Sterling Integrator®

iSeries Upgrade

Version 5.0

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Chapter 1

Introduction

Use the Sterling Integrator *5.0 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.

For new installations, use the Sterling Integrator *5.0 iSeries Installation Guide*.

Chapter 2

Pre-Upgrade Information

Before You Begin Upgrading

Before you begin upgrading to Sterling Integrator 5.0, be aware of the following prerequisite tasks and considerations:

✦ *Standard Tasks and Considerations* on page 6

✦ *Special Tasks and Considerations* on page 7

Also, at several points in the upgrade process, you will be asked to download a file from https://support.sterlingcommerce.com. After logging in at this web page, click on the following links to reach the file: **Product Support** > **Gentran Integration Suite** > **Gentran Integration Suite Product Updates/Downloads**.

Standard Tasks and Considerations

Before you begin upgrading, be aware of all of the following standard tasks and considerations:

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. Download the following information from the Sterling Integrator 5.0 library page http://www.sterlingcommerce.com/Documentation/SI50/homepage.htm.

   ◆ *Release Notes*

   ◆ *System Requirements*

   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.

4. Archive and purge any unneeded data before upgrading.

   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.

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.

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 5.0.

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.

   ◆ cdinterop-proxy-records.properties

   ◆ cdinterop-spoe-auth.properties

   ◆ cdinterop-spoe-policy.properties

   ◆ cdinterop-user-records.properties

10. You should not perform Sterling Integrator upgrade on a hot fix directly. Please 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

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 5.0 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 5.0, 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.

Preparing Your System for the Upgrade

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

1. Review Sterling Integrator *Release 5.0 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 5.0 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 5.0.

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 *5.0 Release Notes*.

Upgrading in an iSeries Environment

Preinstallation Setup Checklist for an iSeries Environment

The following topics will assist you with preinstallation tasks when planning an upgrade installation of Sterling Integrator in an iSeries environment:

Checklist for iSeries Preinstallation

The preinstallation checklist contains the items you need to gather and tasks you need to complete prior to installing Sterling Integrator on iSeries.

Note: You can upgrade Sterling Integrator only by a previously created user account.

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 or one of the following: **$**, **@**, or **#**

◆ The remaining characters may be alphanumeric or one of the following: **$**, **@**, **#**, **_** or, **.** (period).

◆ Do not use spaces or apostrophes.

You may want to make a copy of the following checklist and use it to do the following:

✦ Set up your system and verify that it is ready for an installation (Steps 1-6).

✦ Record the information that you will need during the installation (Steps 7-18).

Step	Description	Your Notes
1	Verify that your system meets the hardware and software requirements specified for this release. See *Checking System Requirements* on page 12.	
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 addresses, your system may not operate properly after installing Sterling Integrator.	
3	Verify that all client computers are using Microsoft Internet Explorer 5.x or later.	
4	Configure the system to view Sterling Integrator files using Windows Explorer. See *Configuring the System to View Files* on page 14.	
5	Map a network drive to your working directory. See *Mapping a Network Drive* on page 14.	
6	Specify the QCCSID (Coded Character Set) under which Sterling Integrator will run. See *Specifying the QCCSID* on page 14.	
7	Determine and record the collection name for the database. See *Preparing the Database* on page 15.	
8	During installation, you are prompted twice to enter the passphrase, which is not displayed when you type it. **Note:** The system passphrase used when upgrading to Sterling Integrator 5.0 must match the system passphrase of your existing Gentran Integration Suite 4.x installation.	
9	Determine and record information to set up default system alerts from Sterling Integrator: ◆ The Administrative e-mail address to which system alert messages are sent. **Note:** 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. ◆ The SMTP Server IP address used for sending alert messages.	

Step	Description	Your Notes
10	Determine and record the initial port number to be used by Sterling Integrator. See *Determining Port Numbers* on page 13.	
11	Determine and record the catalog name for the database. See *Preparing the Database* on page 15.	
12	Determine the Host IP address for Sterling Integrator. This is required even if you only have one IP address for your system. To find the IP Address of your system: ◆ Key in `WRKTCPSTS *IFC` ◆ Locate and record the IP address to use for Sterling Integrator.	
13	Create Sterling Integrator user profile and its associated password. Be sure to record the user password so you can enter it during installation. The user password is not displayed when you enter it. See *Creating a Sterling Integrator User Profile* on page 14.	
14	Determine and record the absolute path to 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. **Note:** Do not place the Sterling Integrator jar file in the root directory. It must reside under a directory other than the root directory. For example, /*install_dir*/xxx.jar	
15	Record the directory in which you want to install Sterling Integrator. 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 the *install_dir*.	
16	Obtain the license file and record the absolute path to the license file. See *Obtaining a License File* on page 15.	
17	Obtain the JCE distribution file and record the absolute path to the zipped file. See *Downloading the JCE Distribution File* on page 13.	
19	Verify that your user profile points to the correct JDK. If you have multiple JDKs loaded on your system, you need to point your user profile to JDK 1.5. You need to create a SystemDefault.properties file in the home directory of the user profile. See *Creating a SystemDefault.properties file* on page 16.	

