

Sterling Integrator®

Windows Non-Cluster Upgrade

Version 5.0.05



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Upgrade Overview: Windows Non-Cluster Environment

Upgrade for Windows in a Non-Cluster Environment

Use the guide to upgrade the Sterling Integrator software to Version 5.0.05 in a non-cluster (single node) Windows environment. The upgrade impacts the MySQL database. For more information on Patch 5005, see the patch information documentation.

You need to prepare for an upgrade the same way that you would prepare for an installation. An upgrade:

- Does not overwrite your current Sterling Integrator directory structure on disk.
- Creates a new installation of Sterling Integrator 5.0 that points to and upgrades the Oracle, DB2 or Microsoft SQL Server 2005 database of your current installation. If you use the MySQL database you will need to follow the instructions in the Upgrade MySQL Checklist (External MySQL).
- Retains configuration data from the previous release.
- Retains run time data from the previous release.

After the upgrade, you start your Sterling Integrator instance from the newly created directory structure. Your original instance will no longer be operational after performing the upgrade.

What's in this Guide (Windows)

This guide provides the following upgrade information:

- Upgrade Path Scenarios
- Upgrade Planning Information
- Prepare Your Current System for Upgrade
- MySQL Upgrade Impacts
- Pre-Upgrade Information Gathering Checklist)
- Upgrade the Software (GUI, Silent Install)
- Validate the Upgrade
- Post Upgrade Configuration and Testing

- Maintenance (Patches and Hot-fixed)
- Uninstall the Software
- User Documentation
- Troubleshooting Tips

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

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 5.0.

Upgrade Path Scenarios

Upgrade Scenarios (Windows Non-Cluster)

Upgrading to Sterling Integrator can follow one of three paths. Keep these scenarios in mind as you plan for your upgrade:

Upgrade Scenario	Example
Operating system and the database are the same between the old Gentran Integration Suite version and Sterling Integrator 5.0.	<p>If you are upgrading from Gentran Integration Suite 4.3 (on HPUX 11.11 and using Oracle 10.1.0.4 RAC) to Sterling Integrator 5.0 (on HPUX 11.11 and using Oracle 10.1.0.4 RAC).</p> <p>The upgrade steps are:</p> <ul style="list-style-type: none">• Export the configuration data.• Back up the database.• Upgrade to Sterling Integrator 5.0.
Database upgrade before the upgrade to Sterling Integrator 5.0 when the old Gentran Integration Suite database is not supported by Sterling Integrator 5.0.	<p>If you are upgrading from Gentran Integration Suite 4.0 (on Solaris 9 and using DB2 8.1 Fixpack 5) to Sterling Integrator 5.0 (on Solaris 9 and using DB2 9.2).</p> <p>The upgrade steps are:</p> <ul style="list-style-type: none">• Export the configuration data.• Back up the database.• With help from a database administrator (DBA), copy the database to DB2 9.2.• Back up the newly created database.• Upgrade by pointing to the newly created database. If the upgrade stops and leaves the newly created database in an incomplete state, you can re-start the upgrade using the backup of the database.
Your current Gentran Integration Suite operating system is not supported by Sterling Integrator 5.0.	<p>If you are upgrading from Gentran Integration Suite 4.0 (on RH EL 3.0 and using Oracle) to Sterling Integrator 5.0 (on RH EL 5.0 and using Oracle).</p> <p>The upgrade steps are:</p>

Upgrade Scenario	Example
	<ul style="list-style-type: none"> • Export the configuration data. • Back up the database. • Upgrade to Sterling Integrator on the RH EL 5.0 machine while pointing to Oracle.
<p>You want to move your current Sterling Integrator 5.0 instance to a new operating system.</p>	<p>If you are upgrading from Sterling Integrator 5.0 on Windows Server 2003 to Sterling Integrator 5.0 on Windows Server 2008 using your current database.</p> <p>The upgrade steps are:</p> <ul style="list-style-type: none"> • Export the configuration data. • Back up the database. • Upgrade to Sterling Integrator 5.0 on the Windows Server 2008 machine while pointing at your current database.

Supporting Information and Detailed Procedures

Upgrade to Microsoft SQL Server 2005

Sterling Integrator 5.0 supports Microsoft SQL Server 2005 Enterprise and Standard version 9.00.3159 or higher within 9.x.x.

To upgrade to Microsoft SQL Server 2005 9.00.3159 from version 9.00.3152:

1. Download the GDR2 hotfix from <http://support.microsoft.com/kb/934459/>.
2. Apply the GDR2 hotfix.

The Microsoft SQL Server 2005 version is now 9.00.3159.

