Sterling Integrator®

iSeries Environment Installation Guide
Version 5.1

IBM.

Contents

Installation Overview

Installation Overview for an iSeries Environment

Use the guide to install Sterling Integrator 5.1 in an iSeries environment.

This guide contains the following information:

• Install the Software
• Validate the Installation
• Post Installation Configuration
• Installation Maintenance
• User Documentation
• Troubleshooting Tips
• Uninstall the Software

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

Prerequisite Knowledge for Installation in an iSeries Environment

Before you being the installation, you should be knowledgeable on the following topics:

• Application servers
• Database administration
• System Requirements for this release of Sterling Integrator

Intended Audience

This document is intended for use by:

• System Administrators

- Installation Engineers
- Database Administrators

Assumptions for this Guide

The procedures in this guide are accurate as of the publication date and are specific to Sterling Integrator 5.1.

Install the Software

Installation Checklist for iSeries Environment

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

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

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

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

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

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

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

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

Verify Your System Meets the System Requirements

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

The installation strictly enforces the following *System Requirements*:

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

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

Configure View Files (iSeries)

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

Map Network Drive (iSeries)

In the iSeries environment, you must map a network drive to the working directory for Sterling Integrator.

For more information, refer to the documentation on the IBM Web site.

Specify the QCCSID (iSeries)

In the iSeries environment, you must specify the QCCSID (Coded Character Set) for the Sterling Integrator. 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.

To specify the QCCSID:

1. From an iSeries command line, enter `DSPSYSVAL SYSVAL(QCCSID)`.
2. Determine if the QCCSID set to 65535.
3. If the QCCSID value is set to 65535, then complete one of the following:

   • Change the CCSID to a specific coded character set.

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

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

4. If the QCCSID value is NOT set to 65535, continue with next item in the *iSeries Installation Checklist*.

DB2 Database Configuration (iSeries)

In an iSeries environment, Sterling Integrator uses the DB2 database that is included in OS/400. The installation process creates a new collection for Sterling Integrator.

Before you install the Sterling Integrator software, 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. Example: GISxxdb, where xx represents the version of GIS that you are installing
- The **catalog name** is the database name of your iSeries system, as defined by the WRKRDBDIRE command. Generally, this value is the name of your system.

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

Sizing

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

Capacity Planning

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

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.

Determine Port Numbers (iSeries)

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

• A range of 200 consecutive open ports between 10000 and 65535 are required for this installation.
• The initial port number represents the beginning port number in the range.
• Make sure that port numbers in the port range are not used by any other applications on your system.

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

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

• Select from the **iSeries Navigator Network** > **TCP/IP Configuration > Connections.**
• Enter 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.

Create User Profile (iSeries)

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.

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.

The job description assigned to the user profile must have a job queue defined that allows at least ten active jobs. If the maximum number of active jobs is less than ten, Sterling Integrator will not install correctly. This also applies to starting Sterling Integrator after installation.

Create SystemDefault.properties file (iSeries)

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

1. Log on with the Sterling Integrator user profile.
2. Create a home directory for the Application user profile. From an iSeries command line, enter MKDIR*/home/appuser*.

   Where appuser represents the Sterling Integrator user profile.

3. Enter EDTF and press **F4**.
4. Enter /home/appuser/SystemDefault.properties and press **Enter**.
   An edit session will be displayed.
5. On the first line, enter java.version=1.6

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

6. Press **F2**.
7. Press **F3**.
8. Verify that the Sterling Integrator user profile's home directory is pointing to /home/appuser.

   This can be done by the WRKUSRPRF command.

Verify User Profile Job Queue Requirements (iSeries)

Verify that your user profile is pointing to a job queue in a subsystem that meets the following requirements:

• The subsystem has at least 2 GB of dedicated memory.

• 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 do not know which system pool your subsystem is defined to, press the F14 key.

• The maximum jobs in the subsystem is set to *NOMAX.

• The Max Active parameter defined in the Job Queue is set to at least 10.

