

Sterling Integrator[®]

iSeries Installation

Version 5.0

Sterling Commerce
An AT&T Company

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Introduction

Use the *Sterling Integrator 5.0 iSeries Installation Guide* to install Sterling Integrator 5.0 in an iSeries environment.

This guide focuses on these installation tasks, including:

- ◆ Setting up the database
- ◆ Installing the Sterling Integrator software

For upgrades, use the *Sterling Integrator 5.0 iSeries Upgrade Guide*.

Installing in an iSeries Environment

Preinstallation Setup for an iSeries Environment

Note: If you are upgrading from a prior release, see the *Upgrade Guide* before continuing with the installation of Sterling Integrator.

The following topics will assist you with preinstallation tasks when planning to install Sterling Integrator in an iSeries environment:

- ◆ *Checklist for iSeries Preinstallation* on page 6
- ◆ *Checking System Requirements* on page 9
- ◆ *Downloading the JCE Distribution File* on page 10
- ◆ *Determining Port Numbers* on page 10
- ◆ *Configuring the System to View Files* on page 11
- ◆ *Mapping a Network Drive* on page 11
- ◆ *Specifying the QCCSID* on page 11
- ◆ *Creating a Sterling Integrator User Profile* on page 11
- ◆ *Preparing the Database* on page 12
- ◆ *Obtaining a License File* on page 13
- ◆ *Creating a SystemDefault.properties file* on page 14

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: 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 record the information you collect:

Step	Description	Your Notes
11	Verify that your system meets the hardware and software requirements specified for this release. See <i>Checking System Requirements</i> on page 9.	
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	If you are using a non-English environment, confirm that you are using the appropriate character set.	
5	Configure the system to view Sterling Integrator files using Windows Explorer. See <i>Configuring the System to View Files</i> on page 11.	
6	Map a network drive to your working directory. See <i>Mapping a Network Drive</i> on page 11.	
7	Specify the QCCSID (Coded Character Set) under which Sterling Integrator will run. See <i>Specifying the QCCSID</i> on page 11.	
8	Determine and record the collection name for the database. See <i>Preparing the Database</i> on page 12.	
9	Determine and record the passphrase you want to use for the Sterling Integrator system. During installation, you are prompted twice to enter the passphrase, which is not displayed when you type it.	
10	Determine and record information to set up default system alerts from Sterling Integrator: <ul style="list-style-type: none"> ◆ The Administrative e-mail address to which system alert messages are sent. ◆ The SMTP Server IP address used for sending alert messages. 	
11	Determine and record the initial port number to be used by Sterling Integrator. See <i>Determining Port Numbers</i> on page 10.	
12	Determine and record the catalog name for the database. See <i>Preparing the Database</i> on page 12.	

Step	Description	Your Notes
13	<p>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:</p> <ul style="list-style-type: none"> ◆ Key in WRKTCPSTS *IFC ◆ Locate and record the IP address to use for Sterling Integrator. 	
14	<p>Create the 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 <i>Creating a Sterling Integrator User Profile</i> on page 11.</p>	
15	<p>Determine and record the absolute 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.</p> <p>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, <i>/install_files/SI.jar</i>.</p>	
16	<p>Record the directory in which you want to install Sterling Integrator.</p> <p>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>.</p>	
17	<p>Obtain the license file and record the absolute path to the license file. See <i>Obtaining a License File</i> on page 13.</p>	
18	<p>Obtain the JCE distribution file and record the absolute path to the zipped file. See <i>Downloading the JCE Distribution File</i> on page 10.</p>	
19	<p>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 <i>SystemDefault.properties</i> file in the home directory of the user profile. See <i>Creating a SystemDefault.properties file</i> on page 14.</p>	

Step	Description	Your Notes
20	<p>Verify that your user profile is pointing to a job queue in a subsystem that meets the following requirements:</p> <ol style="list-style-type: none"> 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: 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.

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 most recent *System Requirements*.

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**.
5. Review your personal information and the license agreement. Select **I agree** checkbox 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 the `install_dir/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 **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 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 the Sterling Integrator databases. You 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 jobs must be set to at least eight). 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.

In an iSeries environment, 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.

Database Sizing (iSeries)

Database sizing is designed to give you estimates of the database growth and to assist in planning the disk requirements.

Capacity Planning (iSeries)

There are many factors to consider when estimating the amount of disk space that will be required for the Sterling Integrator. As a result, trying to consider all growth factors is impractical because the user may not know the answers to many questions that are required to do a detailed forecast. Over the years the cost of disks has dramatically decreased, and the capacity and speed of disks has increased. The method of how information system managers order disk capacity has also changed from purchasing disk arrays that are dedicated to a particular database server and project to the concept of SANS.

The Sterling Integrator provides a methodology to estimate your initial disk requirements. Consider the confidence that you have in your data estimates when making the final purchase decision and adjust accordingly. After the initial purchase and production deployment, disk growth should be tracked for future purchase forecasts.

Tracking and Estimating Future Disk Requirements (iSeries)

You should track your actual database storage usage and the number of database records regularly. Correlating these two metrics enables you to plan your future disk requirements. Moreover, determining the average amount of space used for each order line or shipment line enables you to accurately predict your future growth requirements.

Translator Requirements for iSeries Database Files

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.