Step	Description	Your Notes
20	Verify that your user profile is pointing to a job queue in a subsystem that meets the following requirements:	
	1 The subsystem has at least 2 GB of dedicated memory.	
	2 The Max Active (maximum number of threads) is set to at least 500. This can be viewed on the WRKSYSSTS screen and is broken down by subsystem. If you don't know which system pool your subsystem is defined to, press the **F14** key.	
	3 The maximum jobs in the subsystem is set to ***NOMAX**.	
	4 The Max Active parameter defined in the Job Queue is set to at least **8**.	

Note: 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.

Checking System Requirements

Before you begin, verify that your system meets the hardware and software requirements specified for this release. The hardware requirements listed are the minimum required to run Sterling Integrator. Your system requirements will exceed these if you are running other applications on the same machine as Sterling Integrator. For current information, see the *System Requirements* posted on Sterling Integrator Documentation Library:

http://www.sterlingcommerce.com/Documentation/SI50/homepage.htm

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)

Make sure that your profile is pointing to JDK 1.5.

✦ Disk space

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

✦ JDBC driver version (supports exact matches and wildcard matches).

If the installation halts because the system requirements are not met, you need to upgrade to a supported version.

Downloading the JCE Distribution File

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. By default, Sterling Integrator uses the limited strength JCE file that is included in the JDK that you use during the installation.

If you install the unlimited strength file, it will overwrite the limited strength file. You must use the unlimited strength file if you are using the AES-192 CBC or AES-256 CBC symmetric key algorithm in Web services.

Note: If you are installing Sterling Integrator 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 this file for the IBM JDK 1.5:

1. Open your browser and navigate to https://www14.software.ibm.com/webapp/iwm/web/reg/pick.do?source=jcesdk.

2. Enter your IBM ID and password. If you do not have an IBM ID, follow the IBM registration instructions provided on the Sign In page.

3. Click **Submit**.

4. Select *Unrestricted JCE Policy files for SDK 1.4.2* and click **Continue**.

    Note: The Unrestricted JCE Policy files for the 1.4.2 SDK are also used for the 1.5.0 SDK.

5. Review your personal information and the license agreement.

    Select **I agree** check box and click **I confirm** to continue.

6. Download the unrestrict142.zip file to your system.

7. Once the file resides on your system, note the exact directory and file name for this zipped file. You will need this information during the installation process.

Determining Port Numbers

During installation, you are prompted to specify the initial port number for Sterling Integrator. To specify a port number, follow these guidelines:

✦ Sterling Integrator requires a range of 200 consecutive open ports between 10000 and 65535.

✦ 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 *install_dir*/properties/sandbox.cfg 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 **WRKTCPSTS** 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.

Configuring 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).

Mapping a Network Drive

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.

Specifying the QCCSID

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.

   Note: 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 task.

Creating a Sterling Integrator User Profile

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/start correctly. This also applies to starting Sterling Integrator after installation.

Preparing the Database

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, please refer to the IBM manuals for instructions on journaling physical files.

Obtaining a 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 Sterling Integrator and all of the licensed features for a limited period. Before the keyfile expires, you must replace the temporary key with a permanent key to continue running Sterling Integrator. 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. To extend your temporary key, obtain the permanent key, or request changes to a permanent key you already have, go to the online Gentran Integration Suite/Sterling Integrator Key Request form (https://support.sterlingcommerce.com/forms/gis_key_request.aspx)and have your PSP number (a unique number that identifies a licensed software asset in your Sterling Integrator installation) available. The PSP Number is present in the temporary or previous version of the keyfile you received from Sterling Commerce. Upon submission of this form, your new keyfile will be generated and delivered to you as an attachment to an email.

The Sterling Integrator 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 Sterling Integrator license file, Sterling Integrator 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.

Installing the Temporary Key

To install the temporary key, do the following:

1. Rename the temporary key. Use a name (for example, **assetTracking.key**) that clearly identifies the key as the original installation license key.