License File

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

Your first license file is a temporary keyfile that is e-mailed to you after you purchase Sterling Integrator. It allows you to run the software and all of the licensed features for a limited period. Before the keyfile expires, you must replace the temporary key with a permanent key Failure to either extend your temporary keyfile or replace it with a permanent keyfile will result in the keyfile expiry and Sterling Integrator will fail to start.

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

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

Obtain a License File

To obtain a license file:

1. Navigate to the Sterling Commerce Customer Center (*https://customer.sterlingcommerce.com*).

2. Click **Support Center > Sterling Integrator > Key Requests**.

3. Enter the following information:

   - Company Name
   - Contact Name
   - Phone Number
   - Fax number
   - Email Address
   - Requested Key Type (Permanent or Temporary)
   - PSP number - The PSP Number (unique number that identifies a licensed software asset in your Sterling Integrator installation) is present in the temporary or previous version of the keyfile you received from Sterling Commerce.
   - CD Key (if no PSP number is present in your license key)
   - Order Number
   - Product
   - Platform
   - Environment
   - IP Addresses
   - Previous IP Address
   - Sterling Account Executive
   - Comments

4. Click **Submit**.

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

Install the License Key

To install the license key from the command line:

1. When you receive the permanent license keyfile, make a copy of it, and keep the copy in a safe place.
2. Stop Sterling Integrator.
3. Copy your license keyfile to the machine where Sterling Integrator is installed.
4. Navigate to /*install_dir*/bin.
5. Enter `./AddLicenseSet.sh` <*path*>.
   Where <*path*> is the path to the license keyfile.
6. Start Sterling Integrator.

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

Download the JCE Distribution File for the IBM JDK 1.6

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

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

To obtain the zip file for the IBM JDK 1.6:

1. Open your browser and navigate to https://www14.software.ibm.com/webapp/iwm/web/preLogin.do?source=jcesdk.
2. Enter your `IBM ID` and `password`.

   If you do not have an IBM ID, follow the IBM registration instructions.

3. Click **Sign in**.
4. Select the **Unrestricted JCE Policy files for SDK for all newer versions** and click **Continue**.
5. Review your personal information and the license agreement.
6. Select the **I agree** check box and click **I confirm** to continue.
7. Click **Download now**.
8. Save the unrestricted.zip file to your system.
9. Record the directory and the zip file name.

   You will need this information during the installation process.

Determine IP Address (iSeries)

To determine the IP address of your iSeries:

1. Enter `WKRTCPSTS *IFC`.
2. Record the IP address to use for Sterling Integrator installation.

If this view brings up multiple IP addresses, another way to check your IP address is to ping your catalog name from an iSeries command line. This will display the resolved IP address for your system.

Translator Requirements (iSeries)

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

Untar a file from ESD Portal on iSeries

Before you install the Sterling Integrator product that was downloaded from ESD Portal, you must perform the following steps to untar the jar file:

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 **enter**.

3. This will list variables on the screen. You are looking for QIBM_CCSID. It will look like **QIBM_CCSID=0**. Record the value of this parameter.

4. Key in **export QIBM_CCSID=819** and press **enter**.

5. cd to the directory where the tar file is sitting.

6. Key in `set` to verify that the QIBM_CCSID is set to 819.

7. Key in **tar –xvf name.of.tarfile.tar** and press **enter**.

8. After it has performed the untar, the CCSID needs to be set back to the original value.

9. Key in **export QIBM_CCSID=0** and press **enter**, where the 0 represents the value in step 3.

10. Key in **set** and press **enter** to verify the QIBM_CCSID is set to what it was in step 3.

11. 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. 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.

Install Sterling Integrator (iSeries)

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

Before you begin:

• You should have completed the *iSeries Installation Checklist*.
• The license file must reside on the host machine on which the application is being installed.
• These 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, unzip the downloaded file to an empty directory. The directory containing the unzipped 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.

Note: To untar the files, use the *Untar a File from ESD Poral on iSeries* task.

To install the software, refer to your installation checklist and follow these steps:

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:

    • 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: `cp /qopt/Sterling Integrator.jar absolutePath/Sterling Integrator.jar`

    • Record the absolute path.