Installing in an iSeries Environment

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

- ◆ *Untarring a File from the ESD Portal* on page 14
- ◆ *Running the Installation Program in iSeries* on page 15
- ◆ *Installing the Current Maintenance Patch* on page 17
- ◆ *Preserving Custom Changes During Updates* on page 21

Note: If you are upgrading, refer to the *Upgrade Guide*.

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 installation, you will reference this procedure.

1. After the file has been downloaded from ESD portal, enter **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_CCSD variable. It will look like **QIBM_CCSD=0**. Write down what it is set to.
3. Key in **export QIBM_CCSD=819** and press **Enter**.

4. Change 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. Enter `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 Installation Program in iSeries

Note: 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, refer to the instructions on un-tarring a file from *Untarring a File from the ESD Portal* on page 14. 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 install 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.

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 Sterling Integrator.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/Sterling Integrator.jar absolutePath/Sterling Integrator.jar
```
3. Copy the install.savf file from the iSeries directory on the installation CD to the mapped network drive.
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 `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 the following command:

```
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. Enter `ADDLIB LIB(INSTJAR)` from an iSeries command line to add the installation programs to your library list.
9. Enter `INSTJAR` and press **F4** to prompt the command. The system displays the list of configuration parameters needed to install Sterling Integrator.
10. For each configuration parameter listed, enter the value you want to use. Refer to your notes in the preinstallation checklist.
 - ◆ Collection
 - ◆ Upgrade from prior Sterling Integrator version (***YES** or ***NO**)

Answer ***NO** to this question. If you wish to upgrade from a prior version, stop here and refer to the *iSeries Upgrade* documentation to complete the upgrade process.
 - ◆ Sterling Integrator System Passphrase
 - ◆ Verify Sterling Integrator System Passphrase
 - ◆ Administrative e-mail address
 - ◆ IP Address for SMTP Server
 - ◆ TCP/IP Port Number
 - ◆ Catalog Name
 - ◆ Host IP Address
 - ◆ Sterling Integrator User Profile
 - ◆ Sterling Integrator User Password
 - ◆ Full Path to Sterling Integrator Jar File
11. 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.

12. 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 Sterling Integrator.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.

Patches and Hot-Fixes

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

- ◆ *Installing the Current Maintenance Patch* on page 17

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 18

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.

Note: Before performing this task, refer to *Preserving Custom Changes During Updates* on page 21.

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 PDF files are available on the Sterling Commerce Support on Demand web site. To access this information, do the following:

1. Log in to the Support On Demand web site at <https://support.sterlingcommerce.com/user/login.aspx>.
2. Click on the **Product Support** menu.
3. Navigate through the menu items to the **Service Packs and Patches** section to download the jar and the PDF files for Sterling Integrator.

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.

Note: 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`

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/user/login.aspx>.
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_dir>` is 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 18 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.

Preserving Custom Changes During Updates

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.

A report shows what has changed in the system that customer-specific changes did not permit to get set as defaults. This report is used in conjunction with the user interface to verify that customer overrides are not getting overwritten by the patch.

The report includes the following resource types:

- ◆ Workflow definitions
- ◆ Maps
- ◆ Schema
- ◆ Template

Postinstallation in an iSeries Environment

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

- ◆ *Configuring Property Files* on page 21
- ◆ *Performing Initial Administrative Setups in Sterling Integrator* on page 22
- ◆ *Starting Sterling Integrator in iSeries* on page 22
- ◆ *Accessing Sterling Integrator* on page 23
- ◆ *Validating the Installation* on page 25
- ◆ *Downloading Sterling Integrator Tools* on page 25
- ◆ *Stopping Sterling Integrator* on page 25

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 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

Note: If you are upgrading from a prior release, see the Sterling Integrator *Upgrade Guide* that applies to your implementation *before* continuing with the setup of the Sterling Integrator. Changes may have been made to the properties files since the previous release, so you must read the *Upgrade Guide* for information about how these changes impact your system.

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.

Starting Sterling Integrator in iSeries

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) QP0ZSPWP 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 2.0 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 `noapp.properties.in` file.

- 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.

```
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.

```
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.

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 optional 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.

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 QP0ZSPWP jobs are complete and disappear.

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

Uninstalling Sterling Integrator from an iSeries Environment

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

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

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 the installation directory.

Example:

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

4. Enter the command `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 any tools that were downloaded to the desktop:

- ◆ Map Editor and associated standards

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

- ◆ Graphical Process Modeler

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

- ◆ Web Template Designer

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

- ◆ (If licensed) MESA Developer Studio plug-ins, 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.

Troubleshooting: iSeries Environment

Situation	Message or Symptom	Explanation/Resolution
Installing	Cannot find the license file that was downloaded as a preinstallation task.	<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>

Situation	Message or Symptom	Explanation/Resolution
Starting	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>Download your license file from http://www.productupdates.stercomm.com. See <i>Obtaining a License File</i> on page 13.</p>
Accessing	Attempts to access the URL for Sterling Integrator display the message: <i>Page cannot be displayed.</i>	See <i>Technical Note: Changes to Network Interface Bindings</i> on page 23.
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 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: <ul style="list-style-type: none"> ◆ A problem with the installation of Sterling Integrator, then delete <i>install_dir</i> 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.

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