

Sterling Integrator®

iSeries Upgrade

Version 5.1



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iSeries Upgrade

Upgrade Overview for iSeries

Use the Sterling Integrator 5.1 iSeries Upgrade Guide to upgrade the Sterling Integrator software in an iSeries environment. This guide includes the pre-upgrade and post-upgrade processes. It also includes information for using the DB2 database with Sterling Integrator.

It is important to remember that upgrading to 5.1 involves a full installation of Sterling Integrator. You need to prepare for an upgrade the same way that you would prepare for an installation.

This upgrade does not overwrite your current Sterling Integrator directory structure on disk. Instead, it creates a new installation of Sterling Integrator 5.1 and uses a copy of your original instance's database to upgrade to the new version. After the upgrade, both instances will be operational.

For new installations, use the Sterling Integrator 5.1 iSeries Installation Guide.

Before You Begin the Upgrade

Before You Begin the iSeries Upgrade

Before you begin the upgrade, review the following checklist.

#	Before You Begin Checklist	Your Notes
1	You must have a new license file to use the new licensed features of your upgraded installation.	
2	Read through this entire document so that you have a clear understanding of what the upgrade requires.	
3	<p>Download the following documents from the Documentation Library (http://www.sterlingcommerce.com/Documentation/SI50/homepage.htm):</p> <ul style="list-style-type: none">• Release notes• System Requirements - <p>With each release, Sterling Commerce introduces leading edge technology to improve and enhance its software. Review the System Requirements to confirm that your system and databases meet the requirements, and also to manage any necessary upgrades or changes before upgrading.</p>	
4	<p>Archive and purge any unneeded data before upgrading.</p> <p>Archived data can only be restored from the same version and patch of Sterling 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 Integrator that matches the version and patch from which the archive was taken.</p>	
5	Back up your database. Export your business processes, trading partners, maps, etc.	
6	Review and note the adapters, business processes, and other configurations in your current version. This will help identify any need for updating transport messages, third-party adapters, or configurations to adapters, such as the File System and Command Line Adapters.	

#	Before You Begin Checklist	Your Notes
7	If you have edited a pre-defined business process, be aware that the upgrade process overwrites pre-defined business processes. Your customized business process is preserved in the system, but it is no longer the default process.	
8	If you have edited any property files (.properties or .properties.in), be aware that 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 in Sterling Integrator 5.1.	
9	If you edited any of the following cdinterop files, 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. <ul style="list-style-type: none"> • cdinterop-proxy-records.properties • cdinterop-spoee-auth.properties • cdinterop-spoee-policy.properties • cdinterop-user-records.properties 	
10	You should not perform Sterling Integrator upgrade on a hot fix directly. Apply the latest build (patch) prior to upgrading Sterling Integrator.	
11	Always install and test your upgrade in a non-production environment before upgrading your production environment.	

Special Tasks and Considerations (iSeries)

Before you begin upgrading, be aware of the following special tasks and considerations, depending on your type of upgrade:

- 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.
- If your version of Sterling Integrator is integrated with the JBoss™, WebLogic®, or WebSphere® application server.

Sterling Integrator version 5.1 is installed without integration to an application server and does not require an application server for installation or at runtime. However, Sterling Integrator still supports integration with JBoss, WebLogic, and WebSphere. After you upgrade to 5.1, you can restore integration with your application server if desired. To do so, use the Sterling Integrator EJB Adapter. For more information, refer to the documentation for the EJB Adapter.

Prepare Your iSeries for the Upgrade

To verify system compatibility and prepare for the upgrade, perform the following tasks:

1. Review Sterling Integrator Release 5.1 *System Requirements* document. Your system must meet the minimum requirements that are documented, while your database and JDBC driver versions must match the documented requirements. Complete any necessary upgrades or changes in preparation for the upgrade.
2. Collect information on any third-party libraries used for adapter configuration that were added to your current release. You must add each of these libraries to release 5.1 later in the upgrade process.
3. Locate any configuration file changes for the JDBC adapter or the Lightweight JDBC adapter in your current release. Later in the upgrade process, you will copy these changes to release 5.1.
4. Record your performance tuning configuration. You will restore these settings later in the upgrade process.
5. Back up Sterling Integrator and your current database

Caution: 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 Integrator and your database.

After you successfully back up Sterling Integrator and your database, you are ready to upgrade the software. Before you begin, see Sterling Integrator 5.1 *Release Notes*.

Upgrade Impacts Overview

This documentation provides information on how system behavior has changed based on upgrading your system from 4.3 (or later) to 5.1. You need to review all of the information before you begin your upgrade.

Backups Are Not Generated During Install, Upgrade, Patch or Hotfix

Before you begin an upgrade to Sterling Integrator 5.1, review the following backup information.

In Sterling Integrator 5.1, some of the standard resources installed during install, upgrade, patch, or hotfixes 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 `sandbox.cfg` file.

Capitalization Insensitivity for Header Value

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 to Sterling Integrator 5.1, you need to review CA certificates upgrade information.

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.