Upgrade Planning Information

Upgrade Planning Information

Before you begin an upgrade you should:

- Read and become familiar with this document so that you have a clear understanding of what the upgrade requires.
- Review the upgrade path scenarios to determine which scenario you want to use.
- Review and record system configuration information.
- Review and record performance and tuning information.
- Review the Best Practices for Upgrade Testing.
- Review the Planning Your Maintenance Window and Production Upgrade.

In addition, you should consider the following:

- Be prepared for the upgrade program to run for several hours. Time the upgrade (and restore) to estimate the maintenance/outage window you will need when you perform the production upgrade.
- Practice on a test instance. Take a production database snap-shot and load a copy of that snap-shot into the test instance.
- Should errors occur during the upgrade, the upgrade program restarts from the beginning and may require a restore. You should build time into your schedule for re-running the upgrade program from the start of the process.
- If the program fails during your trial run, review the InstallSI.log file created by the upgrade script and search the Support Center Knowledgebase for references matching any errors received. Before restarting the upgrade, restore the database snap-shot to the test system. If no solution is found in the Knowledgebase, open a Support case with your InstallSI.log to document the error. If you later get past the original problem causing the upgrade to error, notify Customer Support.
- Keep a record of any changes made to reach successful completion. You will need to apply all of these changes to the production database when you run the upgrade on that system.

Planning Your Maintenance Window and Production Upgrade

Consider the following when you are planning for the maintenance window and production upgrade:

- Verify that the upgrade is transparent to your customer.
- Determine if you need to communicate any information about the upgrade to your customers.
- Do you have a database maintenance plan?
- Have you tested the volume expectations and is the setup for the proper database levels? (running optimizer, re-orgs, re-indexes, statistics)

Best Practices for Upgrade Testing

Before you begin your upgrade, you should review the following questions, as you may need to plan test scenarios for these items after the upgrade:

- Are your Business Processes functioning properly?
- Will your map outputs be the same in the upgraded system?
- Are your Trading Partners set up correctly?
- Are your certificates working correctly?
- Are your communications in and out of the system working correctly?
- Do you have any Disaster Recover/Failover test scenarios?
- If you have a cluster, is the cluster functioning properly?
- If you are upgrading OS or DB versions have you tested the new configuration?

Supporting Information and Detailed Procedures

Access the Sterling Integrator Knowledgebase

Before you upgrade, you may want to access the Sterling Integrator knowledgebase. The knowledgebase contains many topics and has a search engine to assist you in finding information. To access the knowledgebase:

1. Go to <https://customer.sterlingcommerce.com>.
2. Enter your **User Name** and **Password**.
3. Click **Support Center**.
4. Under **Self Support Tools**, select **Knowledgebase**.
5. Enter search criteria and click **Find**.

Obtain the Upgrade Media for Sterling Integrator 5.0

Before you upgrade, it is a best practice to always check the Product Updates & Downloads site to ensure you have the latest version of the upgrade media.

To obtain the most recent version of upgrade media:

1. Go to <https://customer.sterlingcommerce.com>.
2. Enter your **User Name** and **Password**.
3. Under **Product Support**, select **Sterling Integrator > Product Updates & Downloads**.
4. Under the **Upgrading Sterling Integrator/GIS**, select **Request Upgrade Jar File - Sterling Integrator Version 5.0**.
5. Enter the following information in the Sterling Integrator/GIS Upgrade Request form:
 - Company Name.
 - Billing Account Name.
 - Ship to Contact Name.
 - Ship to Street Address.
 - Email Address.
 - 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.
 - Delivery Method (ground shipment 5 to 7 days or electronic software delivery)
 - Current Software Version
 - IP Address
 - License Filekey
 - Operating System
6. Select the adapters which you are running from the list.
7. Add any additional comments.
8. Click **Submit**.

Your upgrade media will be shipped to you via the delivery method you selected.

Prepare Your System for Upgrade

Prepare Your System for the Upgrade (Windows)

Before you begin the upgrade, you need to review and complete each of the following checklists:

- Pre-Upgrade System Checklist
- Pre-Upgrade Database Checklist

Pre-Upgrade System Checklist (Windows)

Before you begin an upgrade, you need to:

#	Pre-Upgrade System Checklist	Your Notes
1	<p>Verify that your system meets the hardware and software requirements specified for this release in the System Requirements. Verify you have the correct:</p> <ul style="list-style-type: none">• Patches required by Java™ for the operation system• Version of the JDK• JDK Patches• JCE (entire package)• Absolute path to JDK and patches• Database must match the version listed in the requirements <p>If any of the above requirements are not met, the installation will fail and print/log a report of all items that were non-compliant.</p>	
2	<p>Review your current system to determine if you need to apply a patch prior to upgrading. The following are the minimum patch level for upgrading to this release:</p> <ul style="list-style-type: none">• Release 4.0 - Patch 4.0.3-5• Release 4.1 - base release or any patch• Release 4.2 - base release or any patch• Release 4.3 - base release or any patch	

