
Setup Checklist - Windows Preinstallation (Cluster)

This document contains information to assist you when planning to install Sterling Integrator in a Windows clustered environment.

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

- ◆ Use any valid alphanumeric characters and -, :, \$, &, or _.
- ◆ 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 for installing Sterling Integrator:

Step	Description	Your Notes
1	Verify that your system meets the hardware and software requirements specified for this release. For more information, refer to <i>Checking System Requirements</i> on page 3.	
2	Verify that your system has the patches required by Java™ for the Windows environment. See the vendor's Java Web site for more information.	
3	For systems with multiple IP addresses, verify that the IP address on which the 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 the Sterling Integrator.	
4	Verify that all client computers are using Microsoft Internet Explorer 6.x or later.	
5	If you are using a non-English environment, confirm that you are using the appropriate character set.	
6	Determine and record the following information about the JDK: <ul style="list-style-type: none">◆ Version of the JDK◆ Absolute path to the JDK files and patches. The path name can not include spaces. For more information, refer to <i>Installing the Java Software Development Kit</i> on page 4.	

Step	Description	Your Notes
7	<p>Decide which of the following security certificates you will use:</p> <ul style="list-style-type: none"> ◆ The default self-signed SSL (Secure Sockets Layer) certificate that is automatically installed. ◆ A Certificate Authority-related certificate that you install before installing Sterling Integrator. <p>For more information, refer to <i>Security Certificates</i> on page 4.</p>	
8	<p>Obtain the unlimited strength JCE distribution file. For more information, refer to <i>Downloading the JCE Distribution File</i> on page 4.</p>	
9	<p>Determine and record information to set up default system alerts from Sterling Integrator:</p> <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. 	
10	<p>Determine and record the directory in which you plan to install the Sterling Integrator, using the following guidelines:</p> <ul style="list-style-type: none"> ◆ The installation directory must not already exist because the installation process creates it. ◆ The installation directory must have adequate free disk space. ◆ The name of the directory cannot include spaces and must be less than 30 characters long excluding separators, for example, C:\SI_50\install_dir\install. 	
11	<p>Obtain the license file and record the absolute path and file name to the license file. Be sure that the path name and the file name do not contain any spaces.</p> <p>For more information, refer to <i>Obtaining a License File</i> on page 6.</p>	
12	<p>If you are manually editing the silent installation file, create your file. For more information, refer to <i>Silent Installations</i> on page 8.</p>	

Step	Description	Your Notes
<p>Note: The next two steps are only for Sterling Integrator systems that use the Oracle, SQL Server 2005, or DB2 database.</p>		
13	<p>If you are using an Oracle, SQL Server 2005, or DB2 database, determine and record information about your database server. Be aware that this information is case sensitive.</p> <ul style="list-style-type: none"> ◆ Database vendor ◆ Database user name and associated password ◆ Database (catalog) name ◆ Database host name ◆ Database host port number ◆ (Oracle and Microsoft SQL Server 2005 only) Absolute path and file name for one JDBC driver ◆ (DB2 only) Absolute paths and file names for two JDBC drivers ◆ For more information about encrypting and decrypting passwords, refer to <i>Encrypting Database Passwords</i> on page 5 and <i>Decrypting Database Passwords</i> on page 5. <p>Note: If you are using an Oracle 10.2.x database, you must set it up for native compilation by allocating space and by setting the <code>plsql_native_library_dir</code> parameter.</p>	
14	<p>If you are using an Oracle, Microsoft SQL Server 2005, or DB2 database, decide if you are going to manually or automatically apply database definition language (DDL) statements (schema) to the database.</p> <p>For more information, refer to <i>Applying Database Definition Language (DDL) Statements</i> on page 5.</p>	

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 the Sterling Integrator. Your system requirements will exceed these if you are running other applications on the same machine as the Sterling Integrator. For current information, see the most recent *System Requirements* for 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)

- ◆ 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.

Installing the Java Software Development Kit

You must install the Java Software Development Kit (JDK) and the patches specific to your system. To determine which JDK version and patches you need, see the *Sterling Integrator System Requirements*. After you install the JDK, record the absolute path to its location on your system. You must supply the absolute path when you install the Sterling Integrator.

Caution: In Windows, the directory name where the JDK resides cannot include a space.

Security Certificates

Before installing Sterling Integrator, you must decide which of the following security certificates you will use:

- ◆ The default self-signed SSL (Secure Sockets Layer) certificate that is automatically generated by the installation.
- ◆ A Certificate Authority-related certificate that you generate before installing Sterling Integrator.

If you install with the default SSL certificate, but you later want to switch to a CA-related certificate, you can make that change using the `sslCert` property in the `noapp.properties.in` file.

Downloading the JCE Distribution File

The Java Cryptography Extension (JCE) is a set of Java packages from Sun Microsystems, Inc. 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. Installing unlimited strength JCE file will overwrite the limited strength JCE file.

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 the unlimited strength JCE, do the following:

1. Open your browser and navigate to http://java.sun.com/javase/downloads/index_jdk5.jsp.
2. At the bottom of the page, locate the *Java Cryptography Extension (JCE) Unlimited Strength Jurisdiction Policy Files 5.0* item and click the **Download** button.