3. Copy the install.savf file from the iSeries directory on the installation CD to the mapped network drive.

4. Determine if 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. Enter:

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

6. Enter `RSTLIB SAVLIB(INSTJAR) DEV(*SAVF) SAVF(QGPL/INSTJAR) MPROPT(*ALL) ALWOBJ DIF(*ALL)` to restore the installation objects.

7. Log in to your iSeries using the user profile you created during preinstallation.

8. Enter `ADDLIBLE 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. Refer to the installation checklist and enter the following configuration parameters.

    • Collection Name
    • Upgrade from prior GIS version (default is No, as this is a new installation)
    • System Passphrase (enter and verify)
    • 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** and enter the remaining parameters:

    • Full path to Sterling Integrator install directory
    • Full path to license file
    • Full path to the JCE distribution file

12. Verify the parameters and press **Enter**.

The install runs in batch mode. 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.

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.

Validate the Installation

Validate the Installation Checklist

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

#	Validate Installation Checklist	Your Notes
1	Start the Sterling Integrator.	
2	Access Sterling Integrator.	
3	Validate the Installation.	
4	Stop the Sterling Integrator.	

Start Sterling Integrator (iSeries)

To start Sterling Integrator in an iSeries environment:

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

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

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

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

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

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

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

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

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

4. (Optional) To verify that Sterling Integrator has started normally and completely, view the system through WRKACTJOB. Verify that the SIMAIN job has ended and there are at least five QP0ZSPWP jobs (of yours) left running in your Sterling Integrator batch subsystem.

5. Prepare your browser to log in to Sterling Integrator. Configure your browser so that there is direct connection between the Web browser and iSeries. Do not configure the browser to use any proxy server between you and iSeries (unless it is a requirement of your network).

Access Sterling Integrator

To log in to Sterling Integrator:

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

   The default login is at an administrative level. One of your first tasks as an administrator is to change the administrative password and to register other users with other levels of permission.

Validate the Installation

Validate the installation by testing a sample business process:

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

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

Stop Sterling Integrator (iSeries)

To stop the Sterling Integrator in an iSeries environment:

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

2. Enter the following commands:

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

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

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

3. Wait for shutdown to complete.

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

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

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

Post Installation Configuration

Post Installation Configuration Checklist in an iSeries Environment

After you installed the Sterling Integrator you need to complete some post installation configuration. Complete the items listed in the post installation checklist:

#	Post Installation Configuration Checklist	Your Notes
1	For security purposes, change the default user ID passwords immediately after the installation is completed. See the *Update My Account Information* task in the documentation library.	
2	Download Sterling Integrator Tools.	
3	Determine if you need to modify any Property Files.	
4	Change the Network Interface Bindings.	

Download Sterling Integrator Tools

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

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

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

Property Files Configuration

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

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

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

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

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

• LDAP user authentication
• Prevention of cross-site script vulnerabilities
• Logging configuration
• Process-specific property file settings

Change the Network Interface Bindings

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

To update the property settings:

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

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

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

   ```
   admin_host.1 = hostname1

   admin_host.2 = localhost
   ```
3. If no interface is being displayed, edit hostname1 so that it correctly identifies the primary network interface that accesses Sterling Integrator.
4. If an additional network interface needs to access Sterling Integrator, add an additional admin_host entry.

   For example:

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

---

5. Stop Sterling Integrator.
6. Navigate to */install_dir*/install/bin.
7. Enter setupfiles.sh.
8. Restart Sterling Integrator.

Installation Maintenance

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

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

Patch files are named using the following naming convention:

patch_si_<patch_*number*>.jar

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

patch_si_<patch_*number*>_patch_info.pdf

Before you install the patch, review the following items:

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

Install a Maintenance Patch (iSeries)

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

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

2. Download the most recent patch file for your version of Sterling Integrator and record the absolute path to
   the downloaded file. Do not rename the file. If you use FTP, you must use Binary mode.

3. Stop Sterling Integrator.

4. Perform a full backup of the Sterling Integrator installation directory, including all subdirectories.

5. Perform a backup of the database.

6. If you edited any property files, ensure that the associated properties.in files have the most current changes.
   Property files will be overwritten with the contents of the associated properties.in files during the patch
   installation.