Perimeter Server Installation

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
```

Retry Logic Added to WebSphereMQ Suite Adapter PUT Service

Retry logic has been added to the WebSphereMQ 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:

1. Log into the application.
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 **WebSphereMQ Suite Put Message Service** from the **All Services** pane into the center pane.
7. Double click the **WebSphereMQ Suite Put Message Service**.
8. Select the configuration from the **Config** dropdown.
9. Enter the number of retries in to the **wsmq_send_retryCount** value.
10. Enter the sleep interval in seconds in to the **wsmq_send_retrySleepInterval** value.
11. Save the changes to the service configuration.
12. Exit from the GPM.

Services and Adapters - Show Advance State Button

Before you begin an upgrade to Sterling Integrator 5.1, review the following Show Advance State button information.

In Sterling Integrator 5.1, 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 check box on the search screen to display it.

Some Certificate Fields Are Optional

When generating certificate keys, the following fields were mandatory in the previous release, but now are optional entries:

- alt.name.dns
- alt.name.IP

Support for Multiple AS2 Organizations

Before you begin an upgrade to Sterling Integrator 5.1, review the following schema information.

Sterling Integrator 5.1 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 5.1, 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 to Sterling Integrator 5.1, review the following web services information.

In Sterling Integrator 5.1, 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 patch installation.

After you have completed your upgrade to Sterling Integrator 5.1, 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.

Windows 2003 Does Not Start with Silent Install

If you used the silent install method for your upgrade, you must manually run the InstallWindowsService.cmd file to register the service.

Pre-Upgrade Tasks

Checklist for iSeries Pre-Upgrade

Use this checklist to upgrade the Sterling Integrator in an iSeries environment. The checklist contains:

- Brief descriptions for tasks, while more detailed procedures are provided after the checklist
- Information you need to gather to complete the installation

Note: When creating a name, such as an account name, permissions name, profile name, or database name, follow these conventions:

- The first character must be alphabetic
- The remaining characters may be alphanumeric, but it's best to avoid special characters
- Do not use spaces or apostrophes

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

#	iSeries Installation Checklist	Your Notes
1	Use the system requirements to verify that your system hardware and software meet the requirements specified for this release.	
2	For systems with multiple IP addresses, verify that the IP address on which Sterling Integrator resides is accessible by any client computer that is running a browser interface. Caution: If you do not verify the IP address, your system may not operate properly after installing Sterling Integrator. A good test is to ping the IP address from your iSeries command line.	
3	If you are using a non-English environment, confirm that you are using the appropriate character set.	
4	Configure the system to view Sterling Integrator files using Windows Explorer.	
5	Map a network drive to your working directory.	

#	iSeries Installation Checklist	Your Notes
6	Specify the QCCSID (Coded Character Set) for this installation.	
7	Record the collection name for the database.	
8	Record the system passphrase.	
9	Record the administrative email address. This address is where system alerts messages are sent.	
10	Record the SMTP Server IP address. This address is where alert messages are sent.	
11	Record the Initial Port Number.	
12	Record the Hostname (catalog name) on which you plan to install the software.	
13	Determine the Host IP address for Sterling Integrator. This is required even if you only have one IP address for your system.	
14	Create the Sterling Integrator user profile and the associated password. Be sure to record the user password so you can enter it during installation.	
15	Create a SystemDefault.properties file. If you have multiple JDKs loaded on your system, you need to point your user profile to correct version of the JDK. Verify that your user profile points to the correct JDK.	
16	Verify that your user profile is pointing to a job queue in a subsystem.	
17	Record the path to the Sterling Integrator jar file. The jar file can reside in any directory on your system. During installation, you use this directory, but this is not the final directory where Sterling Integrator resides.	
18	Record the Directory Name where you plan to install the software. The Sterling Integrator installation directory must be a new directory and cannot already exist. A large subdirectory tree will be created under this directory. During installation, this directory is referred to as <i>install_dir</i> .	
19	Obtain the license file and record the absolute path to the license file.	
20	Download the JCE distribution file.	
21	Install the Sterling Integrator software.	

The Sterling Integrator installation program will automatically set the umask to 002 during the installation. However, iSeries system administrators should consider placing an appropriate umask command such as umask 002 in their global or user login script because the default of 000 could allow many IFS files to be world-writable. Please consult the IBM iSeries Information Center for more information on umask and customizing your Qshell environment.

Verify Your System Meets the System Requirements

Before you begin the installation, verify that your system meets the hardware and software requirements specified for this release. The hardware requirements listed are the minimum required. Your system requirements will exceed these if you are running other applications on the same machine as the Sterling 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 should 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 will fail. If the installation fails, review the installation log for a list of non-compliant items.

Download the JCE Distribution File for the IBM JDK 1.6

The Java Cryptography Extension (JCE) is a set of Java packages from IBM that provides a framework and implementations for encryption, key generation and key agreement, and Message Authentication Code (MAC) algorithms.

If you are installing the software outside of the United States, check to see if you can get the JCE unlimited strength jurisdiction policy files. The unlimited strength jurisdiction policy files can only be exported to countries to which the United States permits the export of higher-level encryption.

To obtain the zip file for the IBM JDK 1.6:

1. Open your browser and navigate to <https://www14.software.ibm.com/webapp/iwm/web/preLogin.do?source=jcesdk>.
2. Enter your IBM ID and password.
If you do not have an IBM ID, follow the IBM registration instructions.
3. Click **Sign in**.
4. Select the **Unrestricted JCE Policy files for SDK for all newer versions** and click **Continue**.
5. Review your personal information and the license agreement.
6. Select the **I agree** check box and click **I confirm** to continue.
7. Click **Download now**.
8. Save the `unrestricted.zip` file to your system.
9. Record the directory and the zip file name.
You will need this information during the installation process.

Determine Port Numbers (iSeries)

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

- A range of 200 consecutive open ports between 10000 and 65535 are required for this installation.
- 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.

In an iSeries environment, you can also view the port numbers currently in use on your system using one of these methods:

- Select from the **iSeries Navigator Network > TCP/IP Configuration > Connections**.
- Enter `WRKTCPTS` on an iSeries command line and select Option 3 (Work with TCP/IP connection status). Press **F14** to sort the port numbers in numerical sequence.
- Enter `NETSTAT *CNN` on an iSeries command line and press Enter. Press **F14** to sort the port numbers in numerical sequence.

Configure the System to View Files

In the iSeries environment, you must configure your system to view Sterling Integrator files using Windows Explorer. Use the NetServer component of OS/400 to set up file shares that are accessible through Windows networking. You must set up a file share to a working directory in your iSeries Integrated File System (IFS).

Map a Network Drive (iSeries)

In the iSeries environment, you must map a network drive to the working directory for Sterling Integrator. For more information, refer to the documentation on the IBM Web site.

Specify the QCCSID (iSeries)

In the iSeries environment, you must specify the QCCSID (Coded Character Set) under which Sterling Integrator will run. Follow these steps:

1. From an iSeries command line, enter `DSPSYSVAL SYSVAL(QCCSID)`.
2. Is the QCCSID set to 65535?

If Yes, then complete one of the following tasks:

- Change the CCSID to a specific coded character set.

Enter `CHGSYSVAL SYSVAL(QCCSID) VALUE(xxx)`, where xxx represents your coded character set.

IPL your iSeries.

- Keep the QCCSID at 65535 and specify a specific CCSID other than 65535 when you create your Sterling Integrator user profile.

Refer to the IBM National Language Support Guide for valid coded character sets. It is recommended that you use the coded character set 037 for a US English system

If No, continue with the next preinstallation or preupgrade task.

Create a Sterling Integrator User Profile (iSeries)

In the iSeries environment, you must create a user profile for accessing Sterling Integrator databases. Use this user profile when you submit the installation command and any function related to your Sterling Integrator system.