#	Pre-Upgrade System Checklist	Your Notes
3	<p>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.</p> <p>If you do not verify the IP addresses, your system may not operate properly after installing Sterling Integrator.</p>	
4	<p>If you are using a non-English environment, confirm that you are using the appropriate character set.</p>	
5	<p>Obtain the most recent upgrade media.</p> <p>The Sterling Integrator 5.0 upgrade program has been refreshed since it was initially released. Make sure you have the latest copy before you begin the upgrade.</p>	
6	<p>Backup your Sterling Integrator installation directory and the database.</p> <p>If there are problems with your upgraded system, the only way to ensure that you can roll-back to your previous version is to back up Sterling Integrator and the database.</p>	
7	<p>Archive your data.</p> <p>Archived data can only be restored from the same version and patch of Sterling Integrator from which it was archived. If you need to restore archived data that was archived prior to performing the upgrade, then you must have a running instance of Sterling Integrator that matches the version and patch from which the archive was taken.</p>	
8	<p>Purge any unneeded data.</p>	
9	<p>Export any business objects that can not be upgraded. Including business processes, service configurations, trading partners, maps, etc.</p> <p>The exported business object can be imported into the upgraded system if you need them.</p>	
10	<p>Determine if you have any incompatible data that needs to be modified or deleted.</p> <p><i>Incompatible Data Detection</i> is an optional set of tasks.</p> <p>For this release of Sterling Integrator, data validation has been improved. By screening for these items before running the upgrade, you may address problems that could cause the database changes to fail.</p>	
11	<p>Review the EDI Sequence Check Queue to ensure that no interchanges are in the queue.</p> <p>The EDI Sequence Check Queue is used for X12 and EDIFACT sequence and duplicate checking.</p>	
12	<p>Create an process output log.</p>	
13	<p>Obtain the license file to use the new licensed features in this release.</p>	

#	Pre-Upgrade System Checklist	Your Notes
14	<p>Disable the virus protection software on the server.</p> <p>If the virus protection software is enabled, the upgrade will fail.</p>	

Pre-Upgrade Database Checklist (Windows)

Before you begin an upgrade, you need to:

#	System Verification Tasks	Your Notes
	Copy the Microsoft SQL Server 2000 Database to an Microsoft SQL Server 2005 Database.	
	If you are using Oracle 8i with Sterling Integrator 4.0, upgrade to Oracle 9i before upgrading to Sterling Integrator 5.0.	
	<p>If you plan to import an Oracle 9 or Oracle 10 database, while upgrading to Sterling Integrator 5.0, you must import the database without the indexes.</p> <p>For example, if you are using the Oracle import (imp) tool, you should use the INDEXES=N option. If you attempt upgrading to Sterling Integrator 5.0 with indexes turned on, the upgrade will fail. If you had created any custom indexes in Oracle database, add them after performing the upgrade as they are not imported.</p>	

Supporting Information

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.

Install the JDBC Driver in Microsoft SQL Server

Sterling Integrator requires the correct Microsoft SQL Server driver. See *System Requirements* for supported version information.

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.

Incompatible Data Detection

Some of the data in your existing environment may not be compatible with the newer version of Sterling Integrator. You may choose to screen your data and make changes prior to starting your upgrade. Items you should screen for include:

- Duplicate schedules or schedules associated with deleted business processes - if found you can delete the duplicate schedules
- Duplicate Trading Partners - if found you can rename or delete the duplicates
- Organization Names which exceed 100 characters - if found you can rename
- System business processes which have been deleted - if any have been deleted, record the information

This is an optional task. For this release of Sterling Integrator, data validation has been improved, but by screening for these items, prior to the upgrade, you may save some time during the upgrade.

Determine if You Have Duplicate Schedules

To determine if you have duplicate schedules:

1. Navigate to **Administration Menu > Deployment > Schedules**.
2. In the List panel, click **Go!**
3. Review the list of schedules for duplicates.
4. If you find any duplicates, either rename or delete them.

Delete Duplicate Trading Partners

To determine if you have trading partners:

1. Navigate to **Administration Menu > Trading Partners > Advanced > Identities**.
2. In the List panel, click **Go!**

The system displays a list of all the trading partners.

3. Review the list of trading partners for duplicates.

4. Determine if you need to delete the duplicates.
5. Click **delete** to delete the duplicates trading partner profiles.

Rename Duplicate Trading Partners

To rename duplicate trading partners:

1. Navigate to **Administration Menu > Trading Partners > Advanced > Identities**.
2. In the List panel, click **Go!**
The system displays a list of all the trading partners.
3. View the list of trading partners names.
4. If any names are longer than 23 characters, the click edit and rename them.
5. Click **Save**.
6. Click **Finish**.