2. Copy the temporary key to the *absolutePath*/conf directory.

3. Rename the temporary license key file to **license.key**.

Installing the Permanent Key

To install the permanent key from the command line, do the following:

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

2. Stop Sterling Integrator.

3. Copy your license file to the machine where Sterling Integrator is installed.

4. Navigate to the *install_dir*/bin directory and run the `./AddLicenseSet.sh <path>` command, where `<path> is` the path to the license keyfile, for example, `./AddLicenseSet.sh gis_license.xml`.

5. Start Sterling Integrator.

Note: You can also install or update your license file from the Licenses screen (**Operations** > **System** > **Licenses**) when Sterling Integrator is running.

Creating a SystemDefault.properties file

When creating a SystemDefault.properties file in the Application user profiles home directory, perform the following steps:

1. Create a home directory for the Application user profile.

   From an iSeries command line, key in **MKDIR '/home/*appuser*'** where *appuser* represents the Sterling Integrator user profile.

2. Create the SystemDefault.properties file.

   a. Sign on with the Sterling Integrator user profile.

   b. Key in **EDTF** and press **F4**. Key in **'/home/*appuser*/SystemDefault.properties** and press **Enter**.

   c. An edit session will be displayed. On the first line, key in **java.version=1.5**.

   d. Press **F2**, then press **F3**.

3. Verify that the Sterling Integrator user profile's home directory is pointing to /home/appuser. This can be done by the WRKUSRPRF command.

Upgrading in an iSeries Environment

Installing Sterling Integrator in an iSeries environment includes the following sections:

✦ *Upgrading in iSeries* on page 17
✦ *Untarring a File from the ESD Portal* on page 18
✦ *Running the Upgrade Installation Program in iSeries* on page 18

Upgrading in iSeries

To upgrade to Sterling Integrator version 5.0, follow the installation steps in *Running the Upgrade Installation Program in iSeries* on page 18. These steps include special instructions for upgrading. Before running the upgrade program, refer to the *Pre-Upgrade Information* section. After running the upgrade program, refer to the *Post-Upgrade Processes* section.

Caution: It is important to remember that upgrading to 5.0 involves a full installation of Sterling Integrator. You need to prepare for an upgrade the same way that you would prepare for an installation.

Caution: Before the upgrade, you should always make a copy of your production database, and then perform the upgrade on the copy of the production database.

This upgrade does not overwrite your current Sterling Integrator directory structure on disk. Instead, it creates a new installation of Sterling Integrator 5.0 and uses a copy of your original instance's database to upgrade to the new version. After the upgrade, both instances will be operational.

When running the installation program (see *Running the Upgrade Installation Program in iSeries* on page 18), enter the following information exactly the same as your existing installation:

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

Note: If you need to patch Sterling Integrator before continuing the upgrade, it is recommended that you fully test the patch prior to performing the upgrade. You must patch Sterling Integrator to the most current patch.

Caution: 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).

Untarring a File from the ESD Portal

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. cd 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.

Running the Upgrade Installation Program in iSeries

The following instructions assume that you received an installation CD for Sterling Integrator. If you downloaded Sterling Integrator or a Service Pack (SP) from the Electronic Software Distribution (ESD) Portal, save the SI50.tar file to your mapped network drive on the iSeries and untar the file. Please see *Untarring a File from the ESD Portal* on page 18 on how to untar a file. 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.

Note: During the installation, various messages are displayed, including some warning messages. These warning messages require no action on your part and are included so that helpful data is recorded in the log file.

Note: 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 5.0.

4. Answer the question *Is there a save file called INSTJAR in QGPL on your iSeries?*

   ◆ If **YES**, clear the save file by entering `CLRSAVF FILE(QGPL/INSTJAR).`

   ◆ If **NO**, enter `CRTSAVF 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) MBROPT(*ALL) ALWOBJDIF(*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 5.0, using the following steps.

   Note: Before the upgrade on iSeries, you should always make a copy of your production database, and then perform the upgrade on the copy of the production database.

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

   a. Ensure that no one is using Sterling Integrator 4.0 or Sterling Integrator 5.0 database.