If your system value QCCSID is set to 65535, then set the CCSID parameter to a specific coded character set other than 65535 on the CRTUSRPRF command. See the IBM National Language Support Guide for valid coded character sets. See your operating system documentation for more information about creating user profiles.

Note: The job description assigned to the user profile must have a job queue defined that allows at least eight active jobs (the maximum active must be set to at least 8). If this parameter is defined less than stated, Sterling Integrator will not install or start correctly. This also applies to starting Sterling Integrator after installation.

Prepare the Database (iSeries)

In an iSeries environment, Sterling Integrator uses the DB2 database that is included in OS/400. The installation process creates a new collection for Sterling Integrator. Before you install, you must determine and record the collection name and the catalog name.

- The collection name is the name of the collection (or library) that contains the database, journal, and journal receiver for your Sterling Integrator system. This collection must not already exist.
- The catalog name is the database name of your iSeries system, as defined by the WRKRDBDIRE command. Generally, this value is the name of your system.

All database files are required to be journaled when being used by the translator in Sterling Integrator. If your application files are not currently journaled, and you plan to access these files through Sterling Integrator, refer to the IBM manuals for instructions on journaling physical files.

License File

After your company signed the sales contract with Sterling Commerce, Sterling Commerce creates a license file containing information about your company, your system, and the packages (components) that your company selected to use, such as services, maps, and adapters.

Your first license file is a temporary keyfile that is e-mailed to you after you purchase Sterling Integrator. It allows you to run the software and all of the licensed features for a limited period. Before the keyfile expires,

you must replace the temporary key with a permanent key. Failure to either extend your temporary keyfile or replace it with a permanent keyfile will result in the keyfile expiry and Sterling Integrator will fail to start.

The permanent license keyfile contains your specific operating system and the IP address of your system, and is valid for 20 years from the date of issue.

The permanent license file contains a single or multiple IP addresses in your computing environment. If you change an IP address in your computing environment that is present in your license file, the software will cease to operate. You should take necessary precautions to avoid this potential outage, including notifying the appropriate contacts within your organization (Information technology and related departments) and include the license file updates in your computing environment change plans.

Obtain a License File

To obtain a license file:

1. Navigate to the Sterling Commerce Customer Center (<https://customer.sterlingcommerce.com>).
2. Click **Support Center > Sterling Integrator > Key Requests**.
3. Enter the following information:
 - Company Name
 - Contact Name
 - Phone Number
 - Fax number
 - Email Address
 - Requested Key Type (Permanent or Temporary)
 - PSP number - The PSP Number (unique number that identifies a licensed software asset in your Sterling Integrator installation) is present in the temporary or previous version of the keyfile you received from Sterling Commerce.
 - CD Key (if no PSP number is present in your license key)
 - Order Number
 - Product
 - Platform
 - Environment
 - IP Addresses
 - Previous IP Address
 - Sterling Account Executive
 - Comments
4. Click **Submit**.

Your new keyfile will be generated and delivered to you as an attachment to an email. Save this attachment and record the absolute path. This will be used during the install process.

Install the License Key

To install the license key from the command line:

1. When you receive the permanent license keyfile, make a copy of it, and keep the copy in a safe place.

2. Stop Sterling Integrator.
3. Copy your license keyfile to the machine where Sterling Integrator is installed.
4. Navigate to `/install_dir/bin`.
5. Enter `./AddLicenseSet.sh <path>`.
Where *<path>* is the path to the license keyfile.

6. Start Sterling Integrator.

You can also install or update your license file from the Licenses screen (**Operations > System > Licenses**).

Create SystemDefault.properties file (iSeries)

To create a SystemDefault.properties file in an iSeries environment:

1. Log on with the Sterling Integrator user profile.
2. Create a home directory for the Application user profile. From an iSeries command line, enter `MKDIR/home/appuser`.
Where *appuser* represents the Sterling Integrator user profile.
3. Enter EDTF and press **F4**.
4. Enter `/home/appuser/SystemDefault.properties` and press **Enter**.
An edit session will be displayed.
5. On the first line, enter `java.version=1.6`

Note: Make sure that there is NOT a space in the first position of this line `java.version=1.6`. The `j` needs to start in the very first position. If there is a space, it will not recognize the proper jdk and your install will fail.

6. Press **F2**.
7. Press **F3**.
8. Verify that the Sterling Integrator user profile's home directory is pointing to `/home/appuser`.
This can be done by the `WRKUSRPRF` command.

Upgrade the Software

Upgrade in an iSeries

To upgrade to Sterling Integrator version 5.1, follow the installation steps in *Run the Upgrade Installation Program in iSeries*. These steps include special instructions for upgrading. Before running the upgrade program, refer to the *Before You Begin the Upgrade* section. After running the upgrade program, refer to the *Post Upgrade Validation* and *Post Upgrade Configuration* sections. In the iSeries environment, you must map a network drive to the working directory for Sterling Integrator. For more information, refer to the documentation on the IBM Web site.

When running the installation program (see *Run the Upgrade Installation Program in iSeries*), enter the following information exactly the same as your existing installation:

- Collection name – The name of your copied database
- IP address
- Passphrase

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 is the Admin password for logging into the UI (/dashboard or /ws). See the *Update My Account Information* task in the documentation library.

Untar the File from the ESD Portal (iSeries)

The following procedure describes how to untar a file from the Electronic Software Distribution (ESD) Portal on iSeries. During the upgrade, you will reference this procedure.

1. After the file has been downloaded from ESD portal, key in `qsh` from an iSeries command line and press **Enter**.
2. Key in `set` and press the **Enter** key.

This will list variables on the screen. Look for the `QIBM_CCSID` variable. It will look like `QIBM_CCSID=0`. Write down what it is set to.

3. Key in `export QIBM_CCSID=819` and press **Enter**.

4. Navigate to the directory where the tar file is sitting.
5. Key in `set` to verify that the `QIBM_CCSID` is set to 819.
6. Key in `tar -xvf name.of.tarfile.tar` and press **Enter**.
7. After it has performed the `untar`, you need to set the `CCSID` back.
8. Key in `export QIBM_CCSID=0` and press **Enter**, where the 0 represents the value in step 2.
9. Key in `set` and press **Enter** to verify that `QIBM_CCSID` is set to what it was in step 2.
10. You need to verify that the `untar` was successful. At this point you will still be in the directory where the `SI.jar` was `untarred` to. Key in `jar -tf SI.jar` and press **Enter**. If you get file names to scroll up on the screen, the `untar` worked. If you get the `$` prompt back with no additional information, then the `untar` was not successful and you will have to `untar` again.

You are now ready to continue with the install.

Run the Upgrade Installation Program in iSeries

The following instructions assume that you received an installation CD for Sterling Integrator. If you downloaded the Sterling Integrator or a Service Pack (SP) from the Electronic Software Distribution (ESD) Portal, save the `SI51.tar` file to your mapped network drive on the iSeries and `untar` the file (see `Untar the File from the ESD Portal`). The directory containing the `untarred` files is an electronic image of an installation CD. Use this directory wherever there is a reference to the installation CD in the following instructions. Ignore any instructions to place the installation CD in a drive.

To upgrade Sterling Integrator in an iSeries environment, you run an installation program. Refer to the information you recorded in the checklist and follow the steps below.

Before your upgrade installation, shut down your base installation. This will free up the port number that you used in your base installation.

1. Insert the Sterling Integrator installation CD in the appropriate drive. You can use a drive on your PC or on your iSeries CD reader.
2. Depending on the drive you are using, choose one method. Be sure to record the absolute path that you use.
 - If the CD is in your PC, copy or FTP the file `SI.jar` from the installation CD to the `absolutePath` in the IFS root or QOpenSys file system.
 - If the CD is in your iSeries reader, enter the following command on the command line: `cp /qopt/SI.jar absolutePath/SI.jar`
3. Copy the file `install.savf` from the iSeries directory on the installation CD to the mapped network drive. Steps 4 through 6 will download the installation programs required for the upgrade to Sterling Integrator 5.1.
4. Answer the question `Is there a save file called INSTJAR in QGPL on your iSeries?`
 - If YES, clear the save file by entering `CLRSVAF FILE(QGPL/INSTJAR)`.
 - If NO, enter `CRTSAVAF FILE(QGPL/INSTJAR)` to create a save file on your iSeries.

5. Copy the `install.savf` file that you copied from the CD to the save file created in QGPL by entering:

```
CPYFRMSTMF FROMSTMF( '/directory/filename of the savf/' )
TOMBR( '/QSYS.LIB/QGPL.LIB/INSTJAR.FILE' ) MBROPT( *REPLACE ) CVTDTA( *NONE )
```

6. Enter `RSTLIB SAVLIB (INSTJAR) DEV(*SAVF) SAVF(QGPL/INSTJAR) MPROPT(*ALL) ALWOBJ DIF(*ALL)` to restore the installation objects.
7. Log in to your iSeries using the user profile you created during preinstallation.
8. Copy (back up and restore) the DB2 database for your previous version of Sterling Integrator for iSeries into Sterling Integrator 5.1, using the following steps.

The following procedure uses Sterling Integrator 4.0 as an example. Change the commands as necessary for your version of Sterling Integrator.

- Ensure that no one is using Sterling Integrator 4.0 or Sterling Integrator 5.1 database.
- The save and restore procedure must be done by the iSeries System Security Officer (QSECOFR) or by a user with *SECADM authority. To create a save file to hold your Sterling Integrator 4.0 database, type:

```
CRTSAVF FILE(QGPL/SAVE40DB)
```

If the save file already exists, type in:

```
CLRSAVF FILE(QGPL/SAVE40DB)
```

- Save your Sterling Integrator 4.0 database into the new save file using the following command:

```
SAVLIB LIB(GIS40DB) DEV(*SAVF) SAVF(QGPL/SAVE40DB)
```

GIS40DB represents your Sterling Integrator 4.0 database (collection).

- Create the collection again that will hold your Sterling Integrator 5.1 database, by first signing on to your iSeries using the user profile that you will use to run Sterling Integrator.
- From an iSeries command line, type `STRSQL` to get to an interactive SQL session.
- Type `create collection SI51DB`.

SI51DB represents your Sterling Integrator 5.1 database.

The create collection command creates a collection (library), called SI51DB, that contains a journal, journal receiver, and several logical views.

- After the create command finishes, exit your SQL interactive session without saving.
- To restore your Sterling Integrator 4.0 database to the same collection (library name) that you just created in step f from above, type:

```
RSTLIB SAVLIB(GIS40DB) DEV(*SAVF) SAVF(QGPL/SAVE40DB) RSTLIB(SI51DB)
```

GIS40DB represents your Gentran Integration Suite 4.0 database.

SI51DB represents your Sterling Integrator 5.1 database.

You should receive a message similar to the following message, ### objects restored. 20 not restored to SI51DB.

Note: The 20 objects that are not restored are the journal and journal receiver files. This is expected.

9. Enter `ADDLIBLE LIB(INSTJAR)` from an iSeries command line to add the installation programs to your library list.
10. Journaling needs to be set up appropriately on the newly copied database. To accomplish this, enter `FIXJRNS` and press **F4**. You will be prompted for old collection and new collection information, as follows:

- If the old collection exists on the same iSeries machine as the new collection, when the restore took place, the newly restored files were journaled to the old collection. By running this command, it will un-journal the files from the old collection and journal them to the new collection.
- If the old collection exists on a different iSeries machine and it was transferred and restored onto the iSeries box where you will be performing the upgrade, none of the files were journaled. This command will journal the files to the new collection. When running this command, enter *NONE for the Old Collection parameter and enter the new collection in the New Collection parameter.

Based on the information above, fill in the appropriate answer for the Old Collection parameter. Key in the collection name for the new Sterling Integrator system and press **Enter**. This will run interactively and correctly journal all of your physical files that have just been restored into your newly created collection that will be used in your upgrade process.

11. Enter `INSTJAR` and press **F4** to prompt the command. The system displays the list of configuration parameters needed to install Sterling Integrator.

12. For each configuration parameter listed, enter the value you want to use. Refer to your notes in the preinstallation checklist.

- Collection Name - This collection name must be the newly created collection to which you restored your old database in step 8.
- Upgrade from prior Sterling Integrator version (*YES or *NO) - Answer *YES to this parameter to upgrade your previous version of Sterling Integrator to the 5.1 version of Sterling Integrator. When you answer *YES to this prompt, it will convert your older copied database to the version 5.1 database structure.
- Sterling Integrator System Passphrase - Enter this information exactly the same as in your existing installation.
- Verify Sterling Integrator System Passphrase.
- Administrative e-mail address - It is recommended that you not change the Administrative e-mail address during an upgrade. If you change this address, you will have to update adapters, business processes and other items that include this information.
- IP Address for SMTP Server - Enter this information exactly the same as in your existing installation.
- TCP/IP Port Number
- Catalog Name
- Host IP Address
- Sterling Integrator User Profile
- Sterling Integrator User Password
- Full Path to Sterling Integrator Jar File

13. Press **Page Down** for the remaining parameters:

- Sterling Integrator install directory. Be sure to enter a complete path name.
- Full license path name. Be sure to enter a complete path and file name.
- JCE distribution file. Be sure to enter a complete path and file name.

14. Verify the parameters you entered and press **Enter**.

The installation process takes between two and three hours to complete. The installation time depends upon the size of your iSeries. Monitor the installation process to verify that no JAVA exception errors are generated.

The install runs in batch mode. To monitor the progress of the install, use the WRKLNK command display function to view the log file (gisinstall.log). This file resides in the same directory where you placed the SI.jar file. In addition to the job you submitted, various BCI jobs, command shells, and JVMs appear and disappear in your batch subsystem. This processing is normal.

15. After performing the upgrade, refer to Install the Current Maintenance Patch to install the latest patch.

Post Upgrade Validation

Post Upgrade Validation Checklist for iSeries

#	Post Upgrade Validation Checklist for iSeries	Your Notes
1	Start Sterling Integrator (iSeries)	
2	Access Sterling Integrator	
3	Validate the Installation	
4	Stop the Sterling Integrator (iSeries)	

Start Sterling Integrator (iSeries)

To start Sterling Integrator in an iSeries environment:

1. Sign onto iSeries with your Sterling Integrator user profile.
2. Submit a batch job by entering the following command:

```
SBMJOB CMD(QSH CMD('umask 002 ; cd install_dir/bin ; ./run.sh'))JOB(SIMAIN)
```

The job queue to which you submit the command must allow at least ten active jobs. If the maximum number of active jobs is less than ten, Sterling Integrator will not start up completely.

To reduce keying errors at startup, create a command language (CL) program similar to the following example:

```
PGM
SBMJOB CMD(QSH CMD('umask 002 ; cd install_dir/bin ; ./run.sh')) +
JOB(SIMAIN)
ENDPGM
```

3. Wait for startup to complete. This process takes 10 to 15 minutes.

Startup creates a spool file. When startup is finished, open the QPRINT spool file and check the end of the file for a message about how to connect to Sterling Integrator. For example, you may see a message like the following:

Open your Web browser to `http://host:port/dashboard`, where `host:port` is the IP address and port number where Sterling Integrator resides on your system.

Make a note of the address so you can access Sterling Integrator later. It may take several minutes for Sterling Integrator to be available from the Web browser, even after the URL message has been issued.

4. (Optional) To verify that Sterling Integrator has started normally and completely, view the system through `WRKACTJOB`. Verify that the `SIMAIN` job has ended and there are at least five `QP0ZSPWP` jobs (of yours) left running in your Sterling Integrator batch subsystem.
5. Prepare your browser to log in to Sterling Integrator. Configure your browser so that there is direct connection between the Web browser and iSeries. Do not configure the browser to use any proxy server between you and iSeries (unless it is a requirement of your network).

Access Sterling Integrator

To log in to Sterling Integrator:

1. Open a browser window and enter the address displayed at the end of startup. The login page displays.
2. Enter the default user ID (`admin`) and password (`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.

Validate the Installation

Validate the installation by testing a sample business process:

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

The Status: Success message displays in the upper left side of the page.

Stop Sterling Integrator (iSeries)

To stop the Sterling Integrator in an iSeries environment:

1. Sign onto iSeries with your Sterling Integrator user profile.
2. Enter the following commands:

```
QSH
cd /install_dir/bin
./hardstop.sh
```

To reduce keying errors at shutdown, create a command language (CL) program similar to the following example:

```
PGM
QSH CMD('cd /install_dir/bin ; ./hardstop.sh')
ENDPGM
```

3. Wait for shutdown to complete.

The length of this process is determined by how many temporary objects must be cleaned up and how many spool files must be created.

To ensure that you do not restart Sterling Integrator before shutdown is complete, monitor shutdown through either the `ps` command in Qshell or the `WRKACTJOB` display. Verify that the five `QP0ZSPWP` jobs are complete and disappear.

4. Enter `./stopDAVServer.sh` to stop the WebDAV server.

Post Upgrade Configuration

Post Upgrade Configuration Checklist for iSeries

#	Post Upgrade Configuration Checklist for iSeries	Your Notes
1	Download Sterling Integrator Tools	
2	Configure Property Files	
3	Perform Initial Administrative Setups in Sterling Integrator	
4	Add Third-Party Libraries	
5	Configure Services and Adapters	
6	JDBC Adapter and Lightweight JDBC Adapter	
7	File System Adapter and Command Line2 Adapters	
8	Odette FTP Adapter	
9	Restore Performance Tuning Configuration	
10	Change the Network Interface Bindings	
11	Advanced File Transfer Tab	
12	Reconfigure Archive Settings	
13	Correct Missing Manager IDs	

Download Sterling Integrator Tools

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

- Map Editor and associated standards
- Graphical Process Modeler (GPM)
- Web Template Designer

- (If licensed) MESA Developer Studio plug-ins, including, MESA Developer Studio Software Development Kit (SDK) and MESA Developer Studio Skin Editor
- (If licensed) Reporting Services, which requires MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports.

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

Property Files Configuration

Property files contain properties that control the operation of the Sterling Integrator. For example, the REINT_DB property in the sandbox.cfg file controls whether or not a database is initialized when you install Sterling Integrator.

By modifying the values of these properties, you can customize the Sterling Integrator to suit your business and technical needs. Most property files are in the `/install_dir/install/properties` directory.

After installing the Sterling 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

Performing Initial Administrative Setups in Sterling Integrator

If you are installing Sterling Integrator for the first time, you need to perform some initial administrative setups before users can use the application. For example, the system administrator for Sterling Integrator must register users, grant permissions, and run several performance reports so that benchmarks are established for tuning the system in the future.

For security purposes, change the default user ID passwords immediately after the installation is completed. See the *Update My Account Information* task in the documentation library.

Add Third-Party Libraries

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

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:

- Federation adapter
- 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

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

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 Sterling Integrator 5.1 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 Sterling Integrator 5.1 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 Integrator 5.1, 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

If you use the Odette FTP Adapter and are using the Partner Profile XML file version 2.00 used in 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	<pre><GeneralParameters> <PartnerProfileVersion>3.00 </PartnerProfileVersion> </GeneralParameters></pre>	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	<pre><AuthenticationCertificate type = "..."> <Subject>string</Subject> <Issuer>string</Issuer> <Serial> Bignumber_string </Subject></pre>	Add Structure, if used.	OFTP 2.0: Mandatory for security only. Structure may be repeated.

	</AuthenticationCertificate>		
Physical Partner	<AuthenticationCertificate type ="Private Key"> <Subject>string</Subject> <Issuer>string</Issuer> <Serial>Bignumber_string </Subject> </AuthenticationCertificate>	Add Structure, if used.	OFTP 2.0: Mandatory for security only.
Physical Partner/ CAPI	DWindowSize	Delete field	
Physical Partner/ IP	IPFilter		Uses IPv4 or IPv6 addresses.
Physical Partner IP	SSL	Add field, if used.	OFTP 2.0: Mandatory for security only.
Physical Partner IP	CipherStrength	Add field, if used.	OFTP 2.0: Mandatory for security only.
Physical Partner IP	<SSLCertificate type ="..."> <Subject>string</Subject> <Issuer>string</Issuer> <Serial> Bignumber_string </Subject> </SSLCertificate>	Add structure, if used.	OFTP 2.0: Mandatory for security, only. Structure 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.
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 VirtualFilenamePattern	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.

Restore Performance Tuning Configuration (iSeries)

To restore your original performance tuning configuration to the new release, Correcting Missing Manager IDs provides the Performance Tuning Wizard. You use the wizard to re-enter the settings you saved earlier.

To restore the performance tuning configuration:

1. From the **Administration Menu**, select **Operations > System > Performance > Tuning**.
2. Under **Edit**, click **Go!**
3. Click **Edit settings**.
4. Complete the Performance Tuning Wizard, using the settings you obtained from the previous release.

Change the Network Interface Bindings

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

To update the property settings:

1. On the server where Sterling Integrator resides, edit the noapp.properties.in file.
2. Locate the admin_host parameter.

Where *hostname1* is the name of primary network interface, the one given highest priority by Sterling Integrator.

Where *localhost* is the name of the network interface on the server where Sterling Integrator resides.

```
admin_host.1 = hostname1
```

```
admin_host.2 = localhost
```

3. If no interface is being displayed, edit `hostname1` so that it correctly identifies the primary network interface that accesses Sterling Integrator.
4. If an additional network interface needs to access Sterling Integrator, add an additional `admin_host` entry. For example:
 - `admin_host.1 = hostname1`
 - `admin_host.2 = localhost`
 - `admin_host.3 = hostname2`
5. Stop Sterling Integrator.
6. Navigate to `/install_dir/install/bin`.
7. Enter `setupfiles.sh`.
8. Restart Sterling Integrator.

Add Advanced File Transfer Tab

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:

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**.

Reconfigure Archive Settings

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:

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

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.

Installation Maintenance

Determine If You Need to Apply a Maintenance Patch in iSeries Environment

Patches contain cumulative fixes for a specific version of Sterling Integrator. Patch files are available on the Sterling Commerce Support on Demand web site. Because each patch contains the fixes from previous patches, you only need to install the most recent patch.

Patch files are named using the following naming convention:

patch_si_<patch_number>.jar

Information about a patch is located in a PDF file with a similar name. The PDF file is named:

patch_si_<patch_number>_patch_info.pdf

Before you install the patch, review the following items:

- Preserve your custom changes to system resources.
- The patch installation may use one or more patch property override files. These files will be named *propertyFile_patch.properties*. Do not alter these files.
- Property changes made directly in *.properties or *.properties.in files may be overwritten during the patch installation. Properties overridden using the customer_overrides.properties file are not affected. Sterling Commerce recommends that you maintain property file changes using (when possible) the customer_overrides.properties file. For more information about this file, refer to the property file documentation.
- If you edited any of the cdinterop files, you must back them up before applying the patch. The cdinterop files do not have initialization (*.in) files. After applying the patch, use the backup version of the files in your patched installation. These files include the following files: cdinterop-proxy-records.properties; cdinterop-spoee-auth.properties; cdinterop-spoee-policy.properties; and cdinterop-user-records.properties.
- Information about the patch installation is automatically logged to */install_dir/install/logs/InstallService.log*.
- If you need to rollback a patch, see the *Patch Changes Report*.
- During patch installation, the dbVerify utility compares the list of standard indexes with those present in the database and drops the custom indexes. You should recreate the custom indexes after the patch installation is complete.

Install a Maintenance Patch (iSeries)

To install the latest patch for Sterling Integrator in an iSeries environment:

1. Go to the Sterling Commerce Support on Demand Web site, at <https://support.sterlingcommerce.com/user/login.aspx>.
2. Download the most recent patch file for your version of Sterling 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. Stop Sterling Integrator.
4. Perform a full backup of the Sterling Integrator installation directory, including all subdirectories.
5. Perform a backup of the database.
6. 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 patch installation.
7. Sign on with your Sterling Integrator user profile and enter into QSH (QShell mode).
8. In QSH, navigate to the /install_dir/bin directory where <install_dir> is Sterling Integrator installation.
Enter:

```
cd /install_dir/bin
```

9. Enter:

```
./InstallService.sh <path>/patch_si_<patch_number>.jar
```

where:

<path> is the fully qualified path to maintenance patch file

<patch_number> is the patch number

If the patch attempts to modify the database schema and the modification fails, you will receive an error message about the failure. The message will provide the error message code from the database and the SQL command that failed. The failure information is also logged to the system.log file (in the /install_dir/install directory) and to the patch.log file.

10. Press **Enter** to continue.

Information about the patch is displayed. After the patch has been applied, the following message is displayed:

```
Deployment to application server successful
```

When the \$ is displayed, the patch process had completed.

11. Start Sterling Integrator.

Preserve Custom Changes for System Resources

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 patch.

When a patch, 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 patch 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 patch.

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

DB Checksum Tool

A checksum is a simple redundancy check used to detect errors in data. In Sterling Integrator 5.1, a verification process is used to compare the checksum between the existing default resource and the resource added after applying a patch 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.

Perform a Checksum

To run the DB Checksum tool:

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

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

Where:

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

`-i` is the resource type integer (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 based on the command options and generates the output message.

Patch Changes Report

The Patch Changes Report is used to obtain information if you need to rollback a patch. The patch report can be found in the installation directory patch_reports folder. The report contains the following patch information:

- Patch ID
- Patch Changes
- Number of files deleted
- Number of JARs removed
- Number of JARs added
- Number of files added
- Number of files changed
- Number of properties added
- Number of business processes added
- Number of service instances added
- Number of service definitions added
- Number of templates added
- Number of reports added
- Number of maps added
- Number of schemas added
- Number of business rules added

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

Example: Patch Changes Report

The following is an example of a Patch Changes Report.

```
Summary of Changes
Patch ID: Platform_2.0
Patch Changes: 1287
Number of Files Deleted: 0
Number of JARs Removed: 2
Number of JARs Added: 0
Number of Files Added: 3
Number of Files Changed: 3
Number of Properties Added: 4
Number of BPs Added: 4
Number of Service Instances Added: 2
Number of Service Definitions Added: 3
```

Number of Templates Added: 0
Number of Reports Added: 0
Number of Maps Added: 3
Number of Schemas Added: 3
Number of Business Rules Added: 0

List of JARs Removed:

JAR Removed: /SAMPLE_INSTALL_1/jar/jaf/1_0_2/activation.jar
Time: Wed May 13 15:23:08 EDT 2009

JAR Removed:

/SAMPLE_INSTALL_1/jar/commons_logging/1_0_3/commons-logging-api.jar
Time: Wed May 13 15:23:08 EDT 2009

List of Files Added:

File Added: /SAMPLE_INSTALL_1/bin/sql/fix_db2_schema.sql
Time: Wed May 13 15:21:30 EDT 2009

File Added: /SAMPLE_INSTALL_1/bin/sql/fix_db2iseries_schema.sql
Time: Wed May 13 15:21:30 EDT 2009

File Added: /SAMPLE_INSTALL_1/bin/errorQueueManager.sh.in
Time: Wed May 13 15:21:30 EDT 2009

List of Files Changed:

File Changed:

/SAMPLE_INSTALL_1/properties/lang/en/Reports_en.properties

File Changed:

/SAMPLE_INSTALL_1/properties/lang/es/Reports_es.properties

File Changed:

/SAMPLE_INSTALL_1/properties/lang/fr/Reports_fr.properties

List of Properties Added:

Property Added: /SAMPLE_INSTALL_1/properties/filesToRemove.txt

Property Added: /SAMPLE_INSTALL_1/properties/filesToRemove.txt.in

Property Added: /SAMPLE_INSTALL_1/properties/csr.properties.sample

Property Added: /SAMPLE_INSTALL_1/properties/csr.properties.sample.in

List of BPs Added:

BP Added: Schedule_AssociateBPsToDocs.bpml version: 4

Time: Wed May 13 15:23:07 EDT 2009

BP Added: Recovery.bpml version: 17

Time: Wed May 13 15:23:07 EDT 2009

BP Added: Schedule_AutoTerminateService.bpml version: 10

Time: Wed May 13 15:23:07 EDT 2009

BP Added: Schedule_DBMonitorService.bpml version: 1

Time: Wed May 13 15:23:08 EDT 2009

List of Service Instances Added:

Service Instance Added: RetentionProcessor version: 2

Time: Wed May 13 15:23:28 EDT 2009

Service Instance Added: MESAHttpServerAdapter version: 1

Time: Wed May 13 15:25:11 EDT 2009

List of Service Definitions Added:

Service Definition Added: LockServiceType

Time: Wed May 13 15:22:58 EDT 2009
Service Definition Added: XAPIServiceType
Time: Wed May 13 15:22:59 EDT 2009
Service Definition Added: CleanLockServiceType
Time: Wed May 13 15:22:59 EDT 2009

List of Templates Added:
Template Added: Normalize
Time: Wed May 13 15:23:26 EDT 2009
Template Added: Derive
Time: Wed May 13 15:23:26 EDT 2009

List of Maps Added:
Map Added: IBMPutResponseToXML
Time: Wed May 13 15:24:05 EDT 2009
Map Added: http_headers
Time: Wed May 13 15:24:36 EDT 2009
Map Added: OracleHttpHeaders
Time: Wed May 13 15:24:51 EDT 2009

List of Schemas Added:
Schema Added: E5_V20_Acknowledge_Result.dtd from file:
E5_V20_Acknowledge_Result
Time: Wed May 13 15:24:36 EDT 2009
Schema Added: E5_V20_Acknowledge_Submit.dtd from file:
E5_V20_Acknowledge_Submit
Time: Wed May 13 15:24:36 EDT 2009
Schema Added: E5_V20_APIs_Result.dtd from file: E5_V20_APIs_Result
Time: Wed May 13 15:24:36 EDT 2009

Uninstall the Software

Uninstall the Sterling Integrator from an iSeries Environment

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

To uninstall the software from a iSeries environment:

1. Stop the Sterling Integrator and wait for shutdown to complete.
2. Sign onto iSeries with your Sterling Integrator user profile.
3. In QSH, change to the directory above the installation directory.

For example, If the installation directory is `/(Sterling Integrator)`, then you change to directory `/`.

4. Remove the installation directory, enter:

```
rm -rf install_dir
```

5. Wait for the command prompt to return.
6. Select **F3 exit from Qshell**.
7. Enter `DLTLIB <collection name>`.

For example, `DLTLIB (Sterling Integrator)DB`.

A message like the following is displayed: *Receiver QSQJRN0001 in (Sterling Integrator)DB never fully saved. (I C)*.

Enter `I` to one or more of these messages until the library is deleted.

8. After you remove the software 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 Integrator User Documentation

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

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


Access the Online Documentation

You can also access the Documentation site by opening your Internet browser and entering the following URL:

<http://www.sterlingcommerce.com/Documentation/SI51/homepage.htm>

After you are in the documentation library, you can:

- Enter a word or phrase and search the entire library for information.
- Move through a hierarchy of contents pages to identify the topic you want to read or print.
- Print topics by using your browser's Print function.
- Download entire documents in PDF format. To download PDF documents, click the Documentation in PDF Format link from the main online documentation page.

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

Request a Documentation CD

You can request a CD that contains all the documentation found on the Documentation site. To submit a request, go to the following URL:

http://support.sterlingcommerce.com/forms/Gentran_GIS_UpgradeRequest.aspx

Troubleshooting Tips

Install/Upgrade Troubleshooting Tips: iSeries Environment

Situation	Message or Symptom	Explanation/Resolution
Installing	The license file cannot be found.	<p>Explanation</p> <p>The license file is located on a personal computer rather than the server.</p> <p>Resolution</p> <p>Save the license file to the server using the mapped network drive.</p>
Installing Sterling	Invalid or corrupt license file.	<p>Explanation</p> <p>Either the license file was altered or was not downloaded prior to starting Sterling Integrator.</p> <p>Resolution</p> <p>Obtain and install a new license file.</p>
Installing a desktop tool or resource	<p>Cannot download any of the following:</p> <hr/> <p>Note: MESA Developer Studio and Reporting Services are optional features that are purchased separately from Sterling Integrator. These features each require a separate license in addition to your license for Sterling Integrator.</p> <ul style="list-style-type: none"> • Map Editor and associated standards • Graphical Process Modeler • Web Template Designer • (If licensed) MESA Developer Studio plug-ins (Software Development Kit (SDK), Skin Editor) • (If licensed) Reporting Services, which requires MESA Developer Studio if you 	<p>Explanation</p> <p>When you install Sterling Integrator, system files are created that contain an internal IP address. If you install Sterling 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 IP address from a client residing outside of the firewall.</p> <p>Resolution</p> <p>Modify the system files that contain the invalid IP address. Follow these steps:</p> <ol style="list-style-type: none"> 1. Navigate to the /install_dir/bin directory. 2. Enter the following command followed by the external IP address: <code>patchJNLP.sh external_IP address</code> 3. Stop Sterling Integrator. 4. Restart Sterling Integrator.

Situation	Message or Symptom	Explanation/Resolution
	want to use the plug-ins to create fact models and custom reports.	
Accessing	Attempts to access the URL for Sterling Integrator display the message: Page cannot be displayed.	<p>Resolution</p> <p>Change the Network Interface Bindings.</p>
Stopping	Ending jobs from Sterling Integrator when a hardstop is not successful.	<p>Explanation</p> <p>There was a problem during the installation process or the subsystem was not defined correctly.</p> <p>Resolution</p> <ol style="list-style-type: none"> 1. Enter <code>WRKACTJOB</code> and locate the job that did not end successfully. 2. Press F11 twice to obtain the job number that you want to end. 3. Press F3 to end the <code>WRKACTJOB</code> panel. 4. Enter <code>QSH</code> to enter Qshell mode. 5. Enter <code>ps</code> and press Enter. 6. Locate the pid number that corresponds to job number from the <code>WRKACTJOB</code> panel. 7. Enter <code>kill -kill <pid number> kill -kill <pid number></code>. 8. Review the install log to determine the error and resolution. 9. If the error is due to a problem with the installation, then delete <code>install_dir</code> and install the software again. 10. If the error is due to the job queue having 1 as the maximum number of active jobs in the subsystem, then either change the subsystem that you start Sterling Integrator in, or change the number of maximum active jobs.

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<http://www.sterlingcommerce.com/Documentation/SI51/CopyrightPage.htm>