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

8. In QSH, navigate to the /install_dir/bin directory where <install_dir> is Sterling Integrator installation.
   Enter:

   ```
   cd /install_dir/bin
   ```

9. Enter:

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

   where:

   > *<path>* is the fully qualified path to maintenance patch file
   > *<patch_number>* is the patch number

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

10. Press **Enter** to continue.

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

    ```
    Deployment to application server successful
    ```

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

11. Start Sterling Integrator.

Preserve Custom Changes for System Resources

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

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

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

DB Checksum Tool

A checksum is a simple redundancy check used to detect errors in data. In Sterling Integrator 5.1, a verification process is used to compare the checksum between the existing default resource and the resource added after applying a patch or upgrading. The DB Checksum tool, a resource difference tool generates a granular report of the changes in the system that was not permitted to be set as defaults.

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

Perform a Checksum

To run the DB Checksum tool:

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

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

   Where:

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

   -i is the resource type integer (optional).

   1 is WFD.

   2 is MAP.

   3 is SCHEMA.

   4 is SII.

   5 is TEMPLATE.

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

   -o is the file name to output all the messages (optional).

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

   -h is the help screen.

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

Patch Changes Report

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

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

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

Example: Patch Changes Report

The following is an example of a Patch Changes Report.

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

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

─────────────────────────────────────
List of JARs Removed:
JAR Removed: /SAMPLE_INSTALL_1/jar/jaf/1_0_2/activation.jar
Time: Wed May 13 15:23:08 EDT 2009
JAR Removed:
/SAMPLE_INSTALL_1/jar/commons_logging/1_0_3/commons-logging-api.jar
Time: Wed May 13 15:23:08 EDT 2009

─────────────────────────────────────
List of Files Added:
File Added: /SAMPLE_INSTALL_1/bin/sql/fix_db2_schema.sql
Time: Wed May 13 15:21:30 EDT 2009
File Added: /SAMPLE_INSTALL_1/bin/sql/fix_db2iseries_schema.sql
Time: Wed May 13 15:21:30 EDT 2009
File Added: /SAMPLE_INSTALL_1/bin/errorQueueManager.sh.in
Time: Wed May 13 15:21:30 EDT 2009

─────────────────────────────────────
List of Files Changed:
File Changed:
/SAMPLE_INSTALL_1/properties/lang/en/Reports_en.properties
File Changed:
/SAMPLE_INSTALL_1/properties/lang/es/Reports_es.properties
File Changed:
/SAMPLE_INSTALL_1/properties/lang/fr/Reports_fr.properties

─────────────────────────────────────
List of Properties Added:
Property Added: /SAMPLE_INSTALL_1/properties/filesToRemove.txt
Property Added: /SAMPLE_INSTALL_1/properties/filesToRemove.txt.in
Property Added: /SAMPLE_INSTALL_1/properties/csr.properties.sample
Property Added: /SAMPLE_INSTALL_1/properties/csr.properties.sample.in

─────────────────────────────────────
List of BPs Added:
BP Added: Schedule_AssociateBPsToDocs.bpml version: 4
Time: Wed May 13 15:23:07 EDT 2009
BP Added: Recovery.bpml version: 17
Time: Wed May 13 15:23:07 EDT 2009
BP Added: Schedule_AutoTerminateService.bpml version: 10
Time: Wed May 13 15:23:07 EDT 2009
BP Added: Schedule_DBMonitorService.bpml version: 1
Time: Wed May 13 15:23:08 EDT 2009

─────────────────────────────────────
List of Service Instances Added:
Service Instance Added: RetentionProcessor version: 2
Time: Wed May 13 15:23:28 EDT 2009
Service Instance Added: MESAHttpServerAdapter version: 1
Time: Wed May 13 15:25:11 EDT 2009

─────────────────────────────────────
List of Service Definitions Added:
Service Definition Added: LockServiceType
```