Determine if Organization Names are more than 100 characters

For AS2 only, determine if any organization names are longer than 100 characters:

1. Navigate to **Administration Menu > Trading Partners > AS2**.
2. In the List panel, click **Go!**
The system displays a list of all the AS2 trading partners and organizations.
3. Review the list of organization names.
4. If any names are longer than 100 characters, click edit and rename them.
5. Click **Save**.
6. Click **Finish**.

Determine if any System Business Processes have been Deleted

To determine if any system business processes have been deleted:

1. Navigate to **Administration Menu > Business Process > Monitor > Advanced Search > Business Process**.
2. In the **Search Using Business Process Name** panel, review the list of system business processes in the panel.
3. Make a list of any system business processes that have been deleted.

System Business Processes

The following is a list of the system business processes provided with Sterling Integrator:

- BackupService
- CHIPSUtility_ReceiveHandler
- EventNotification
- handleSWIFTNetAcquireQueue
- MailboxEvaluateAllAutomaticRulesSubMin

- MBIAdd
- MBIDocView
- MBIExtract
- MBIPathList
- MBIQuery
- MBIRollBackExtract
- MBISearch
- MBISelfRegistration
- Purge
- PurgeAll
- Recover.bpml
- Restore
- RestoreService
- Schedule_AssociateBPsToDocs
- Schedule_AutoTerminateService
- Schedule_BackupService
- Schedule_BPExpirator
- Schedule_BPLinkagePurgeService
- Schedule_BPRecovery
- Schedule_CheckExpireService
- Schedule_DBMonitorService
- Schedule_DocumentStatsArchive
- Schedule_IndexBusinesssProcessService
- Schedule_IWFCDriverService
- Schedule_MailboxEvaluateAllAutomaticRules
- Schedule_MessagePurge
- Schedule_NonEdiInboundFSAdapter
- Schedule_NonEdiOutboundFSAdapter
- Schedule_PartialDocumentCleanUpService
- Schedule_PerfDataPurgeService
- Schedule_Produced MsgPurgeService
- Schedule_PurgeService
- Schedule_RetentionProcessor
- Schedule_Scheduled_AlertService
- SMTPNotification
- TimeoutEvent

Create Process Output Log

A log of process activity during the upgrade will help if troubleshooting is required. Output is automatically logged to the upgrade log files (PreInstallSi.log and InstallSi.log). Use this procedure to generate a separate output log for each process you want to log.

To create a process output log:

1. From any directory, run the script command to record the processes, ensuring that you have created and specified the name of the file in which to save the process output.

For example, to start recording output to a file named processoutput.log, type script processoutput.log at the command line. The processoutput.log file will be created in the directory where you ran the script command.

2. After the upgrade is complete, enter exit at the command line to stop recording.
3. You can now retrieve the file containing the process output.

The following example shows a session after starting the script command, specifying the output to be saved to the file named listing.log, and typing exit to stop the script command from running:

```
[2]%script listing.log
  Script started, file is listing.log
[3]%ls
Custard.Recipe FavoriteRecipes Curry.Recipe
VindalooCurry.Recipe Jelly.Recipe
[4]%exit
  Script done, file is listing.log
```

Copy a Microsoft SQL Server 2000 Database to an SQL Server 2005

This is an optional procedure. It is the customer's responsibility to perform it. Sterling Commerce Customer Support cannot help with this procedure.

Before upgrading, it is recommended that you first make a backup of your Microsoft SQL Server 2000 database. One way to accomplish this is to make a separate copy of your existing database so that you can preserve your current system. If you are moving from a Microsoft SQL Server 2000 database to an SQL Server 2005 database, use the following procedure. Your existing Gentrans Integration Suite instance will no longer function if you upgrade your existing database without making a copy.

After this procedure, you will have two databases:

- A database that you will use in your upgraded version of Sterling Integrator.
 - A database that you can use in your old version of Sterling Integrator.
1. Perform a full database backup to the file system on the source SQL 2000 server of the source database.
 2. Copy the resultant backup (.bak) file from the file system on the source server file system to the file system on the SQL 2005 server.
 3. Connect to the SQL 2005 database server as a Windows authenticated user with administrative privileges on the database server using SQL Server Management Studio 2005.
 4. Make sure that the destination database is not in use (disconnect any connected applications).
 5. Restore the backup of the SQL 2000 database over the existing SQL 2005 database, using the Tasks|Restore|Database wizard. The restore will be from a "device," the file created above. Specify on the Options tab the correct locations for the data and log files (since the locations in the backup may not be the same as the correct locations for files on the on SQL 2005 database server); also select the check box to specify that the existing database is to be overwritten. Confirm that the restore is reported as successful.
 6. Check to make sure that existing users in the database match existing users on the server using the command sp_change_users_login 'report'. If no rows are returned, go to step 8.

