B Integrator.	
	If you plan to import an Oracle 9 or Oracle 10 database, while upgrading 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, you should use the INDEXES=N option. If you attempt upgrading to this versin of Sterling B2B Integrator with indexes turned on, the upgrade will fail. If you had created any custom indexes in Oracle database, add them after performing the upgrade as they are not imported.	

Pre-Upgrade Operating System Verification Checklist

Before you begin the upgrade, you need to verify your operating system configuration.

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. IBM Installation Manager in UI mode may fail to start on an RHEL 6.1 or higher x86_64 (64-bit) OS because Installation Manager is a 32-bit application and is dependent on some of the 32-bit libraries. For information on installing the required 32-bit OS libraries, refer to the IBM Support Website (https://www-304.ibm.com/support/docview.wss?uid=swg21459143) **CAUTION:** **Due to a known issue with the IBM JDK on RHEL 6.1 or higher, a performance degradation might be seen in comparison to previous RHEL releases. To avoid this issue, disable the CFS on RHEL 6.1 or higher.** **To disable CFS:** • **Log in as root** • **Edit `/etc/sysctl.conf` and add `"kernel.sched_compat_yield = 1"`** • **Reboot the system** **For more information go to the IBM SDK and Runtime Environment Java Technology Edition Version 6 Information Center and search for** *known limitations on linux***.**	

For the Operating System	Operating System Configuration Checklist	Your Notes
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.	
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.	

Supporting Information and Detailed Procedures

Verification of 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 requirements. Your system requirements exceed these requirements if you are running other applications on the same machine as Sterling B2B Integrator.

The installation strictly enforces the following system requirements:

- Operating system version must match requirement exactly.
- The minimum patch level for the operating system is enforced, but you can apply higher patch 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 noncompliant items.

Obtain Upgrade Media

About this task

Before you upgrade, ensure that you have the latest version of the upgrade media from the Passport Advantage online site.

For the latest version and for online support, go to: http://www.ibm.com/software/howtobuy/passportadvantage/pao_customers.htm

Create Process Output Log

About this task

A log of process activity during the upgrade will help 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 command to record the processes, ensuring that you have created and specified 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 will be created in the directory where you ran the script command.
2. After the upgrade is complete, enter exit at the command line to stop recording.
3. You can now retrieve the file containing the process output.

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

```
[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
```

Copy a Microsoft SQL Server 2000 Database to an SQL Server 2005 Database

About this task

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

Before upgrading, it is recommended that you first make a backup of your Microsoft SQL Server 2000 database. One way to accomplish this 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 will no longer function if you upgrade your existing database without making a copy.

After this procedure, you will have two databases:

- A database that you will 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 using 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, using the Tasks|Restore|Database wizard. The restore will be from a “device,” the file created above. Specify on the Options tab the correct locations for the data and log files (since the locations in the backup may not be the same as the correct locations for files on the on SQL 2005 database server); also 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 using the command sp_change_users_login 'report'. If no rows are returned, go to step 8.
7. If rows are returned, execute 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 using the SQL Studio or sp_helpuser. If the login (existing on the server) who will be working with this database is not currently a user of the restored database, add that login as a user of the database by executing the following commands (login_name and user_name should generally be 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:

The spaces in the quoted strings in the SQL commands should not be included in the final procedure, as spaces are significant to the procedure and the commands will 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 will be 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 will be accessing the data.

10. Execute the following command in the SQL 2005 database to ensure that the default schema for the user who will interact with the database matches the schema containing 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 will need to configure Snapshot for your Microsoft SQL Server. See the *Configure Snapshot for Microsoft SQL Server* for further information.

Configuring the snapshot feature for Microsoft SQL Server

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.

Procedure

Enter the following command to enable the snap shot feature:

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

Upgrading DB2 to version 10.1

To upgrade from DB2 9.5 or 9.7 to 10.1, you must make configuration changes. DB2 version 10.1 is only supported on Sterling B2B Integrator 5.2.4.1_2 or higher.

Procedure

1. Complete the steps in the following table that pertain to your version of Sterling B2B Integrator before you proceed to step 2.

   Important: Back up all files before you change any settings.

If you are upgrading from ...	Do the following steps:
Sterling B2B Integrator 4.3	1. If you are using DB2 9.1 or 9.2, you must first copy your database content to DB2 9.5 or 9.7 2. Upgrade Sterling B2B Integrator to 5.2.4 and point to the DB2 9.5 or 9.7 database 3. Upgrade your 5.2.4 installation to 5.2.4.1

If you are upgrading from ...	Do the following steps:
Sterling B2B Integrator 5.0	1. If you are using DB2 9.1 or 9.2, you must first copy your database content to DB2 9.5 or 9.7 2. Upgrade Sterling B2B Integrator to 5.2.4 and point to the DB2 9.5 or 9.7 database 3. Upgrade your 5.2.4 installation to 5.2.4.1
Sterling B2B Integrator 5.1	1. Upgrade Sterling B2B Integrator to 5.2.4 and point to your DB2 9.5 or 9.7 database 2. Upgrade your 5.2.4 installation to 5.2.4.1
Sterling B2B Integrator 5.2	Upgrade your 5.2.4 installation to 5.2.4.1

2. Copy your DB2 9.5 or 9.7 database content to DB2 10.1.
3. Take a backup of the database driver located at `/install_dir/dbjar/jdbc/DB2/` and then replace it with the DB2 10.1 version.
4. Update the following `sandbox.cfg` file fields with your environment-specific parameters:

```
DB_PASS=
DB_SCHEMA_OWNER=
DB_DRIVERS_VERSION=
YANTRA_DB_PORT=
DB_DATA=
DB_HOST=
YANTRA_DB_USER=
DB_PORT=
YANTRA_DB_PASS=
YANTRA_DB_DATA=
YANTRA_DB_HOST=
DB_DRIVERS=
DB_USER=

DB2_PORT=
DB2_USER=
DB2_PASS=
DB2_DATA=
DB2_HOST=
```

5. Edit the following in the `activemq.xml` file:

```
activemq.xml: <value>jdbc:db2//DB_HOST:DB_PORT/DB_DATA</value>
```

6. Run the `setupfiles` script.
7. Run the `deployer` script.
8. Start Sterling B2B Integrator.

Information Gathering Checklist

Information Gathering Checklist for Upgrade (UNIX/Linux Non-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.

#	**Information Gathering Checklist for Upgrade**	**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 upgrade.	
2	Determine which upgrade method you are going to use: • IBM Installation Manager (Graphical User Interface) • IBM Installation Manager (Text Based) • Silent Installation	
3	Determine if you are going to run the pre-upgrade checks during the upgrade.	
4	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.	
5	If you are using an Oracle, Microsoft SQL Server, or DB2 database, decide if you are going to manually or automatically apply Database Definition Language (DDL) Statements (schema) to the database.	
6	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.	
7	Determine if the database password needs to be encrypted.	
8	Record the Hostname on which you plan to install the software.	
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.	

#	Information Gathering Checklist for Upgrade	Your Notes
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 Database vendor name.	
22	Record the Database user name.	
23	Record the Database password.	
24	Record the Database (catalog) name.	
25	Record the Database host name.	
26	For Oracle, Microsoft SQL Server, or MySQL, record the Path and file name for the JDBC Driver.	
27	For DB2, record the Absolute paths and file names for two JDBC drivers.	

Supporting Information and Detailed Procedures

Pre-Upgrade Checks

Pre-upgrade check reviews Oracle, SQL Server, and DB2 database environments prior to starting the upgrade. This is an optional installation feature which looks for common upgrade errors. 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
- Passphrase 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 in table SCI_ENTITY is no longer than 100 characters
- Default schema 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 audits the system as soon as your system is in use.

After the installation finishes, if you determine that you need to modify licenses files, see “License modifications” on page 70.

Extracting the core license file

The Core_License.xml file is required during the installation or upgrade of Sterling B2B Integrator.

About this task

To extract the Core_License.xml file:

Procedure

1. Download the SI_5020400.jar file from Passport Advantage® to a temporary location.
2. From a command line, open the directory where the SI_5020400.jar file is located.
3. Type the following command to extract the contents of the JAR file: `jar -xvf SI_5020400.jar`
4. Type the following command to change directories to the middleware folder: `cd ./middleware`
5. From the middleware directory, extract the Core_License.xml file by typing the following command: `jar -xvf h_B2BF_4020400.jar`
6. The Core_License.xml file is in the newly extracted directory: B2BF/components/b2b_base/files/properties/licensefiles
7. Copy the Core_License.xml file to a temporary location where you can point to it during your installation or upgrade.