3. Download the `jce_policy-1_5_0.zip` file to your system.
4. 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.

Encrypting Database Passwords

The Sterling Integrator uses a password to connect to the database being used. Currently, the password is stored as clear text in a property file on the system. If the security policies at your company require you to encrypt these passwords, you can do so after you install the Sterling Integrator. Encrypting these passwords is optional.

To encrypt the database password used in Windows, follow these steps:

1. Stop the Sterling Integrator.
2. Go to `install_dir\install\bin`.
3. Run `enccfgs.cmd`.
4. Run `setupfiles.cmd`.
5. Run `deployer.cmd`.
6. Start the Sterling Integrator.
7. Enter your passphrase.

Decrypting Database Passwords

To decrypt the database password used in Windows, follow these steps:

1. Stop the Sterling Integrator.
2. Go to `install_dir\install\bin`.
3. Run `decrypt_string.cmd encrypted_password` (the encrypted password is from `sandbox.cfg`). You are prompted for the passphrase.
4. In the `install_dir\properties\sandbox.cfg` file, edit the `DB_PASS` property to replace the encrypted password with the password that was returned in Step 3.
5. Go to `install_dir\install\bin`.
6. Run `setupfiles.cmd`.
7. Run `deployer.cmd`.
8. Start the Sterling Integrator.
9. Enter your passphrase.

Applying Database Definition Language (DDL) Statements

When you install Sterling Integrator, you can manually apply database definition language (DDL) statements (for tables, indexes, etc.) to your database tables instead of requiring the installation process to do it directly. This enables you to apply DDL statements for database creation separately from the

installation. If you do not choose to manually apply the DDL, the installation will apply both the DDL and the resources.

This feature increases database security by reducing the database permissions of the Sterling Integrator database user. The rights to create tables, indexes, etc. can be reserved for a secure user like a customer database administrator (DBA). A business can require that only a DBA with the proper permissions can make database changes. Also, these database rights would not be affected by Sterling Integrator.

Directory Structure

Many of the directories that you use during the installation are located two levels below the installation directory (*install_dir*) that you specify during the installation. The intermediate directory is named “install,” and is automatically created during the installation.

For example, a lot of commands are run from the bin directory, which is located at *install_dir*\install\bin. Make sure that you are in the correct directory when you run a command. If you are not sure, display the list of files in your current directory.

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.cmd <path>` command, where *<path>* is the path to the license keyfile, for example,
`C:\SterlingCommerce\SI\bin>AddLicenseSet.cmd c:\temp\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.

Silent Installations

You can set up an installation of Sterling Integrator so that it runs with no user interaction. For these silent installations, you need to create the following items for your installation script:

- ◆ A text file with information that during an interactive installation you are prompted to enter. This information is then automatically accessed by the installation script.

Examples of silent installation text file entries:

```
APSERVER_PASS = (system passphrase)
INSTALL_DIR = (full path to the installation directory)
LICENSE_FILE_PATH = (full path to the license file)
PORT1 = (initial port)
JCE_DIST_FILE = (full path to the JCE distribution file)
SI_ADMIN_MAIL_ADDR = (email address for administrative contact)
SI_ADMIN_SMTP_HOST = (SMTP mail server host name)
DB_VENDOR = (database - [MSSQL|MSSQL2005|Oracle])
ACCEPT_LICENSE = (license agreement acceptance - [yes/no])
DB_USER = (database user ID)
DB_PASS = (database password)
DB_DATA = ('net service name' or 'database name')
DB_HOST = (database hostname or IP address)
DB_PORT = (database's listener port.)
DB_DRIVERS = (fully qualified path to the database driver)
DB_DRIVERS_VERSION = (version of database drivers)
```

In a clustered installation, the text file must include the following line for nodes 2 and higher. This prevents these nodes from changing the database.

```
REINIT_DB = false
```

- ◆ A reference in your installation script to this variable file.

Windows silent installation files must delimit all colons (:) and backslashes (\) with a backslash. For example, `INSTALL_DIR=C:\:\path\for\install directory`

Also, Windows silent installation files must use the `-noinstallshield` argument in the command.

Example (node 1):

```
install_dir\JDK\bin\java -jar GISxx.jar -noinstallshield -f
silent_install_file
```

Example (nodes 2 and higher):

```
install_dir\JDK\bin\java -jar GISxx.jar -cluster -noinstallshield -f
silent_install_file
```


Installing the JDBC Driver in SQL Server

Sterling Integrator requires the correct Microsoft SQL Server driver. See *System Requirements* for supported version information. The supported version of the JDBC driver builds the correct Sterling Integrator directory structure.

Installing the JDBC Driver in SQL Server 2005

Go to the Microsoft web site to download the driver and any appropriate patches.

1. Download `sqljdbc_version_language.tar.gz` to a temporary directory.
2. To unpack the zipped tar file, navigate to the directory where you want the driver unpacked and type the following command:

```
gzip -d sqljdbc_version_language.tar.gz
```

3. To unpack the tar file, move to the directory where you want the driver installed and type the following command:

```
tar -xf sqljdbc_version_language.tar
```

After the package unpacks, you can find out more information about using this driver by opening the JDBC Help System in the `absolutePath/sqljdbc_version/language/help/default.htm` file. This will display the help system in your Web browser.

4. When the Sterling Integrator installation asks for the location of the JDBC drivers, specify the extracted jar file created after unpacking the archive (usually named `sqljdbc.jar`). The JDBC driver version is the same as the version of the drivers downloaded from Microsoft.