7. If rows are returned, execute the command `sp_change_users_login 'update_one', 'username', 'username'` substituting the unlinked login name in each execution to correct links between existing users in the restored database and existing logins on the server.
8. Examine the users of the database using the SQL Studio or `sp_helpuser`. If the login (existing on the server) who will be working with this database is not currently a user of the restored database, add that login as a user of the database by executing the following commands (login_name and user_name should generally be the same):

```
USE database_name
Go
EXEC sp_grantdbaccess 'login_name', 'user_name'
Go
EXEC sp_addrolemember 'db_owner', 'username'
Go
CHECKPOINT
Go
USE master
Go
EXEC sp_defaultdb 'username', 'database_name'
Go
```

Note:

The spaces in the quoted strings in the SQL commands should not be included in the final procedure, as spaces are significant to the procedure and the commands will fail if they are there (`EXEC sp_grantdbaccess 'login_name', 'user_name'` should be `EXEC sp_grantdbaccess 'login_name', 'user_name'`).

9. Examine the user tables in the SQL 2005 database to determine which schema they currently are in. Using the SQL Studio, the schema will be the prefix before each table listed in the Table tree.

Note:

This assumes that the schema of the user objects is not changed, even if it is a schema name with the same name as a user other than the user who will be accessing the data.

10. Execute the following command in the SQL 2005 database to ensure that the default schema for the user who will interact with the database matches the schema containing the restored user objects. If the objects are in the dbo schema, use dbo as the schema_name.

```
USE database_name
Go
ALTER USER user_name WITH DEFAULT_SCHEMA = schema_name
Go
```

Configure Snapshot for Microsoft SQL Server

The snapshot feature in Microsoft SQL Server allows you to view a read-only copy of the database even when it is locked. Configuring the snapshot feature can also reduce deadlocks.

Enter the following command to enable the snap shot feature:

```
ALTER DATABASE db_name SET READ_COMMITTED_SNAPSHOT ON;
```

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**).

MySQL Upgrade Impacts

MySQL Upgrade Impact (Version 5.0.05)

Starting with version 5.0.05 and beyond, the MySQL database is no longer bundled with Sterling Integrator software. Therefore, you will need to install and configure an external version of the MySQL database prior to upgrading to the new version of Sterling Integrator.

Upgrade MySQL Checklist (External MySQL)

This checklist assumes you are upgrading from a previous version of Gentran Integration Suite or Sterling Integrator directly to Sterling Integrator 5.0, Patch 5005 and you are knowledgeable on the MySQL database.

If you need additional MySQL database information, see the documentation provided by the vendor at <http://dev.mysql.com/doc/refman/5.0/en/>.

If you are moving from a version of MySQL earlier than MySQL 5.0, you will need to export the data from the earlier version to the MySQL 5.0 version using the following procedure. Your existing Gentran Integration Suite instance will no longer function if you upgrade your existing database without making a copy. After this procedure, you will have two databases:

- A database that you will use in your upgraded version of Sterling Integrator (Sterling Integrator 5.0).
- A database that you can use in your old version of Sterling Integrator.

Task	Which database	MySQL Upgrade for Patch 5005 Checklist	Your Notes
1	New external database	Install an external MySQL database. Refer to MySQL documentation for information about installing the MySQL database. Be sure to install correct version and patches. See <i>System Requirements</i> for supported version information.	
2	New external database	Update the MySQL Parameters.	

Task	Which database	MySQL Upgrade for Patch 5005 Checklist	Your Notes
3	New external database	<p>Create the database.</p> <p>For example, you can run the following command to create the database:</p> <pre>CREATE DATABASE database_name</pre> <p>Refer to MySQL documentation for more information about creating the database.</p>	
4	New external database	Create a user account and grant permissions.	
5	New external database	Install the JDBC Drivers for MySQL.	
6	Previous database	<p>Rename the SCHEMAS table to XMLSCHEMAS to avoid reserved word collision:</p> <ul style="list-style-type: none"> • Only required when moving from MySQL version earlier than 5.0 • Use the following command: <code>Alter table SCHEMAS rename to XMLSCHEMAS</code> 	
7	Previous database	<p>Perform a MySQL database export.</p> <p>As part of the export, you will have a backup copy of the database.</p>	
8	Previous database	<p>If you renamed the SCHEMAS table in task 6, you need to rename the SCHEMAS table, so that your older version of Sterling Integrator will be operational.</p> <p>Use the following command: <code>Alter table XMLSCHEMAS rename to SCHEMAS</code></p>	
9	New external database	Import the exported data for MYSQL into the new external database.	

If you need additional MySQL database information, see the documentation provided by the vendor at <http://dev.mysql.com/doc/refman/5.0/en/>.