Security certificates

You can choose between different security certificates before you install Sterling B2B Integrator.

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 change the certificate 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.

Use the following guidelines for port numbers:

- A range of 200 consecutive open ports (1025 - 65535) is required for this installation.

Important: Because of RMI, on occasion, a port number outside the range can 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 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.

Use one of the following methods to upgrade your system:

- Upgrade using the IBM Installation Manager (Graphical User Interface)
- Upgrade using the IBM Installation Manager (Text Based)
- Upgrade using the Silent Installation

General Upgrade Guidelines

The following are some general guidelines:

- Do not create the new upgrade directory manually before the start of the upgrade. If you create the installation directory before you begin, the upgrade will fail. The directory name provided during the upgrade process is used to create the new installation directory.
- The server on which you are installing must have adequate free disk space.
- If you are on Linux, do not use any soft/symbolic links in the path to the installation package file.
- *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.
- *parent_install* is the directory one level above the *install_dir* directory.
- Ensure that the *parent_install* directory has the proper read/write permissions.
- If you are using FTP to copy the files, verify that your session is set to binary mode.

- If you are using AIX with the DB2 database, the directory path cannot be longer than 108 bytes.
- The directory path to SI_<*build_number*>.jar cannot include any spaces.
- The installation creates subsequent ports based on the initial port number. For all of the port assignments, see the /*install_dir*/`install/properties/sandbox.cfg` file.
- 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.

General Installation/Upgrade Information for a Windows Non-Cluster Environment

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 Integrator documentation library for more information on secure deployment options.

Installation Scenarios for Version 5.2.3

It is important to review the following installation scenarios:

Scenario	Instructions
Version 4.x is installed as the base release and it needs to be upgraded to the 5.2.3 level.	Use the *Upgrade the Software* instructions provided in the *Windows Non-Cluster Environment Upgrade* guide for version 5.2.3.
Version 5.0 is installed as the base release and it needs to be upgraded to the 5.2.3 level.	Use the *Upgrade the Software* instructions provided in the *Windows Non-Cluster Environment Upgrade* guide for version 5.2.3.
Version 5.1 is installed as the base release and it needs to be upgraded to the 5.2.3 level.	Use the *Upgrade the Software* instructions provided in the *Windows Non-Cluster Environment Upgrade* guide for version 5.2.3.
Version 5.2.0 is installed as the base release and it needs to be upgraded to the 5.2.3 level.	Use the *Install Version 5.2.1 - 5.2.3 as a Fix Pack* instructions provided in the *Install the Software* chapter.
Version 5.2.1 is installed as the base release and it needs to be upgraded to the 5.2.3 level.	Use the *Install Version 5.2.1 - 5.2.3 as a Fix Pack* instructions provided in the *Install the Software* chapter.
Version 5.2.2 is installed as the base release and it needs to be upgraded to the 5.2.3 level.	Use the *Install Version 5.2.1 - 5.2.3 as a Fix Pack* instructions provided in the *Install the Software* chapter.
Version 5.2.3 is being installed as the base release.	You will need to review this document and use the installation instructions in the *Install the Software* chapter.

Installation Methods

Use one of the following methods to install your system:
- IBM Installation Manager (Graphical User Interface)
- IBM Installation Manager (Text Based)
- Silent Installation

General Installation Guidelines

General installation guidelines include the following:
- Do not create the installation directory manually before the start of the installation. If you create the installation directory before you begin, the installation will fail. The directory name provided during the installation process is used to create the new installation directory.
- The name of the directory cannot include spaces and must be less than 30 characters long excluding separators. Using a directory name of more than 30 characters could create an install that is impossible to delete. An example of an installation directory is `C:\SI_52\install`.
- The server on which you are installing must have adequate free disk space.
- *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 read/write permissions.
- If you need to install more than one instance of Sterling B2B Integrator on the same Windows server, you must install the second instance in a different directory.
- 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.
- Sterling B2B Integrator does not support IPv6 installation on Windows. Before applying an IPv6 address, see the *IPv6 Capabilities* section in *System Requirements*.
- The installation creates subsequent ports based on the initial port number. For all of the port assignments, see the *install_dir*`\install\properties\sandbox.cfg` file.

General Installation Manager information

The IBM Installation Manager Software Delivery Platform is an installation management tool that installs and maintains Installation-Manager-based software packages.

Use the Installation Manager to modify feature sets and search for updates of installed software. The Installation Manager ensures that only compatible fixes are applied to a software installation.

Important: The on-screen options **Manage Licenses**, **Roll Back**, **Modify**, and **Update** are not functional as part of the Sterling B2B Integrator release 5.2.3. Additionally, the **Uninstall** option only removes Sterling B2B Integrator from the

Installation Manager. The uninstall procedure as described in *Uninstall Sterling B2B Integrator from a Windows Non-Cluster Environment* still must be performed to completely uninstall Sterling B2B Integrator.
Attention: If you are using Installation Manager to install Sterling B2B Integrator version 5.2.3 and you plan on using the Financial Services License, you need to manually install the license.

The Installation Manager must be installed on each computer on which Sterling B2B Integrator is being installed. If you have an existing version of Installation Manager installed on your computer for use with other IBM applications, it can be used with Sterling B2B Integrator. If you do not have the Installation Manager installed, it is provided as part of the installation media and can be installed as part of the Sterling B2B Integrator installation.

The Installation Manager user interface provides the following features:

- The choice of either entering the paths or selecting the paths and files (**Select File**).
- Internal navigational buttons on every screen in the Installation Manager. You need to click **Next** to move to the next step. The click **Next** step is not represented in each step in the procedure.

  Important: The **Next** button does not activate until you enter data on a screen. For fields that require validation, you must click out of the field somewhere on the screen to trigger the validation and after validation completes, the button activates.
- For every screen in the text-based installation wizard, you need to press Enter to move to the next step. The press Enter step is not represented in each step in the procedure.
- Numbered options for each step in the Installation Manager's text mode, you need to press Enter to move to the next step.
- The ability to navigate to the different installation configuration pages out of sequence. The following icons indicate the status of a configuration page:
  –

    

    - page is completed
  –

    

    - current page you are on
  –

    

    - required entry
  –

    

    - page not completed

  Note: All the pages must have a

  

to continue.

Additional heap memory parameters

The heap memory parameters specify the amount of memory the Installation Manager can use during the installation process. The heap memory pool sizes that are used by the Installation Manager are hardcoded defaults. If these defaults are not sufficient for your environment, you can specify different values by adding parameters to the Installation Manager's `config.ini` file.

Important: These additional parameters are needed only if you are experiencing `Out Of Memory` errors during the installation process.

The following parameters can be added:
- `memoryMin=user.sb.INSTALL_`*`<OS>`*`_INIT_HEAP.`*`<amount_of_memory>`*
- `memoryMax=user.sb.INSTALL_`*`<OS>`*`_MAX_HEAP.`*`<amount_of_memory>`*

Where *`<OS>`* is the user's operating system and *`<amount_of_memory>`* is the specified amount of memory.