   b. 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)
   ```

   c. 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).

   d. Create the collection again that will hold your Sterling Integrator 5.0 database, by first signing on to your iSeries using the user profile that you will use to run Sterling Integrator.

   e. From an iSeries command line, type `STRSQL` to get to an interactive SQL session.

f. Type `create collection` *SI50DB*.

   SI50DB represents your Sterling Integrator 5.0 database.

   The create collection command creates a collection (library), called SI50DB, that contains a journal, journal receiver, and several logical views.

g. After the create command finishes, exit your SQL interactive session without saving.

h. 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(`*SI50DB*`)`

   GIS40DB represents your Gentran Integration Suite 4.0 database.

   SI50DB represents your Sterling Integrator 5.0 database.

   You should receive a message similar to the following message, `### objects restored. 20 not restored to SI50DB`.

   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 5.0 version of Sterling Integrator. When you answer ***YES** to this prompt, it will convert your older copied database to the version 5.0 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

  Note: 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.

Note: After performing the upgrade, refer to *Installing the Current Maintenance Patch* on page 22 to install the latest patch.

Patches and Hot-Fixes

The following sections explain how to update Sterling Integrator, using the following methods:

✦ *Installing the Current Maintenance Patch* on page 22

   Patches contain cumulative fixes for a specific version of Sterling Integrator. Because each patch contains the fixes from previous patches, you only need to install the most recent patch.

✦ *Installing a Hot-Fix* on page 23

   A hot-fix is one or more fixes applied to a specific existing patch.

Installing the Current Maintenance Patch

Patches contain cumulative fixes for a specific version of Sterling Integrator. Because each patch contains the fixes from previous patches, you only need to install the most recent patch.

To help you determine which patch to use, the files are named using the following naming convention:

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

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

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

Both the .jar and the .txt files are available on the Sterling Commerce Support on Demand Web site, at https://support.sterlingcommerce.com. You should periodically check the web site to verify that you have the most recent patch.

Note: 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.
Additionally, 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.

To install the latest patch for Sterling Integrator in an iSeries environment, follow the steps below.

1. Go to the Sterling Commerce Support on Demand Web site, at https://support.sterlingcommerce.com.

2. Download the most recent patch file for your version of Sterling Integrator.

3. Sign on with your Sterling Integrator user profile and enter into QSH (QShell mode).

4. In QSH, change to the *install_dir*/bin directory where *<install directory>* = Sterling Integrator installation directory.

   Example: `cd /install_dir/bin` and press Enter.

5. Run the following command to install the patch:

   ```
   ./InstallService.sh <path>/si_<version>_build_<number>.jar
   ```

   where:
   <path> is fully qualified path to maintenance patch file

       <version> is Sterling Integrator version

       <number> is patch number

Example: `InstallService.sh /installdir/si_50_build_5002.jar`

Information about the Patch installation is automatically logged to *install_dir*/logs/InstallService.log.

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 and to the patch.log file. If you cannot determine whether the failure can be safely ignored, contact Sterling Commerce Customer Support for assistance. Choose one of the following options when prompted:

- ◆ Continue – If you determine that the failure can be safely ignored, continue with the patch installation.

- ◆ Stop – Stops the patch installation. You should always contact Sterling Commerce Customer Support for assistance before choosing this option.

- ◆ Retry – Choose this option to retry the failed command.

Enter the passphrase when prompted.

6. After the patch is applied, the following message is displayed:

   `Deployment to application server successful`

7. Start Sterling Integrator.

Installing a Hot-Fix

After you install Sterling Integrator you may need to install a hot-fix. A *hot-fix* is one or more fixes applied to a specific existing patch.

Before you can install a hot-fix developed for your company, you must have completed the following:

- ✦ Received the case ID number from Sterling Commerce Customer Support
- ✦ Created a full backup of Sterling Integrator
- ✦ Created a full backup of your database

To install a hot-fix in an iSeries environment, follow the steps below:

1. Log in to the computer that you are installing the hot-fix on.

2. Sign on with your Sterling Integrator user profile.

3. At the command line, type `ftp theworld.stercomm.com`.

4. Type your user name and password. If you do not know your user name and password, contact Sterling Commerce Customer Support.

5. Type `bin` and press **Enter** to select Binary as your transfer mode.

6. Type `namefmt 1` to direct the file to the IFS.

7. Type `lcd /install_dir`, where `/install_dir` is your Sterling Integrator installation directory. After the FTP is complete, the file will reside in this directory.

8. At the FTP prompt, type `get ccaseid.jar`, where caseid is the ID number you received from Sterling Commerce Customer Support. For example, c123.jar, where 123 is the ID number.

9. Shut down Sterling Integrator.

10. Enter into QSH mode.

11. Change to the *install_dir*/bin directory.

12. Type the following command to install the hot-fix:

    `./InstallService.sh absolutePath/ccaseid.jar`

    Caution: You may need to complete this step twice depending on the patch. Read the output from the `InstallService.sh` script carefully to see if you need to complete this step twice.

13. Restart Sterling Integrator.

14. In the *install_dir*/bin directory, run `dump_info.sh` to verify that the hot-fix was successfully installed.

Hot-Fix Package Delivery Method

The hot-fix package delivery method has changed effective Sterling Integrator, Release 5.0 Build 5006 onwards. The hot-fix package will be delivered as a jar file that contains only the files that were modified. However, the installation procedure for a hot-fix remains the same. Refer to *Installing a Hot-Fix* on page 23 for hot-fix installation procedure.

The following list describes the features of the new hot-fix package model:

✦ Modified components are packaged as an installable file (jar).

✦ Hot-fix version is maintained in the hotfix.properties file. It does not update the SI_VERSION table.

Run `dumpinfo.sh` command to display the hot-fix version. You can also verify the hot-fix version in Sterling Integrator Support user interface page.

✦ Size of the hot-fix package is small.

✦ Hot-fix must be installed on the same build version that was used to build it. For example, if a test system is on Sterling Integrator, Release 5.0 Build 5006 and the hot-fix is built for 5006, it can be installed on that test system. However, if the production system is on Sterling Integrator, Release 5.0 Build 5005, you must apply Sterling Integrator, Release 5.0 Build 5006 prior to applying the hot-fix.

✦ You can locate the hot-fix read me file in the Sterling Integrator root *(install_dir)* directory. For example, *install_dir*/hotfix_readme.txt.

✦ If you have Sterling File Gateway installed in your environment, the hot-fix for Sterling File Gateway is installed automatically.

Performing Checksum using DB Checksum Tool

A checksum is a simple redundancy check used to detect errors in data. In Sterling Integrator 4.3, 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.

To run DB Checksum tool, do the following:

1. Navigate to the `<install_dir>`/bin directory.

2. Run the following command from the `<install_dir>`/bin directory:

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

   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.

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

Post Installation in an iSeries Environment

After installing Sterling Integrator, you should complete the following tasks:

✦ *Starting Sterling Integrator* on page 26

✦ *Accessing Sterling Integrator* on page 26

✦ *Validating the Installation* on page 28

✦ *Downloading Sterling Integrator Tools* on page 28

✦ *Configuring Property Files* on page 28

✦ *Performing Initial Administrative Setups in Sterling Integrator* on page 29

✦ *Stopping Sterling Integrator* on page 29

Starting Sterling Integrator

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)**

   Note: The job queue to which you submit the command must allow at least eight active jobs. If the maximum number of active jobs is less than eight, 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, a process that takes 10 to 15 minutes.

4. 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.

   Note: It may take several minutes for Sterling Integrator to be available from the Web browser, even after the above URL message has been issued.

5. (Optional) To verify that Sterling Integrator has started normally and completely, view the system through WRKACTJOB and verify that at least four (sometimes five) QPOZSPWP jobs (of yours) are left running in your Sterling Integrator batch subsystem.

6. 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).

Accessing Sterling Integrator

To log in to Sterling Integrator the first time, follow these steps:

1. Be sure that Sterling Integrator is started and running.

2. Open a browser window and enter the address displayed at the end of startup.

3. The login page for Sterling Integrator displays.

4. Type 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.

Technical Note: Changes to Network Interface Bindings

To increase the security of the Administrator Console user interface, Sterling Integrator version 5.0 binds only to specific network interfaces. By default, previous versions had been bound to all network interfaces. After installing, if the URL for Sterling Integrator returns *Page cannot be displayed*, you can adjust property settings to correct the problem.

1. On the server where Sterling Integrator resides, edit the file **noapp.properties.in**.

    a. Locate the **admin_host** parameter. The default settings are as follows:

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

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

    ```
    Default entries
    admin_host.1    = hostname1
    admin_host.2    = localhost
    ```

    b. Correct the parameters.

    If no interface is being displayed, edit *hostname1* so that it correctly identifies the primary network interface that accesses Sterling Integrator.

    If an additional network interface needs to access Sterling Integrator, add an additional *admin_host* entry, as shown below.

    ```
    Edited entries
    admin_host.1    = hostname1
    admin_host.2    = localhost
    admin_host.3    = hostname2
    ```

2. Stop Sterling Integrator.

3. Run the setupfiles.sh utility located in the *install_dir*/bin directory.

4. Restart Sterling Integrator.

For the Dashboard user interface, Sterling Integrator version 5.0 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 Sterling Integrator.

1. On the server where Sterling Integrator resides, edit the file **perimeter.properties.in**.

    a. Locate the **localmode.interface** parameter. The default setting is unrestricted, as shown below.

    ```
    Unrestricted Setting (Default)
    localmode.interface=*
    ```

    b. To restrict access to the Dashboard, enter the network interface that you want Sterling Integrator to support.