Update the MySQL Parameters

Sterling Integrator requires the following parameter settings in your MySQL database.

The parameter values recommended are minimum values. You can increase the values based on your requirements or if the database server is used by more than one instance of Sterling Integrator.

It is recommended to configure a data file for auto extension (`innodb_data_file_path = ibdata1:400M:autoextend`).

Parameter	Value
max_connections	500
max_allowed_packet	100M
default-table-type	INNODB
wait_timeout	31536000
max_write_lock_count	500000
transaction-isolation	READ-COMMITTED
character-set-server	utf8
binlog_format	mixed
table_open_cache	512
key_buffer_size	384M
sort_buffer	512K
connect_timeout	15
innodb_data_file_path	ibdata1:400M:autoextend
innodb_data_home_dir	<i>/install_dir/mysql/var/</i>
innodb_log_group_home_dir	<i>/install_dir/mysql/var/</i>
innodb_flush_log_at_trx_commit	1
innodb_mirrored_log_groups	1
innodb_log_files_in_group	3
innodb_file_io_threads	4
innodb_lock_wait_timeout	600
innodb_log_file_size	5M
innodb_log_buffer_size	8M
innodb_buffer_pool_size	128M
innodb_additional_mem_pool_size	32M

Review the `innodb_buffer_pool_size` and the `innodb_additional_mem_pool_size` in the `/install_dir/install/mysql/data my.cnf`. If the values from the previous Sterling Integrator `tuning.properties` are larger than what is in your new `my.ini` file, you need to adjust them accordingly.

Create User Account and Grant MySQL Database User Privileges

You must grant all privileges on the MySQL database to the Sterling Integrator administrative user. The following example creates and grants all privileges to the user in the MySQL database:

```
GRANT ALL PRIVILEGES ON database_name.* TO user@localhost IDENTIFIED BY 'password'
WITH GRANT OPTION
```

Where:

- `database_name` - refers to the name of the database created.

- user - refers to the database user account that will be used by Sterling Integrator.
- password - refers to the password associated with the database user account.

Once you have granted all the privileges, you will need to FLUSH the privileges to complete the setup. For example, run this command from the SQL prompt:

```
FLUSH PRIVILEGES;
```

Install the JDBC Drivers for MySQL

The Sterling Integrator requires appropriate JDBC driver for MySQL database. These drivers are platform independent and architecture independent drivers. See System Requirements for supported version information.

After obtaining the correct JDBC driver, record the absolute path to its location on your system. You must supply this absolute path when installing the Sterling Integrator.

Perform a MySQL Database Export

The full backup can be performed using the mysqldump utility. The details on the usage of this MySQL utility can be found in the MySQL reference documentation. Since there are many options that are provided with this utility, the following are the minimum recommendations:

- Specifying the db_name on the mysqlcommand will prevent the subsequent import from creating a new database. You should specify the db_name of the Sterling Integrator Database.
- --extended-insert: Use multiple-row INSERT syntax that include several VALUES lists. This results in a smaller dump file and speeds up inserts when the file is reloaded.
- --quick: This option is useful for dumping large tables. It forces mysqldump to retrieve rows for a table from the server a row at a time rather than retrieving the entire row set and buffering it in memory before writing it out.
- --disable-keys: This makes the dump file faster because the indexes are created after all rows are inserted.

To export the database.

1. Perform a backup of the database.

For example, enter

```
mysqldump -u <internal_mysql_username> -p<password> <db_name>  
--host=<internal_mysql_host> --port=<internal_mysql_port> > <dump_file_name>
```

2. Make a copy the resultant dump file (.dmp) file from the file system on the source server file system to the file system on the MySQL destination server.

If the MySQL database was created as part of a Sterling Integrator installation, you can determine the port number by reviewing the MYSQL_PORT entry in the sandbox.cfg that is in the Sterling Integrator install directory.

Import the Data to the New Version of MySQL Database

Before you begin:

- Make sure the new version of the MySQL database is not in use.
- Know the name of the new database.

To import the exported data:

Enter:

```
mysql -u <external_mysql_username> -p<password> <db_name>  
--host=<external_mysql_host> --port=<external_mysql_port> <<dump_file_name>
```

Where database_name is the name of the new database created in task 3 of the checklist.

Pre-Upgrade Information Gathering Checklist

Information Gathering Checklist for Upgrades (Windows Non-Cluster Environment)

The checklist contains the items you need to gather and tasks you need to complete prior to upgrading the Sterling Integrator in a cluster 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

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

#	Information Gathering Checklist for Cluster Upgrades	Your Notes
1	Determine which installation method you are going to use: <ul style="list-style-type: none">• GUI- based• Silent Installation	
2	Decide which type of security certificates you will use: <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.	
3	If you are using an Oracle, 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.	
4	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>plsq_native_library_dir</code> parameter.	
5	Determine if the database password need to be encrypted.	
6	Record the Hostname on which you plan to install Sterling Integrator.	
7	Record the Directory Name where you plan to install Sterling Integrator.	