Operating System	Parameter	Example Entry
Sun-Solaris	Initial Heap Size **`INSTALL_SUN_INIT_HEAP`**	`memoryMin=user.sb.INSTALL_SUN_INIT_HEAP.3072m`
	Maximum Heap Size **`INSTALL_SUN_MAX_HEAP`**	`memoryMax=user.sb.INSTALL_SUN_MAX_HEAP.3072m`
Linux	Initial Heap Size **`INSTALL_LINUX_INIT_HEAP`**	`memoryMin=user.sb.INSTALL_LINUX_INIT_HEAP.3072m`
	Maximum Heap Size **`INSTALL_LINUX_MAX_HEAP`**	`memoryMax=user.sb.INSTALL_LINUX_MAX_HEAP.3072m`
AIX®	Initial Heap Size **`INSTALL_AIX_INIT_HEAP`**	`memoryMin=user.sb.INSTALL_AIX_INIT_HEAP.3072m`
	Maximum Heap Size **`INSTALL_AIX_MAX_HEAP`**	`memoryMax=user.sb.INSTALL_AIX_MAX_HEAP.3072m`
HP-UX	Initial Heap Size **`INSTALL_HPUX_INIT_HEAP`**	`memoryMin=user.sb.INSTALL_HPUX_INIT_HEAP.3072m`
	Maximum Heap Size **`INSTALL_HPUX_MAX_HEAP`**	`memoryMax=user.sb.INSTALL_HPUX_MAX_HEAP.3072m`
Windows	Initial Heap Size **`INSTALL_WIN_INIT_HEAP`**	`memoryMin=user.sb.INSTALL_WIN_INIT_HEAP.3072m`
	Maximum Heap Size **`INSTALL_WIN_MAX_HEAP`**	`memoryMax=user.sb.INSTALL_WIN_MAX_HEAP.3072m`

Guidelines for IPv6 addresses

The use of IPv6 addresses in an installation of Sterling B2B Integrator requires certain guidelines.

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 plan the installation:

- 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 an IPv6 address, comment out the host name mapping to the IPv4 address and retain the mapping to the IPv6 address in the host file in the `/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 IPv6 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 need to add the IPv6 address (as the **`admin_host.3`** property) to the `noapp.properties_platform_ifcresources_ext .in` file.

Upgrading in a UNIX/Linux non-cluster environment with the IBM Installation Manager in GUI mode

You can upgrade Sterling B2B Integrator in a UNIX/Linux non-cluster environment with the IBM Installation Manager in a graphical user interface (GUI) mode. Use the X Window System for this installation.

Before you begin

- Access the JAR file for your upgrade. The JAR file depends on your operating system and current version of Sterling B2B Integrator. Refer to the following websites for the correct JAR file. Consult with your IBM representative to identify the correct JAR file for your upgrade path.
  - Refer to Fix Central to see if you must use an interim fix or fix pack JAR file for the upgrade.
  - Refer to Passport Advantage to see if you must use an installation JAR file for the upgrade.
- Complete the "Information Gathering Checklist for Upgrade (UNIX/Linux Non-Cluster)" on page 25.
- Install an X Window windowing system (for example Cygwin or Xming) for UNIX/Linux operating systems on your PC.
- Install and configure a Telnet client (for example PuTTY) for use with the X Window System. The following parameters must be set:
  - X-11 forwarding must be enabled.
  - X display location must be set to localhost.
- If you are using the Standards Processing Engine (SPE) application with Sterling B2B Integrator, you must upgrade SPE before you upgrade Sterling B2B Integrator.

- If you are using the EBICS Banking Server application with Sterling B2B Integrator 5.2.5, the data encryption for storage within the installation location is not supported.

About this task

This upgrade changes the administrative password to the default password. After the upgrade, change the password back to the administrative password to minimize security risks. This password is the Admin password for logging in to the user interface (/dashboard or /ws).

Procedure

1. Start the X Window System client on your PC.

   Minimize the window after it opens.
2. Open a console window and log on to the UNIX/Linux host server where Sterling B2B Integrator is upgraded.
3. From the installation media, copy the compressed update package to a UNIX/Linux directory on the host where Sterling B2B Integrator is installed.
4. Decompress the upgrade package on the host server.
5. Open the IMSI (Installation Manager) folder that is located in the directory structure that was created when the installation package was decompressed. Several `IM_`*`OperatingSystem`*`.zip` files are displayed.
6. decompress the file for your operating system.
   - `IM_AIX.zip` (for AIX)
   - `IM_Solaris.zip` (for Solaris)
   - `IM_HPPARISC.zip` (for HP-UX PA-RISC)
   - `IM_HPIA.zip` (for HP-UX Itanium)
   - `IM_Linux.zip` (for Linux)
   - `IM_zLinux.zip` (for Linux on System z®)

   This action creates a new IMSI folder.
7. Open the new IMSI folder.
8. Start the upgrade, enter `./userinst`

   The Installation Manager opens.
9. Click **Next** to start the upgrade.
10. Review the license agreement and select the option **I accept the terms in the license agreements** to continue.

    If you do not accept the agreement, the upgrade process is canceled.
11. Select a location for the Shared Resources directory and a location for the Installation Manager:
    a. Specify a **Shared Resources Directory**.
    b. (Optional if previously installed) Specify an **Installation Manager Directory**.

       Note: The Shared Resources directory cannot be a subdirectory of the Installation Manager installation.

       The specified Shared Resources and Installation Manager directories must be empty.
12. Choose an installation package group to use:

a. Select the appropriate option for this installation:
   - **Use the existing package group**
   - **Create a new package group**

b. Specify the path to the Sterling B2B Integrator **Installation Directory**.

   Below the installation directory, the installer creates a directory that is named `install`. This directory contains the installation files.

13. Select the features to install.

    Clear the check box of any features you do not want to install.

    If you have other products installed that use the Installation Manager, updates for them might appear in your listing.

    Note: The system confirms that you have enough space on your system to complete the upgrade.

14. Enter the full path to your **JDK directory**.
15. Verify if the **JDK** is 64 bit.

If the JDK ...	then ...
is 64 bit,	Leave the check box selected.
is not 64 bit,	Clear the check box.

16. Select the **Features** to upgrade. The following list is displayed:
    - **IBM Sterling B2B Integrator and/or IBM Sterling File Gateway**

      Important: Sterling File Gateway requires extra installation steps. See Installing Sterling File Gateway (2.2.2 and higher).
    - **FIPS Module**
      - **FIPS Compliance Mode (Must enable FIPS Module)**
    - (5.2.5 and higher) **NIST 800-131a Compliance Mode**
      - **off** (default value)
      - **transition**
      - **strict**
    - **AS2 Edition Module**
    - **Financial Services Module**
    - **EBICS Banking Server Module**
    - (5.2.5 and higher) **SPE Integration Module (Requires pre-install of SPE, WTX optional)**

      If you select the SPE option, you are prompted for the following information:
      - SPE installation directory
      - WebSphere® Transformation Extender (WTX) installation directory
      - SPE UI port

      For more information, see the documentation for the integration of Sterling B2B Integrator and SPE.

    Select only the check boxes for licenses/features that are defined by your IBM contract. If you are unsure which to select, the upgrade can proceed without making a selection and complete successfully. Startup and operation of the software, however, requires one of the licenses to be selected. See *License Modification* to apply licenses after the installation.

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

Note: If you are upgrading to Sterling B2B Integrator version 5.2.4 from a previous 5.2.x release, you must manually install the EBICS client. For more information about installing the EBICS Client manually, see the EBICS Client User Guide on the Sterling B2B Integrator 5.2 Information Center.

17. Enter the full path to your **JCE jar file**.
18. Enter the full path to the JAR file that you are using for the upgrade.
19. Enter your **Installation panel properties** information:
    a. Enter the explicit IP address for the server or use the default value of localhost.
    b. Enter the Initial Port number or use the default value of 8080.
20. Enter your **System Passphrase** information:
    a. Enter a passphrase.
    b. Confirm the passphrase.
21. Enter you **E-Mail Information**:
    a. Enter the email address to which you want system alert messages sent.
    b. Enter the SMTP mail server (IP address or host name) that you want to use for system alert messages and other administrative notices.
22. Specify if you want to **Enable FIPS** (Federal Information Processing Standards) mode. To enable FIPS, select the check box.

    The default is FIPS mode is disabled.
23. Select the database vendor you want to use:
    - Oracle
    - (5.2.3 - 5.2.4.2) Microsoft SQL Server 2005
    - (5.2.5 and higher) Microsoft SQL Server 2012
    - DB2®
    - MySQL
24. Select all options that apply to this installation:

Choices:	Action
This installation is for a cluster node 2 or higher (Not applicable for MySQL)	Do not select this option.
Apply database schema automatically? (Not applicable for MySQL)	If yes, no action is required. The default is to automatically apply the DDL statements. If you want to manually create the database schema, then clear the **Apply database schema automatically** check box and continue with the remaining installation steps. **Note:** After the upgrade starts, it runs for a short time and stops without error. When the upgrade stops, you must perform additional actions as given in Step 29 of this procedure.

Choices:	Action
(Oracle only) Select the appropriate check box for the data type to use for binary data.	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.