    ```
    Restricted Setting
    localmode.interface=hostname1
    ```

2. Stop Sterling Integrator.

3. Run the setupfiles.sh utility located in the *install_dir*/bin directory.

4. Restart Sterling Integrator.

Validating the Installation

After you install, start, and log in to Sterling Integrator the first time, you can validate the installation by testing a sample business process. Follow these steps:

1. Open a browser window and enter the address for Sterling Integrator. This address was displayed at the end of startup.

2. Enter your user login and password.

3. From the **Administration Menu**, select **Business Process** > **Manager**.

4. In the Process Name field, type **Validation_Sample_BPML** and click **Go!**

5. Click **execution manager**.

6. Click **execute**.

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

Downloading Sterling Integrator Tools

Sterling Integrator includes tools that run on a desktop or personal computer. After you install, start, and access Sterling Integrator, you can install the following tools by downloading them from within Sterling Integrator. For more information about a tool, refer to the documentation for that tool.

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.

✦ 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.

Configuring Property Files

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

After installing the Sterling Integrator, most property and script files do not need any further configuration for basic operation of the system. However, if you want to customize any specific operations—for example, setting a different logging level—you will need to edit (and in some cases, create) certain property or .xml files.

Before changing any property files, refer to the *Working with Property Files* documentation for general information about how to work with property files. Also, the property files reference documentation has information about specific properties.

Areas where you might need to make specific property file changes after an installation include (but are not limited to) the following areas:

✦ LDAP user authentication

✦ Prevention of cross-site script vulnerabilities

✦ Logging configuration

✦ Process-specific property file settings

✦ Securing the Interop Servlet

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.

Stopping Sterling Integrator

To stop Sterling Integrator in an iSeries environment, follow these steps:

1. Sign onto iSeries with your Sterling Integrator user profile.

2. Enter the following commands:

    QSH

    cd *install_dir***/bin**

    ./hardstop.sh

    Note: 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 QPOZSPWP jobs are complete and have disappeared.

Uninstalling Sterling Integrator from an iSeries Environment

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

Additionally, you can manually remove any desktop tools that were downloaded.

Note: This uninstallation procedure applies to Sterling Integrator 5.0, and not the version of Sterling Integrator from which you are upgrading.

To uninstall Sterling Integrator from an iSeries environment, follow these steps:

1. Stop 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 *install_dir*.

   Example:

   If the install directory is /(Sterling Integrator), then you change to directory **/**.

4. Enter **rm –rf** *install_dir*.

   Example:

   rm –rf Sterling Integrator

5. Wait for the command prompt to return.

6. Select **F3 exit from Qshell**.

7. Enter **DLTLIB** *<collection name>*.

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

   Note: You can remove Eclipse plug-ins without removing Eclipse. Refer to the Eclipse on-line help for information about removing the plug-ins.

   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.

   ◆ 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 the Software Development Kit (SDK) and 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.

Troubleshooting: iSeries Environment

Situation	Message or Symptom	Explanation/Resolution
Installing	Cannot find the license file that was downloaded as a preinstallation task.	**Explanation** The license file is located on a personal computer rather than the server. **Resolution** Save the license file to the server using the mapped network drive.
Starting	Invalid or corrupt license file.	**Explanation** Either the license file was altered or was not downloaded prior to starting Sterling Integrator. **Resolution** Download your license file from http://www.productupdates.stercomm.com. See *Obtaining a License File* on page 15.

Situation	Message or Symptom	Explanation/Resolution
Installing a desktop tool or resource	Cannot download any of the following: **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. ◆ 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 want to use the plug-ins to create fact models and custom reports.	**Explanation** 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. **Resolution** Modify the system files that contain the invalid IP address. Follow these steps: 1 Navigate to the *install_dir*/bin directory. 2 Enter the following command followed by the external IP address: `patchJNLP.sh external_IP address` 3 Stop Sterling Integrator. 4 Restart Sterling Integrator.
Accessing	Attempts to access the URL for Sterling Integrator display the message: *Page cannot be displayed*.	See *Technical Note: Changes to Network Interface Bindings* on page 26.

Situation	Message or Symptom	Explanation/Resolution
Stopping	Ending jobs from Sterling Integrator when a hard stop is not successful.	**Explanation** There was a problem during the installation process or the subsystem was not defined correctly. **Resolution** 1 Key in **WRKACTJOB** and locate the job that didn't end successfully. 2 Press F11 twice to obtain the job number that you want to end. 3 Press F3 to end the WRKACTJOB panel. 4 Key in **QSH** to enter Qshell mode. 5 Key in **ps** and press **Enter**. 6 Locate the pid number that corresponds to job number from the WRKACTJOB panel. 7 Key in **kill -kill** *<pid number>* 8 Review the install log to determine the error and resolution. If the error is due to: ◆ A problem with the installation of Sterling Integrator, then delete the *install_dir* and install Sterling Integrator again. ◆ 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.