#	Information Gathering Checklist for Cluster Upgrades	Your Notes
8	Record the Login to host machine.	
9	Record the Password to the host machine.	
10	Record the path to the JDBC drivers.	
11	Record the path to the installation wizard and file name.	
12	Record the path to JDK.	
13	Record the path to the License File.	
14	Record the path to JCE file.	
15	Record the Host IP address.	
16	Record the Initial Port Number.	
17	Record the System passphrase.	
18	Record the Administrative e-mail address used for sending alert messages.	
19	Record the SMTP Server IP address used for sending alert messages.	
20	Record the Database vendor name.	
21	Record the Database user name.	
22	Record the Database password.	
23	Record the Database (catalog) name.	
24	Record the Database host name.	
25	For Oracle, MySQL, and Microsoft SQL Server 2005, record the path and file name for the JDBC Driver.	
26	For DB2, record the absolute paths and file names for two JDBC drivers.	

Upgrade the Software

General Installation/Upgrade Information for a Windows Environment

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.

Use one of the following methods to install your system:

- Installation Wizard
- Silent Installation

General installation guidelines include the following:

- The installation directory can be added manually and selected during the upgrade. If you create the installation directory before you begin, the directory must be empty. If the installation directory has any files in it, an error is generated.
- 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. Using a directory name of more than 30 characters could create an install that is impossible to delete. An example of an installation directory is C:\SI_50\install_dir\install.
- If you need to install more than one instance of Sterling Integrator on the same Windows server, you must install the second instance in a different directory.
- Sterling Integrator 5.1 does not support IPv6 installation on Windows. Before applying an IPv6 address, see the *IPv6 Capabilities* section in Sterling Integrator 5.1 *System Requirements* guide.

General Installation Wizard Information for Windows

The installation wizard provides:

- The option of either entering the paths or selecting the paths and files (**Select File**).
- For every screen in the GUI-Based installation wizard, you need to click **Next** to move to the next step the wizard. The click **Next** step is not represented in each step in the procedure.

Upgrade Sterling Integrator in a Windows Non-Cluster Environment (GUI-Based)

Before you begin:

- You should have completed the *Information Gathering Checklist for Upgrades (Windows)*.
- The license file must reside on the host machine on which the application is being installed. If you saved the license file to a Windows client, transfer the license file to the host.
- Sterling Integrator 5.0 does not support IPv6 installation on Windows.

Before applying an IPv6 address, see the *IPv6 Capabilities* section in Sterling Integrator 5.0 *System Requirements* guide.

- *install_dir* refers to the installation directory where the software is installed. Do not use any pre-existing directory name or an old version of the Sterling Integrator installation directory. If you do, you could inadvertently overwrite the existing installation.
- *parent_install* refers to the parent directory of the installation directory that you create during the installation.
- If you are installing Sterling Integrator on VMware, provide the IP address of the virtual machine; not the IP address of the VMware host. For example, if 10.251.124.160 is the IP address of the VMware server and 10.251.124.156 is the IP address of the Window 2003 server it is hosting, you should use the 10.251.124.160 as the IP address to install the Sterling Integrator.
- The installation creates subsequent ports based on the initial port number. For all of the port assignments, see the *\install_dir\install\properties\sandbox.cfg* file.
- You need to know what version of the Windows Server you are using.
- Create a folder that contains:
 - license file
 - SI.jar (jar file for the upgrade, for example SI_5005.jar)
 - SCIIInstallWizard.jar
 - jce file

To upgrade the software:

1. Close all open Windows programs and any command prompt windows.
2. Copy the SCIIInstallWizard.jar and the SI.jar files to a location on your desktop.
3. Start the upgrade process using one of the follow methods:

For Windows Server 2003 or earlier	For Windows Server 2008
<ul style="list-style-type: none"> • From the desktop, double-click SCIIInstallWizard.jar. • From a command prompt (or from the Run dialog box), enter the following command: <pre>\absolutePath\bin\java -jar \absolutePath\SCIIInstallWizard.jar</pre> <p>The installation dialog box appears.</p>	<ul style="list-style-type: none"> • Click Start. • Right-click Command Prompt and select Run as administrator. <p>The Administrator: Command Prompt dialog box is displayed.</p> • Enter the following command: <pre>\absolutePath\bin\java -jar \absolutePath\SCIIInstallWizard.jar</pre> <p>The installation dialog box appears.</p>

4. Click **Next** to continue the upgrade.

5. Review the license agreement and click **Accept** to accept the terms.
6. Enter the full path to the JDK directory.
7. Enter the full path to the license file.
8. Enter the full path to your JCE file.
9. Enter the path to installation directory. If the installation directory does not exist, click **Yes** at the prompt *The directory does not exist, create it?*. The installer creates the directory (*install_dir*).