25. Enter the **Database Information**.
    - Database user name.
    - Database password (and confirmation).
    - Database catalog name.
    - Database host name.
    - Database port.
    - (Oracle, Microsoft SQL Server, and MySQL 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 that is used directly by DB2, allowing a direct call from the system to the DB2 server.
26. Click **Add** to browse to the file location for the appropriate JDBC driver.
27. Click **Test** next to the database driver path.

    Note: The Installation Manager must successfully validate the connection to the database before you can continue with the installation. If there is a validation failure, you can view the system log to determine more information about the failure.
28. Determine what **Other options** apply to this installation. Select the applicable options:
    - **Verbose install**
    - **This installation is an upgrade from a prior version** - Select this option.

      Note: After you select the upgrade option, an additional option is displayed.
    - **Would you like to run upgrade pre-check?** - To run the pre-check, click **Test**.
29. Specify the **Performance configuration** that applies to this installation. Select the applicable options:
    - **Number of Processor Cores** - Accept the default value or enter the appropriate value.
    - **Physical Memory (MB) allocated to Sterling B2B Integrator** - Accept default value or enter the appropriate value.
30. Specify if you want to generate an installation response file:
31. Review the installation package summary information. Click **Install** to continue.

    Note: If you did not select the option to the **Apply database schema automatically** field, the upgrade stops and you must perform these additional steps to complete the upgrade with manual DDL statements:

a. Open your installation directory.
b. Locate the `InstallSI.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 these 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 to make changes appropriate for your database. These changes might include changing the SQL delimiter or adding tablespace options.
e. Log in to your database as the DB schema user.
f. Run the SQL files manually in this order:

   Note: When you are running the scripts, it is important to run the SQL scripts in the specified order.
   1) `EFrame_IndexDrops.sql`
   2) `EFrame_TableChanges.sql`
   3) `EFrame_IndexAdds.sql`
   4) `EFrame_TextIndexAdds.sql`
   5) `EFrame_Sequence.sql`
   6) `EFrame_TextIndexModify.sql`
   7) `EFrame_TextIndexUpdates.sql`
   8) `EFrame_TextIndexUpgrade.sql`
   9) `EFrame_Static.sql`

   Important: ActiveMQ uses dynamically generated table names based on the name of the installation node. Table generation is not included in these scripts, but is performed automatically during the initial start of Sterling B2B Integrator or when a new cluster node is added. Table generation might fail if security restrictions reduced the Sterling B2B Integrator database user permissions. To avoid this issue, ensure that the DBADM role permissions are enabled during the initial startup. If further issues arise, contact IBM customer support for guidance.
g. Exit from the database.
h. Open the parent directory of the *`install_dir`* directory.
i. Delete (or Rename as a backup) the Sterling B2B Integrator installation directory.
j. Restart the Installation Manager and provide the same installation options that you provided before, including clearing the **Apply database schema automatically** check box.

The **Installation Progress** screen indicates which component of the installation is in process.

A status bar below the **Repository Information** heading displays the progress of component installation. When the installation completes, a large green circle with a check mark displays with the message `The packages are installed`. A link is provided to view the installation log file.

The installation completes automatically. When the installation is finished, the system displays a dialog box with the message `The install completed successfully.`

Installation information is in the `InstallSI.log` file.

32. Click **Finish**. The Installation Manager closes.

    Check the `InstallSI.log` to verify all of the components were installed properly.

33. (This step applies only if you are upgrading to Sterling B2B Integrator 5.2.5.0.)

    After the Sterling B2B Integrator 5.2.5.0 installation is complete, install Sterling B2B Integrator 5.2.5.0 interim fix 3 (5020500_3). See "Installing an interim fix (UNIX Non-Cluster)" on page 67 for instructions.

    This interim fix (`si_52_build_5020500_interimfix_3.jar`) is included in the Sterling B2B Integrator 5.2.5 installation media released in April 2015, but is not automatically installed. It must be installed separately. In this case, use the included `si_52_build_5020500_interimfix_3.jar` file rather than downloading from Fix Central.

34. Determine whether you need to apply a fix pack or interim fix to the installation. Refer to "Installing an interim fix (UNIX Non-Cluster)" on page 67 for information.

Upgrading in a UNIX/Linux non-cluster environment with the IBM Installation Manager in text mode

You can upgrade Sterling B2B Integrator in a UNIX/Linux non-cluster environment in a text-based mode.

Before you begin

- Access the JAR file for your upgrade. The JAR file depends on your operating system and current version of Sterling B2B Integrator. Refer to the following websites for the correct JAR file. Consult with your IBM representative to identify the correct JAR file for your upgrade path.
  - Refer to Fix Central to see if you must use an interim fix or fix pack JAR file for the upgrade.
  - Refer to Passport Advantage to see if you must use an installation JAR file for the upgrade.
- Complete the "Information Gathering Checklist for Upgrade (UNIX/Linux Non-Cluster)" on page 25.
- The Upgrade Pre-check is not available for MySQL.
- If you are using the Standards Processing Engine (SPE) application with Sterling B2B Integrator, you must upgrade SPE before you upgrade Sterling B2B Integrator.
- If you are using the EBICS Banking Server application with Sterling B2B Integrator 5.2.5, the data encryption for storage within the installation location is not supported.

About this task

This upgrade changes the administrative password to the default password. After the upgrade, change the password back to the administrative password to minimize security risks. This password is the Admin password for logging in to the UI (/dashboard or /ws).

Procedure

1. Open a console window and log on to the UNIX/Linux host server where Sterling B2B Integrator is installed.
2. From the installation media, copy the compressed installation package to a UNIX/Linux directory on the host server.
3. Decompress the installation package on the host server.
4. Open the IMSI (Installation Manager) folder that is located in the directory structure that is created when the installation package was decompressed. Several `IM_`*`OperatingSystem`*`.zip` files are displayed.
5. Decompress the file for your operating system:
   - `IM_AIX.zip` (for AIX)
   - `IM_Solaris.zip` (for Solaris)
   - `IM_HPPARISC.zip` (for HP-UX PA-RISC)
   - `IM_HPIA.zip` (for HP-UX Itanium)
   - `IM_Linux.zip` (for Linux)
   - `IM_zLinux.zip` (for Linux on System z)

   This action creates a new IMSI folder.
6. Open the new IMSI folder.
7. Start the upgrade with one of the following methods:
   - If you do not have root access, enter `./userinstc -c`
   - If you have root access, enter `./installc -c`

   The Installation Manager (text mode) starts.

   An **[X]** next to an option number indicates that option is selected.
8. Select the packages to install. Press **Enter** to accept the default selections.

   Note: The appropriate packages are selected by default. If you want to proceed only with the installation of the Installation Manager, you can deselect the Sterling B2B Integrator installation package.
9. Review the license agreement. Enter:
   - **1** to view the IBM Installation Manager license agreement.
   - **2** to view the Sterling B2B Integrator license agreement.
   - **A** to accept the agreement.
   - **D** to decline the agreement.

     Note: If you do not accept the agreement, the installation process is canceled.

   The screen refreshes with an [X] in front of your selected option. Press **Enter** to continue.
10. Select a location for the Shared Resources directory and a location for the Installation Manager.

    Default locations are provided. You can modify a path by entering the appropriate letter in front of an option and pressing **Enter**.

Note: The Shared Resources directory cannot be a subdirectory of the Installation Manager installation.

The specified Shared Resources and Installation Manager directories must be empty.

11. Choose an installation package group to use:

    Note: A new package group is provided for first-time installations.

    a. Select the appropriate option for this upgrade:
       - **M** to change the path where the package is located.
       - **N** to accept the default path.

    The screen refreshes with an [X] in front of your selected option. Enter **N** to continue.
12. Enter the full path of your JDK directory.
13. Specify if the JDK is 64 bit. Enter **[Y]es** or **[N]o**.
14. Select the license and features to install. Enter **[Y]es** to select a feature or **[N]o** to decline a feature when prompted. You are prompted for each of the following licenses:
    - **IBM Sterling B2B Integrator and/or IBM Sterling File Gateway**
    - **FIPS Module**
      - **FIPS Compliance Mode (Must enable FIPS Module)**
    - (5.2.5 and higher) **NIST 800-131a Compliance Mode**

      For this feature, you are prompted to enter a number for the option.
      - **off** (default value)
      - **transition**
      - **strict**
    - **AS2 Edition Module**
    - **Financial Services Module**
    - **EBICS Banking Server Module**
    - (5.2.5 and higher) **SPE Integration Module (Requires pre-install of SPE, WTX optional)**

      If you select the SPE option, you are prompted for the following information:
      - SPE installation directory
      - WebSphere Transformation Extender (WTX) installation directory
      - SPE UI port

      For more information, see the documentation for the integration of Sterling B2B Integrator and SPE.