```
Time: Wed May 13 15:22:58 EDT 2009
Service Definition Added: XAPIServiceType
Time: Wed May 13 15:22:59 EDT 2009
Service Definition Added: CleanLockServiceType
Time: Wed May 13 15:22:59 EDT 2009
_____
List of Templates Added:
Template Added: Normalize
Time: Wed May 13 15:23:26 EDT 2009
Template Added: Derive
Time: Wed May 13 15:23:26 EDT 2009
_____
List of Maps Added:
Map Added: IBMPutResponseToXML
Time: Wed May 13 15:24:05 EDT 2009
Map Added: http_headers
Time: Wed May 13 15:24:36 EDT 2009
Map Added: OracleHttpHeaders
Time: Wed May 13 15:24:51 EDT 2009
_____
List of Schemas Added:
Schema Added: E5_V20_Acknowledge_Result.dtd from file:
E5_V20_Acknowledge_Result
Time: Wed May 13 15:24:36 EDT 2009
Schema Added: E5_V20_Acknowledge_Submit.dtd from file:
E5_V20_Acknowledge_Submit
Time: Wed May 13 15:24:36 EDT 2009
Schema Added: E5_V20_APIs_Result.dtd from file: E5_V20_APIs_Result
Time: Wed May 13 15:24:36 EDT 2009
```

User Documentation

Sterling Integrator User Documentation

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

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

Access the Online Documentation

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

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

After you are in the documentation library, you can:

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

To access the Documentation site from within Sterling Integrator or one of its tools, select the Help ⑦ icon. The application must reside on a computer that supports Internet access and an Internet browser.

Request a Documentation CD

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

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

Troubleshooting Tips

Install/Upgrade Troubleshooting Tips: iSeries Environment

Situation	Message or Symptom	Explanation/Resolution
Installing	The license file cannot be found.	**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.
Installing/Starting	Invalid or corrupt license file.	**Explanation** Either the license file was altered or was not downloaded prior to starting Sterling Integrator. **Resolution** Obtain and install a new license file.
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	**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.

Situation	Message or Symptom	Explanation/Resolution
	want to use the plug-ins to create fact models and custom reports.	
Accessing	Attempts to access the URL for Sterling Integrator display the message: Page cannot be displayed.	**Resolution** Change the Network Interface Bindings.
Stopping	Ending jobs from Sterling Integrator when a hardstop is not successful.	**Explanation** There was a problem during the installation process or the subsystem was not defined correctly. **Resolution** 1. Enter `WRKACTJOB` and locate the job that did not end successfully. 2. Press **F11** twice to obtain the job number that you want to end. 3. Press **F3** to end the WRKACTJOB panel. 4. Enter `QSH` to enter Qshell mode. 5. Enter `ps` and press **Enter**. 6. Locate the pid number that corresponds to job number from the WRKACTJOB panel. 7. Enter `kill -kill <pid number> kill -kill <pid number>`. 8. Review the install log to determine the error and resolution. 9. If the error is due to a problem with the installation, then delete install_dir and install the software again. 10. If the error is due to the job queue having 1 as the maximum number of active jobs in the subsystem, then either change the subsystem that you start Sterling Integrator in, or change the number of maximum active jobs.

Uninstall the Software

Uninstall the Sterling Integrator from an iSeries Environment

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

To uninstall the software from a iSeries environment:

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

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

4. Remove the installation directory, enter:

   ```
   rm -rf install_dir
   ```

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

   For example, DLTLIB (Sterling Integrator)DB.

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

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

8. After you remove the software from the server, you can remove Eclipse, and any tools that were downloaded to the desktop, including the following:

   • Map Editor and associated standards. Refer to the *Map Editor Guide* for information about removing the Map Editor.
   • Graphical Process Modeler. Refer to the *Graphical Process Modeler Guide* for information about removing the Graphical Process Modeler.
   • Web Template Designer. Refer to the *Web Extensions Guide* for information about removing the Web Template Designer.
   • (If licensed) MESA Developer Studio plug-ins, including:

     • MESA Developer Studio Software Development Kit (SDK).

• MESA Developer Studio Skin Editor.

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

• (If licensed) Reporting Services, which requires MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports. Refer to the *MESA Developer Studio* guide for information about removing Reporting Services.

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