Post-Upgrade Processes

Adding 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 process for release 5.0. See the documentation for each third party adapter you use.

Configuring 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

✦ 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

These are just examples. Always check the configuration of your adapters following an upgrade.

The following adapters need special consideration following an upgrade:

✦ *JDBC Adapter and Lightweight JDBC Adapter* on page 35

✦ *File System Adapter and Command Line2 Adapters* on page 37

✦ *Odette FTP Adapter* on page 38

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. The specific actions necessary depend on your current installation.

Upgrading from Gentran Integration Suite 3.0

If you are upgrading from version 3.0 and you used the JDBC adapter or the Lightweight JDBC adapter in that version, perform the following steps:

1. Save a copy of the jdbc.properties file and the poolManager.properties file from the earlier system. You will need any properties settings you customized for your external database.

2. Set up your Lightweight JDBC adapter or JDBC adapter according to the instructions in the *Lightweight JDBC Adapter* topic or the *JDBC Adapter* topic in Sterling Integrator Documentation site.

Upgrading from Gentran Integration Suite 3.1

If you are upgrading from version 3.1 and you used a jdbc_customer.properties.in file in that version, perform the following steps:

1. Copy the jdbc_customer.properties.in file from Sterling Integrator 3.1 installation to the *install_dir*/**properties** directory in Sterling Integrator 5.0 installation. You will edit this copied file in the following steps.

2. Open the *install_dir*/**properties**/**jdbc_customer.properties.in** file in a text editor.

3. Add the following properties:

    Note: In the following property names, replace *databasePool* with the name of the pool.

Property	Description
databasePool.factory	Always enter: `com.sterlingcommerce.woodstock.util.frame.jdbc.ConnectionF` `actory`.
databasePool.behaviour	Sets the behavior that a connection pool exhibits when it runs out of connections. This property replaces the databasePool.onEmpty property in the former poolManager.properties file. Valid values: ◆ 0–The pool returns, indicating to the software to abort its current action and try again later. This value corresponds to the value **return** in the *databasePool*.**onEmpty** property. ◆ 1–The pool waits the number of milliseconds specified in *databasePool*.**waittime** for a connection to be returned before indicating to the software to abort and try again. This value corresponds to the value **wait** in the *databasePool*.**onEmpty** property. ◆ 2–The pool creates a buffered connection (a connection above the size specified in *databasePool*.**maxsize**). When using a setting of 2, the maximum number of connections for the pool is the value specified for *databasePool*.**maxsize** plus the value specified for *databasePool*.**buffersize** connections. This allows connections to be created under heavy demand. This value corresponds to the value **new** in the *databasePool*.**onEmpty** property.
databasePool.buffersize	Number of extra connections that the connection pool can create above the value specified for *databasePool*.**maxsize** to improve handling of unanticipated loads on the system. This property is only used if *databasePool*.**behaviour** is set to 2.
databasePool.maxsize	Maximum size of the database pool. This property was previously contained in the poolManager.properties file. This value must not exceed the value specified for the *databasePool*.**maxconn** parameter in the jdbc.properties file.
databasePool.initsize	Initial size of the database pool. This property was previously contained in the poolManager.properties file.
databasePool.waittime	Amount of time (in milliseconds) to wait for a connection to become available before indicating to the software to abort the current action and try again later. This property is only used if *databasePool*.**behaviour** is set to 1.

For more information, see the *Lightweight JDBC Adapter* topic or the *JDBC Adapter* topic on Sterling Integrator Documentation web site.

4. Run the setupfiles.sh utility located in the /*install_dir*/bin directory of Sterling Integrator installation directory.

5. Stop and restart Sterling Integrator to use the updated settings.

If you are upgrading from version 3.1 and you used the JDBC adapter or the Lightweight JDBC adapter but you did not use a jdbc_customer.properties.in file in that version, perform the following steps:

1. Save a copy of the jdbc.properties file and the poolManager.properties file from Sterling Integrator 3.1 installation. You will need any properties settings you customized for your external database.

2. Set up your Lightweight JDBC adapter or JDBC adapter according to the instructions in the *Lightweight JDBC Adapter* topic or the *JDBC Adapter* topic in Sterling Integrator Documentation site.

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 Sterling Integrator release. Ensure that you create new directories and save scripts outside of the release 5.0 installation directory and edit each configuration to use the appropriate directories and scripts.

Note: Creating directories and saving scripts outside of the release 5.0 installation directory makes future upgrade processes easier.

Note: As of Sterling Integrator 5.0, the Command Line2 adapter has replaced the Command Line adapter. To replace the Command Line adapter, follow the instructions in *Command Line Adapter* on page 37.

Command Line2 Adapter