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

Note: If you are upgrading to Sterling B2B Integrator version 5.2.4 from a previous 5.2.x release, you must manually install the EBICS client. For more information about installing the EBICS Client manually, see the EBICS Client User Guide on the Sterling B2B Integrator 5.2 Information Center.

15. Enter the full path to unlimited strength JCE policy file.
16. Enter the full path to the JAR file that you are using for the upgrade.
17. Enter an explicit IP address or host name to override the default value of localhost.
18. Enter the initial port number. Default is 8080.
19. Enter your system passphrase.
    - (5.2.3 - 5.2.4.2) The password is not hidden. It appears in clear case on your screen.
    - (5.2.5 and higher) The password is hidden.
20. Enter your system passphrase again to confirm it.
21. Enter the email address to which you want system alert messages sent.
22. Enter the SMTP mail server host name that you want to use for system alert messages and other administrative notices.
23. Do you want to use FIPS (Federal Information Processing Standards) mode?
    - **[Y]es**.
    - **[N]o**.
24. Enter the number of the database vendor as listed in the display:
    - **[1] DB2**
    - **[2] Oracle**
    - **[3] MySQL**
    - (5.2.3 - 5.2.4.2) **[4] MSSQL2005**
    - (5.2.5 and higher) **[4] MSSQL2012**
25. (Skip for MySQL) Specify if this installation is for a cluster node 2 or higher. Enter**[N]o**.
26. (Skip for MySQL) Specify if you want to apply database schema automatically:
    - To automatically apply the database schema, enter **[Y]es**.
    - To manually create the database schema, enter **[N]o**and continue with the remaining installation steps.

      Note: After the upgrade starts, it runs for a short time and stops without error. When the upgrade stops, you must perform additional actions as given in Step 30 of this procedure.
27. Configure your database by entering the following information:
    - Database user name.
    - Database password (and confirmation).
      - (5.2.3 - 5.2.4.2) The password is not hidden. It appears in clear case on your screen.
      - (5.2.5 and higher) The password is hidden.
    - Database catalog name.
    - Database host name.
    - Database host port number.
    - (Oracle, Microsoft SQL Server, and MySQL only) Absolute path and file name for one JDBC driver.

- (DB2 only) Absolute paths and file names for two JDBC drivers.

  Use the Type-4 JDBC driver. This type of driver converts JDBC calls into the network protocol that is used directly by DB2, allowing a direct call from Sterling B2B Integrator to the DB2 server.
- (Oracle only) At the *What Data type would you like to use?* prompt, choose a data type for binary data (BLOB or Long Raw).

  To use caching for BLOB (binary large object) columns, enter **BLOB**. You can significantly improve performance by enabling the cache on the BLOB data object in Oracle. For more information, refer to the documentation for slow performance in Oracle.

  To use the Long Raw data type, enter **Long**.

Note: The Installation Manager must successfully validate the connection to the database before you can continue with the upgrade. If there is a validation failure, the upgrade is canceled. You can view the system log to determine more information about the failure.

28. Specify if this installation is an upgrade from a prior version. Enter **[Y]es**.
29. Specify if you want to use the verbose installation option. Enter the appropriate option:
    - **[Y]es**.
    - **[N]o**

    Confirm your entry by pressing **Enter**.
30. Specify if you want to perform an upgrade precheck:
    - **[Y]es**.
    - **[N]o**
31. Specify the **Performance configuration** that applies to this upgrade. Select the applicable options:
    - **Number of Processor Cores** - Accept the default value or enter the appropriate value.
    - **Physical Memory (MB) allocated to Sterling B2B Integrator** - Enter the appropriate value.

    A Summary page of upgrade information with your selections is displayed.
32. Review the Summary page. Specify the next course of action:

Course of action to take ...	Select ...
Generate a text file of your entries. (Not functional for release 5.2.3)	G. Generate installation response file.
Return to step 10 of this procedure to correct/modify previous entries.	B. Back
Begin the upgrade.	I. Install
Cancel the upgrade.	C. Cancel

If you selected `I`, the upgrade begins.

Note: If you did not select the option to apply the database schema automatically, the upgrade stops and you must perform additional steps to complete the installation with manual DDL statements:

a. Open your installation directory.
b. Locate the `InstallSI.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 these 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 to make changes appropriate for your database. These changes might include changing the SQL delimiter or adding table space options.
e. Log in to your database as the DB schema user.
f. Run the SQL files manually in this order:

   Note: When you are running the scripts, it is important to run 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`

   Important: ActiveMQ uses dynamically generated table names based on the name of the installation node. Table generation is not included in these scripts, but is performed automatically during the initial start of Sterling B2B Integrator or when a new cluster node is added. Table generation might fail if security restrictions reduced the Sterling B2B Integrator database user permissions. To avoid this issue, ensure that the DBADM role permissions are enabled during the initial start. If further issues arise, contact IBM customer support for guidance.
g. Exit from the database.
h. Open the parent directory of *`install_dir`*.
i. Delete (or Rename as a backup) the Sterling B2B Integrator installation directory.
j. Restart the installation wizard and provide the same installation options that you provided before including the clearing of the **Apply database schema automatically** check box.

Installation information can be found in the `InstallSI.log` file.The installation automatically continues. When the installation is finished, the system displays the following message:

```
The install completed successfully
```

33. Press **Enter** to select **Finish**.

Check the `InstallSI.log` to verify that all the components were installed properly.

34. If you are using the AIX operating system and are using IPv6:
    - Open the `/install_dir/install/properties` directory.
    - Add the following value to the `sandbox.config` file:
      `IPV4STACk=false`
    - Open the `/install_dir/install/bin` directory.
    - Enter the command `./setupfile.sh`.
35. Start Sterling B2B Integrator.

    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 is located 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 later.
36. (This step applies only if you are upgrading to Sterling B2B Integrator 5.2.5.0.)

    After the Sterling B2B Integrator 5.2.5.0 installation is complete, install Sterling B2B Integrator 5.2.5.0 interim fix 3 (5020500_3). See "Installing an interim fix (UNIX Non-Cluster)" on page 67 for instructions.

    This interim fix (`si_52_build_5020500_interimfix_3.jar`) is included in the Sterling B2B Integrator 5.2.5 installation media released in April 2015, but is not automatically installed. It must be installed separately. In this case, use the included `si_52_build_5020500_interimfix_3.jar` file rather than downloading from Fix Central.
37. Determine whether you need to apply a fix pack or interim fix to the installation. Refer to "Installing an interim fix (UNIX Non-Cluster)" on page 67 for information.

Silent File Method for Upgrading

To use a silent installation file, you must first create a silent installation file using a text editor. The file must contain the entries marked as required in the following table. When you are finished editing the file, record the file name and location.

Create the Silent Install File for an Upgrade

About this task

You need to create a silent install file using a text editor. The following entries correlate to prompts in the upgrade procedure.

Silent Install File Entry	Description
IPV4STACK	(Required for AIX) Set this parameter to false.
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.

Silent Install File Entry	Description
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	Indicates if a license is being passed in and is required for 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) The directory that includes directories like bin and properties. The INSTALL_DIR property cannot point to a pre-existing directory or the installation will fail.
UPGRADE	(Required) Indicates if you are upgrading. Default: false
DB_VENDOR	(Required) Database vendor. Valid values: • Oracle • MSSQL2005 (use this value for Microsoft SQL 2005 and 2008) • DB2 • MySQL

Silent Install File Entry	Description
INSTALL_IP	(Required) Host IP address. Valid values: • localhost (default) • (your IP address) 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 this version with an 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. Example: 12345 Default: 8080
APSERVER_PASS	(Required) Passphrase used to secure all encrypted data in database. Default: (blank)
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
REINIT_DB	(Required) Indicates if database should be initialized. For a single node installation, this property is true. (Default)
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.
ORACLE_USE_BLOB	(Required if DB_VENDOR=Oracle) Indicates if you are using the BLOB data type. Default: true
DB_USER	(Required) Database user name.

Silent Install File Entry	Description
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, MSSQL, or MySQL, 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*/jdbc.jar • *JDBC_driver_dir*/db2_1_jdbc.jar:*JDBC_driver_dir*/db2_2_jdbc.jar
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.
JDK64BIT	(Optional) 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	(Optional) Indicates if you want to create a desktop icon for accessing . Valid values: • true - Create a desktop icon. • false (default) - Do not create a desktop icon.

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

Silent Install File Entry	Description
DB_DRIVERS_VERSION	(Optional) Free form version string for JDBC driver. This is informational only. Example: 8_1_5

Silent Install File Entry	Description
JDBC_VENDOR	(Optional) JDBC driver vendor. Used when multiple vendors are available (DB2 iSeries: DB2APP, DB2TOOLBOX, DB2). Default: Microsoft
LOAD_FACTORY_SETUP	(Optional) Indicates whether factory setup should be loaded during installation Valid values: • true (default).- loads factory setup during installation. • false - does not load factory setup during installation. Run loadDefaults command after 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.
CONFIG_GS	(Optional) Indicates whether integration with Sterling Gentran:Server® should be configured. Default: No
NO_DBVERIFY	(Optional) Valid values are true/false. When set to true during installation and installservice, dbverify will not be run. This means that the installation will not generate DDL to make the database like the XML entity repository.

Upgrade Using the Silent Install File

You can upgrade Sterling B2B Integrator in a UNIX/Linux non-cluster environment using a silent installation file.

About this task

If you are using AIX and IPv6, you must set the IPVSTACK parameter to false in the silent installation file.

To upgrade using a silent installation file, refer to your preinstallation checklist and follow the steps below:

Procedure

1. From the upgrade media, copy 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 file name and location.
4. Navigate to your working directory.
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:

   ```
   /absolutePath/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*`/ -f /`*absolutePath*`/`*SilentInstallFile*

   The installation starts. You can follow the progress of the installation on screen.

   The upgrade installation program verifies support for your operating system and JDK. It also verifies that you have enough space for the upgrade installation.

   When the installation is finished, the system displays the following message:

   ```
   Installation has completed successfully.
   ```

   The final startup processes run, concluding with the following messages:

   ```
   Open your Web browser to [URL]
   ```

   ```
   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 later.

   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. (Skip this step if you are applying database schema automatically.) If you are going to manually create the database schema, the upgrade starts and runs for a short time before stopping without error.

   Note: After the upgrade stops, you must perform these additional steps to complete the upgrade 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

Important: ActiveMQ uses dynamically generated table names based on the name of the install node. Table generation is not included in the above scripts, but is performed automatically during the initial start of Sterling B2B Integrator or when a new cluster node is added. Table generation may fail if security restrictions have reduced the Sterling B2B Integrator database user permissions. To avoid this issue, ensure that the DBADM role permissions are enabled during the initial startup. If further issues arise, contact IBM customer support for guidance.

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 upgrade and provide the same options you provided before.

8. Check the **InstallSI.log** to verify all the components have installed properly.
9. (This step applies only if you are upgrading to Sterling B2B Integrator 5.2.5.0.)

   After the Sterling B2B Integrator 5.2.5.0 installation is complete, install Sterling B2B Integrator 5.2.5.0 interim fix 3 (5020500_3). See "Installing an interim fix (UNIX Non-Cluster)" on page 67 for instructions.

   This interim fix (`si_52_build_5020500_interimfix_3.jar`) is included in the Sterling B2B Integrator 5.2.5 installation media released in April 2015, but is not automatically installed. It must be installed separately. In this case, use the included `si_52_build_5020500_interimfix_3.jar` file rather than downloading from Fix Central.
10. Determine whether you need to apply a fix pack or interim fix to the installation. Refer to "Installing an interim fix (UNIX Non-Cluster)" on page 67 for information.

Validate the Upgrade

Validate the 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 Installation Task	Completed
1	Start Sterling B2B Integrator.	
2	Access Sterling B2B Integrator.	
3	Validate the Installation.	
4	Stop Sterling B2B Integrator.	

Starting Sterling B2B Integrator in a UNIX/Linux noncluster environment

After you run the upgrade software, you can start Sterling B2B Integrator.

Before you begin

If you are starting Sterling B2B Integrator after upgrading the application from version 5.1.0.4 to 5.2.5, change the values of the following properties in the `centralops.properties` file to `600`. This action prevents the **`run.sh`** command from timing out before Sterling B2B Integrator starts. The `centralops.properties` file is in the *`install_dir`*`/install/properties` directory.

- **`OpsServer.commandTimeout`**
- **`PassPhrase.urlTimeout`**

Procedure

1. Open the `/`*`install_dir`*`/install/bin` directory.
2. Enter `./run.sh`.
3. Enter your passphrase. 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.
4. Record the URL address so that you can access Sterling B2B Integrator.

Accessing Sterling B2B Integrator

You can access Sterling B2B Integrator through a web browser.

Procedure

1. Open a browser window and enter the address that is displayed at the end of the start.
2. On the login page, 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.

Validating the installation with a sample business process

You can validate the installation by testing a sample business process.

Procedure

1. From the **Administration Menu**, click **Business Process** > **Manager**.
2. In the **Process Name** field, type `Validation_Sample_BPML` and click **Go!**
3. Click **execution manager**.
4. Click **execute**.
5. Click **Go!** The `Status: Success` message is displayed on the upper left side of the page.

Stop Sterling B2B Integrator (Hard Stop)

About this task

A hard stop halts the system without waiting for business processes to finish. Hard stops may result in loss of data in unfinished processes.

To run a hard stop:

Procedure

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

Stopping Sterling B2B Integrator (Soft Stop)

A soft stop of Sterling B2B Integrator halts the system after all the business processes finish running.

About this task

- In the user interface, click **Operations** > **System** > **Troubleshooter**and then click **Soft Stop**.
- You can soft stop Sterling B2B Integrator from the command-line interface.

For more information about the softstop user interface and command line options, see the performance management documentation.

Procedure

1. Choose how to soft stop Sterling B2B Integrator:
   - To soft stop from the user interface, see step 2
   - To soft stop from the command-line interface, see step 3
2. To soft stop from the user interface:
3. To soft stop from the command-line interface:
4. Navigate to the `/`*`install_dir`*`/install/bin` directory.
5. Enter the following command:
   `./softstop.sh`
6. Enter your passphrase.

Post Upgrade Configuration

Post upgrade configuration checklist

After the upgrade software finishes running, you must perform some post upgrade procedures.

Review all of the procedures in the checklist. Some procedures may not be required.

Task number	Task	Your notes
1	For security purposes, change all default user ID passwords immediately after installation is completed. See the account update topic in the security documentation.	

Task number	Task	Your notes
2	"Determine if You Need to Apply a Fix Pack in UNIX/Linux Environment"	
3	"Change the Administrative Password" on page 56	
4	"Disable Services" on page 56	
5	"Download of the Sterling B2B Integrator tools" on page 56	
6	"Changes to Network Interface Bindings" on page 56	
7	"Enable Business Processes" on page 57	
8	"Property files configuration in a UNIX environment" on page 58	
9	"Add cdinterop Files" on page 58	
10	"Updating the sandbox.cfg file with a new JCE file" on page 58	
11	"Review the EDI Sequence Check Queue" on page 58	
12	"Configure Document File Systems" on page 59	
13	"Add Third-Party Libraries" on page 59	
14	"Configure Services and Adapters" on page 59	
15	"Configure JDBC Adapter and Lightweight JDBC Adapter" on page 60	
16	"Configure File System Adapter and Command Line2 Adapters" on page 60	
17	"Configure Odette FTP Adapter" on page 61	
18	"Add Advanced File Transfer Tab" on page 63	
19	"Restore Performance Tuning Configuration" on page 64	
20	"Reconfigure Archive Settings" on page 64	
21	"Correct Missing Manager IDs" on page 64	
22	"Configure JVM Containers" on page 64	

Determine if You Need to Apply a Fix Pack in UNIX/Linux Environment

Fix packs contain cumulative fixes for a specific version of Sterling B2B Integrator. Fix packs are available from the IBM Fix Central web site.