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 information in the online Documentation site.

If you are upgrading to Sterling Integrator 5.0 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*/client/cmdline2 directory. 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.

Command Line Adapter

If you are upgrading to Sterling Integrator 5.0 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*/client/cmdline2 directory. 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.

Note: CLA instances are now pointing to the CLA2 Service definition. After importing old service instances of CLA onto Sterling Integrator 5.0, 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.

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	<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	
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 DuplicateFileProcessing Testings 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 Sterling Integrator Scheduler instead.	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 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	InboundBusinessProcess	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*.

Restoring Performance Tuning Configuration

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

Note: Before completing this procedure, see *Final Upgrade Notes* on page 41.

To restore the performance tuning configuration:

1. From Sterling Integrator **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.

Final Upgrade Notes

The upgrade is complete. At this point, you should download and apply the latest maintenance update from Support on Demand before using Sterling Integrator.

Note: 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 Sterling Integrator 5.0 after the upgrade process.

After you upgrade, do not use the previous release of Sterling Integrator. However, you should maintain your backup copy for future reference.

For additional information, see the following sections:

- ✦ *Changes to Network Interface Bindings* on page 41
- ✦ *Advanced File Transfer Tab* on page 42
- ✦ *Reconfiguring Archive Settings* on page 43
- ✦ *Correcting Missing Manager IDs* on page 43

Changes to Network Interface Bindings

To increase the security of the Administrator Console user interface, Sterling Integrator version 5.0 binds only to specific network interfaces. After upgrading, if the previous URL for Sterling Integrator returns *Page cannot be displayed*, you can adjust property settings to correct the problem.

1. On the server where Sterling Integrator resides, edit the noapp.properties.in file.

2. Locate the **admin_host** parameter. The default settings are as follows:

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

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

    Default entries

    ```
    admin_host.1    = hostname1
    admin_host.2    = localhost
    ```

3. Correct the parameters.

    - ◆ If no interface is being displayed, edit *hostname1* so that it correctly identifies the primary network interface that accesses Sterling Integrator.

    - ◆ If an additional network interface needs to access Sterling Integrator, add an additional *admin_host* entry, as shown below.

    Edited entries

    ```
    admin_host.1    = hostname1
    admin_host.2    = localhost
    admin_host.3    = hostname2
    ```

4. Stop Sterling Integrator.

5. Run the setupfiles.sh utility located in the *install_dir*/bin directory.

6. Restart Sterling Integrator to use the updated settings.

For the Dashboard user interface, Sterling Integrator version 5.0 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 Sterling Integrator.

1. On the server where Sterling Integrator resides, edit the perimeter.properties.in file.

2. Locate the **localmode.interface** parameter. The default setting is unrestricted, as shown below.

   Unrestricted Setting (Default)

   ```
   localmode.interface=*
   ```

3. To restrict access to the Dashboard, enter the network interface that you want Sterling Integrator to support.

   Restricted Setting

   ```
   localmode.interface=hostname1
   ```

4. Stop Sterling Integrator.

5. Run the setupfiles.sh utility located in the *install_dir*/bin directory.

6. Restart Sterling Integrator to use the updated settings.

Advanced File Transfer Tab

The Advanced File Transfer tab in the Dashboard interface will not be enabled by default after an upgrade installation of Sterling Integrator 5.0. You will need to configure the Dashboard to enable the tab.

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**.

Reconfiguring 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, choose **Operations** > **Archive Manager**.

2. Under 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**.

Correcting Missing Manager IDs

If you created a Manager ID with no corresponding User ID in your previous version of Sterling Integrator, the Manager ID may be missing after upgrading to Sterling Integrator 5.0. If this occurs, create a user in the system with a User ID that matches the missing Manager ID.

Accessing User Documentation for Sterling Integrator

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.

Using the Online Documentation

The documentation for Sterling Integrator is located on the Sterling Commerce Documentation web site. You can type a word or phrase and search the entire library for information. Or you can move through a hierarchy of contents pages to identify the topic you want. After you find the topic you want, you can read it online or print it using your browser's Print function.

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

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

http://www.sterlingcommerce.com/Documentation/SI50/homepage.htm

Documentation Available in PDF Format

The online documentation includes documents in PDF format that you can download. To download PDF documents, click the *Documentation in PDF Format* link from the main online documentation page.

Requesting 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

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