About this task

Because each fix pack contains the fixes from previous fix packs, you only need to install the most recent fix pack.

Information about a fix pack is located in a PDF file with a similar name.

Before you install the fix pack, review the following items:

- Preserve your custom changes to system resources.
- The fix pack installation may use one or more 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 when applying the fix pack. Properties overridden using the

customer_overrides.properties file are not affected. IBM 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 fix pack. The cdinterop files do not have initialization (*.in) files. After applying the fix pack, use the backup version of the files in your upgraded 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 fix pack installation is automatically logged to /*install_dir*/install/logs/InstallService.log.
- If you would need to roll back a fix pack, see the *Fix Pack Changes Report*.
- When installing a fix pack, 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 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 is the Admin password for logging into the UI.

Disable Services

About this task

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

Download of the Sterling B2B Integrator tools

After you install Sterling B2B Integrator, you can install tools like the Map Editor and the Graphical Process Modeler (GPM).

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 require MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports

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

Changes to Network Interface Bindings

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

Update Property File for Network Interface Binding Changes

About this task

On the server where the system resides, edit the noapp.properties_platform_ifcresources_ext.in file.

Procedure

1. Locate the **admin_host** parameter. The default settings are: *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 resides. 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 additional network interface needs to access the system, add an additional *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.

Update 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 resides, 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.

Enable Business Processes

About this task

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

Property files configuration in a UNIX environment

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 or not 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:

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

After installing Sterling 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, for example setting a different logging level - you will need to edit (or in some cases, create) certain property or .xml files.

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

Areas where you might need to 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

Add cdinterop Files

About this task

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

Updating the sandbox.cfg file with a new JCE file

If you upgrade from Sterling B2B Integrator release 5.2.4.2 to 5.2.5 and you change the JDK from Sun to IBM, you must manually update the Java Cryptography Extension (JCE) policy file information in the `sandbox.cfg` file.

Procedure

1. Open the *install_dir*/install/properties directory.
2. Open the `sandbox.cfg` file.
3. Change the **JCE_DIST_FILE** property to the path to the JCE file that you specified during the upgrade.
4. Save and close the `sandbox.cfg` file.
5. Open the *install_dir*/install/bin directory.
6. Enter the `setupfile.sh` command to update your installation with the new **JCE_DIST_FILE** property value.

Review 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 has 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, you should follow the instructions in the error message to correct the situation.

Configure 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 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.

Add Third-Party Libraries

About this task

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

Configure Services and Adapters

About this task

You may need 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 re-set to their default configurations. This includes directory paths, which are restored to their default paths. You need to reconfigure those adapters and services, which include, but are not limited to:

- 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 may need to reconfigure or reactivate the service or adapter following an upgrade. You may also need to reconfigure adapters that used directories or scripts in the installation directory of your previous release.

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

The following adapters need special consideration following an upgrade:
- JDBC Adapter and Lightweight JDBC Adapter
- File System Adapter and Command Line2 Adapters
- Odette FTP Adapter

Configure 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 have been streamlined. The poolManager.properties file has been eliminated and some of its pool properties are now included in the jdbc.properties file, along with some new properties. You will need to 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 are not affected by product updates.

Configure File System Adapter 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 the following:
- If you are using the Command Line2 adapter and have located the CLA2Client.jar file 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 *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 version of the CLA2Client.jar file with the CLA2Client.jar located 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 prior to 4.0 and are using the Command Line adapter, you must update the version of the CLAClient.jar file with the CLA2Client.jar located 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 importing old service instances of CLA onto Sterling B2B Integrator, you need to reconfigure the imported CLA services to re-set the Remote Name and Remote Port service configuration parameters. For more information, refer to the documentation for the Command Line Adapter and Command Line2 Adapter.

Configure Odette FTP Adapter

About this task

If you use the Odette FTP Adapter and are using the Partner Profile XML file version 2.00 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 may be repeated.
Physical Partner	<AuthenticationCertificate type =”Private Key”> <Subject>string</Subject> <Issuer>string</Issuer> <Serial>Bignumber_string </Subject> </AuthenticationCertificate>	Add Stucture, if used.	OFTP 2.0: Mandatory for security only.
Physical Partner/ CAPI	DWindowSize	Delete field	

Section	Name of Structure or Field	Action	Comment
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 may 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 may be repeated.

Section	Name of Structure or Field	Action	Comment
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 changing the Partner Profile for version 3.00, import the Partner Profile into the new Odette FTP Partner Profile database. For additional information, see Odette FTP Partner Profile.

Add 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, perform 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**.

Restore Performance Tuning Configuration

About this task

Before you begin this procedure, you need to 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**.

Reconfigure 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**.

Correct Missing Manager IDs

About this task

If you created a Manager ID with no corresponding User ID in your previous version, the Manager ID may be missing after upgrading. If this occurs, create a user in the system with a User ID that matches the missing Manager ID.

Configure JVM Containers

About this task

After you have upgraded the system, you will need to reconfigure the JVM containers.

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

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

Use one of the following tasks to reconfigure your containers:
- *Set Up Adapter Container - iSeries*
- *Set Up Adapter Container - UNIX/Linux*
- *Set Up Adapter Container - Windows*

System Maintenance

System Maintenance

From time to time, you may need to perform system maintenance activities. These activities might include any or all of the following:
- Applying a fix pack
- Applying an interim fix
- Performing a checksum
- Generating a fix pack Change Report
- Modifying the license files

Preserve Custom Changes

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 makes a change 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 the custom changes to resources.

Determine if You Need to Apply a Fix Pack in UNIX/Linux Environment

Fix packs contain cumulative fixes for a specific version of Sterling B2B Integrator. Fix packs are available from the IBM Fix Central web site.

About this task

Because each fix pack contains the fixes from previous fix packs, you only need to install the most recent fix pack.

Information about a fix pack is located in a PDF file with a similar name.

Before you install the fix pack, review the following items:
- Preserve your custom changes to system resources.

- The fix pack installation may use one or more 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 when applying the fix pack. Properties overridden using the customer_overrides.properties file are not affected. IBM 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 fix pack. The cdinterop files do not have initialization (*.in) files. After applying the fix pack, use the backup version of the files in your upgraded 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 fix pack installation is automatically logged to /*install_dir*/install/logs/InstallService.log.
- If you would need to roll back a fix pack, see the *Fix Pack Changes Report*.
- When installing a fix pack, 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 installation is complete.

Install a fix pack in a UNIX/Linux non-cluster environment

Fix packs are used to update Sterling B2B Integrator.

About this task

To install the latest fix pack for Sterling B2B Integrator in an UNIX or Linux environment:

Procedure

1. Navigate to the IBM Fix Central website.
2. 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.
3. Verify that the database server is up and ready to accept connections.
4. Stop Sterling B2B Integrator.
5. Perform a full backup of the Sterling B2B Integrator installation directory, including all sub-directories.
6. Perform a back up of the database.
7. 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.
8. Is the database password encrypted? If Yes, decrypt the password.
9. Navigate to the directory where Sterling B2B Integrator is installed. Enter: `cd /install_dir/install/bin`
10. Enter: `./InstallService.sh 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 `fix pack.log` file.

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

11. Press **Enter** to continue.
12. To accept the license agreement, enter `Y`.
13. 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`
14. If you decrypted the database password, re-encrypt the password.
15. Start Sterling B2B Integrator.

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

Installing an interim fix (UNIX Non-Cluster)

After you install Sterling B2B Integrator you might need to install an interim fix. An interim fix is one or more fixes that are applied to a specific existing fix pack.

Before you begin

Before you can install an interim fix that is developed for your company, you must complete the following tasks:

- Received the file name of the `ccaseid.jar` to install from IBM Customer Support
- Created a full backup of Sterling B2B Integrator
- Created a full backup of your database
- Preserve your custom changes to system resources.

Procedure

1. Log in to the computer that you are installing the interim fix on.
2. If the database password was encrypted, decrypt the password.
3. Navigate to the IBM Fix Central website.
4. Login using your email address and password.
5. Download the *ccaseid*.jar file, where *ccaseid* includes the ID number you received from Customer Support. If you use FTP, you must use Binary mode.
6. Log in to the server where Sterling B2B Integrator is installed with the user ID and password that was used for the installation.
7. Stop Sterling B2B Integrator.
8. Open the /*install_dir*/install/bin directory.
9. Enter ./InstallService.sh /*absolutePath*/*ccaseid*.jar to install the interim fix.

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

    Attention: Running **InstallService.sh** removes any previously installed interim fix to prevent conflicts with what is being installed.
10. If you decrypted the database password, re-encrypt the password.
11. Start Sterling B2B Integrator.
12. Open the /*install_dir*/install/bin directory.
13. Enter `./dump_info.sh` to verify that the interim fix was successfully installed.

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 compares the checksum between the existing default resource and the resource that was added after applying a fix pack or upgrading. The DB Checksum tool, a resource difference tool generates a granular report of the changes in the system that was not permitted to 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.

Performing a checksum

Use a command to run the DB Checksum tool.

Procedure

To run the DB Checksum tool:

1. Open the `/install_dir/install/bin` directory.
2. Enter the following command:

   ```
   ./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 (optional).
   - `1` is WFD.
   - `2` is MAP.
   - `3` is SCHEMA.
   - `4` is SII.
   - `5` is TEMPLATE.
   - `-r` is the resource name (optional). For example, wfd, map, schema, sii, or template.
   - `-o` is the file name to output all the messages (optional).
   - `-g` is the file name that lists all the ignored resources (optional).
   - `-h` is the help screen.

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

Fix Pack Changes Report

The Fix Pack Changes Report is used to obtain information if you need to roll back a fix pack.

The fix pack report can be found in the installation directory `fix pack_reports` folder. The report contains the following fix pack information:

- Fix pack ID
- Fix pack changes
- Number of files deleted
- Number of JAR files removed
- Number of JAR files 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 `fix pack_reports` folder contains the `fix pack_Report.html` file. When you open this file, you can view the fix pack information.

Example: Fix Pack Changes Report

The Fix Pack Changes Report includes both summary and detailed report information.

The following is an example of a Fix Pack Changes Report:

```
Summary of Changes
Fix Pack ID: Platform_2.0
Fix Pack 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 modifications

After the installation finishes, you can modify the software licenses that you loaded with 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 in the following directories:

- 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. On the Administration Menu, click **System** > **B2B Console** > **Operations** > **System** > **Licenses**.

AddLicenseSet Command Parameters

Use the **AddLicenseSet** command to modify a single license file or the entire license file directory.

To use the **AddLicenseSet** command, you must do the following:

- Open 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 Parameter	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 locations: • 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 locations: • UNIX - /*install_dir*/install/logs/security/upgrade • Windows -*install_dir*\install\logs\security\upgrade • iSeries -/*install_dir*/logs/security/old_licenses

The **AddLicenseSet** command will check if Sterling B2B Integrator is running. If it is running, the commond will call the Ops server to refresh the license from the database. If you have any problems with your licenses after running the **AddLicenseSet** command, stop and restart Sterling B2B Integrator.

License Modification: Examples

There are several different ways you can use the **AddLicenseSet** command to modify your licenses.

UNIX Examples

From the *install_dir*/bin directory:

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

Windows Examples

From the *install_dir*\bin directory:

Scenario	Command usage (Windows example)
Reload a single license file	AddLicenseSet.cmd*install_dir*\install\properties\ licensefiles\SI_SFG_License.xml -reload
Reload all of the license files in the directory	AddLicenseSet.cmd*install_dir*\install\properties\ licensefiles\ -reload
Upgrade a single license file	AddLicenseSet.cmd*install_dir*\install\properties\ licensefiles\SI_SFG_License.xml -upgrade
Upgrade all of the license files in the directory	AddLicenseSet.cmd*install_dir*\install\properties\ licensefiles\ -upgrade

Upgrading your JDK (Windows and UNIX)

Sometimes you need to upgrade your JDK version to support a new version of Sterling B2B Integrator.

About this task

If you have V5.2.4.1 or later installed, you can use the **upgradeJDK** script to upgrade your version of the JDK. See *bin Directory Files* for more information. If you have V5.2.4.0 or earlier installed, follow the steps below to upgrade your JDK.

Procedure

1. Download the Unrestricted.zip policy file for the IBM JDK.
2. Back up the existing JDK in <*Install Dir*>/jdk. Change the folder name to jdk_back)
3. Copy the new IBM JDK (1.7.0) folder to the installation Directory. Directory Name should be jdk)
4. Copy all the jars present in <*Install Dir* >jdk_back\jre\lib\ext to <*install Dir*>jdk\jre\lib\ext directory.
5. If your installation of V5.2.4 or lower was built using the SUN JDK, continue to the next step. Otherwise skip to step 6.
   a. Edit the sandbox.cfg property file.
   b. Set JCE_DIST_FILE=<*New Path of Unrestricted.zip File*>. For example, JCE_DIST_FILE=D\:\\IBM\\unrestricted.zip7.
   c. Back up the local_policy.jar and US_export_policy.jar files present in <*Install Dir*>jdk\jre\lib\security.8.

d. Unzip the Unrestricted.zip file and copy local_policy.jar and US_export_policy.jar to `<Install Dir>jdk\jre\lib\security`.
6. Run **`updateJavaSecurity.cmd`**.
7. Verify that security providers have been updated in`<Install Dir>\jdk\jre\lib\security\java.security`.
8. Follow the Upgrade Guide instructions for your upgrade scenario.

Uninstall the Software

Uninstall Sterling B2B Integrator

About this task

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

Additionally, you may perform 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 or Linux environment:

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 may be unable to remove Sterling B2B Integrator successfully.
2. Back up the file system and database.

   This step is optional. However, by backing up the file system and database, you are ensured that Sterling B2B Integrator is completely 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, these remain intact even after you remove the 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 reside.
5. Manually remove the JDK:

   a. Navigate into the _uninst subdirectory of your JDK installation directory

   b. Enter `./uninstall.sh`
6. After you remove Sterling B2B Integrator from the server, you can remove Eclipse, and any tools that were downloaded to the desktop, including the following:
   - 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, including:
  - 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 requires 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.

User Documentation

Sterling B2B Integrator user documentation

The user documentation is available from an 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.

If you need a printed copy of the documentation, you can print topics of information through your Internet browser, or you can download documents in PDF format, after you add it to a collection on IBM Knowledge Center.

To access the documentation site from within Sterling B2B Integrator or one of its tools, select the help icon. The system must reside on a computer that supports Internet access and an Internet browser.

Improving your access to online documentation

You can improve your access to online documentation by using several methods.

About this task

After you access the IBM Knowledge Center, you can perform the following tasks:

- 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.
- Add documents to your collection and download them in PDF format.

Request 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.

Troubleshooting Tips

Troubleshooting Tips: UNIX/Linux Non-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 generated during installation: • ant.install.log (in the *install_dir* directory) • *install_dir*/PreInstallSI.log
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 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, including: – MESA Developer Studio Software Development Kit (SDK) – 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.	**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 may not be able to download the desktop tools and resources. The firewall will reject the internal IP address from a client residing 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.

Situation	Message or Symptom	Explanation/Resolution
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.
Installing (HP-UX 11.31)	When entering your email address the @ key is not recognized.	**Explanation** The @ key is being mapped to kill or eol, it needs to be mapped to another character. **Resolution** This resolution only 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.
e-Invoice Upgrade: Oracle Add Constraint Error	When you upgrade Sterling e-Invoicing and are using an Oracle database, if the upgrade fails with the error message `name is already used by an existing object`, this occurs because the default behavior for the "drop constraint" command changed in Oracle 10.	**Explanation** 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 install. 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 will 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 executes two steps: 1. First, it drops the unique constraint so the next step can redefine it using additional 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 already 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 you should use is: `drop index UNQ_EINV_CANON`

Situation	Message or Symptom	Explanation/Resolution
Apply a fix pack or Upgrade	The `/install_dir/install/installed_data` directory is created (if clustered, on each node) during an upgrade or when applying a fix pack. This directory can become very large and take up needed space on the file system.	**Explanation** The information in this directory is used when applying a fix pack or upgrading, but is not required afterward. The deployment/cleanup tasks for the upgrade or fix pack do not remove this directory. **Resolution** The directory can be manually removed to increase the available space for the file system: 1. Navigate to `/install_dir/install` 2. Enter `rm -r installed_data`

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