Below the installation directory, the installer creates a directory named *install*. This directory contains the installation files.

10. Enter the path to the installation jar file (*SI.jar*).
11. Enter the explicit IP address for the server or use the default value of *localhost*.
12. Enter the initial port number or use the default value of 8080.
13. Enter your system passphrase.
14. Re-enter the system passphrase.
15. Enter the e-mail address to which you want system alert messages sent.
16. Enter the SMTP mail server (IP address or host name) that you want to use for system alert messages and other administrative notices.
17. If you want to enable FIPS (Federal Information Processing Standards) mode, select the checkbox. The default is disable FIPS mode.
18. Select the database that you want to use (Oracle, Microsoft SQL Server, DB2, or MySQL).
19. Select *This is an upgrade from a previous version*. You must select this option, as this is an upgrade.
20. If you want to generate an installation log, select *Verbose install*. The events that occur during the installation are recorded in *InstallSI.log* file. By default, the *Verbose install?* is not selected.
21. (Skip if using MySQL) At the *Apply database schema automatically?* check box in the **Select all options that apply to this installation** dialog box, decide whether to automatically or manually apply database definition language (DDL) statements:
 - To automatically apply DDL statements, select the check box (the default value).
 - To manually apply DDL statements, clear the check box.

If you manually create the database schema, you will have to run the installation command again after manually creating the schema. You will manually create the database schema using the sql files in the *\install_dir\install\repository\scripts* directory.

The application of DDL statements should be done in the same order when you select the check box at the *Apply database schema automatically?* prompt. You can find this order by referring to an installation log file of an installation where the check box was selected at the Apply database.

Apply the DDL statements manually and restart the installation procedure in a new installation directory. You can delete the installation directory created earlier. Clear the check box at the *Apply database schema automatically?* prompt. The installation process will continue and complete without any errors. The installation process will validate the database with a Sterling Integrator tool called DBVerify and warn you if there are issues.

22. Enter the database connection information.
 - Database user name.
 - Database password. You will need to enter the password twice.

- Database catalog name.
 - Database host name. In Oracle, do not use an IPv6 address for the hostname.
 - Database port.
 - (Oracle, Microsoft SQL Server, and MySQL) Absolute path and file name for one JDBC driver file.
 - (DB2 only) Absolute paths and file names for two JDBC driver files. Use the Type-4 JDBC driver. This type of driver converts JDBC calls into the network protocol used directly by DB2, allowing a direct call from the system to the DB2 server.
 - (Oracle only) Select the check box to select the data type to use for caching. Select either the default BLOB (binary large object) columns data type or the Long Raw data type. You can significantly improve performance by enabling the cache on the BLOB data object in Oracle. For more information, refer to the Sterling Integrator documentation for slow performance in Oracle.
23. Review and confirm the database information.
24. Review the default *Install Actions*. The following checkboxes are automatically selected and you can not clear them:
- Verify Operating System is supported
 - Verify the selected JDK is supported
 - Install Components
 - Save install files
 - Clean Up Files
 - Install Windows Services
25. If you want to *create a desktop icon* for launching Sterling Integrator, select the check box. By default, the check box is not selected.
- If you created a desktop icon and use Windows Servers 2008, you will need to perform the *Configure the Sterling Integrator Desktop Icon for Windows Server 2008* the procedure after the installation has been completed.
26. Click **Next** to continue.
- The Installation Progress screen appears. You can click **Show Details** to confirm your upgrade information before starting the installation.
27. Click **Install**.
- The Installation Progress screen shows the general progress of the installation through different stages. For more information about these stages, click **Show Details**. For more detailed information about the installation, refer to the `\install_dir\PreInstallSI.log` file.
- The installation completes automatically. When the installation is finished, the system displays a dialog box with the message Installation Wizard completed. Please see the installation guide for next steps.
- Installation information is in the following files:
- ant.install.log (in the *parent_install* directory)
 - InstallSI.log (in the `\install_dir\install` directory)
28. Determine if you need to apply any maintenance patches.
- Refer to *Maintenance (Patches and Hot-fixes)* for information on how to install the latest patch.

Silent Installation

The silent installation method automates part of the installation process and limits your manual interaction with the installation program. To use the silent installation method, you will need to first create a silent install file using a text editor (with a .txt file extension).

Create the Silent Installation File for an Upgrade (Windows)

The following entries correlate to prompts in the Install Using the GUI-Based method procedure. Create a silent installation file with the following variables:

Note: Special characters need to be preceded by a \ (backslash) esc character.

Entry	Description
ACCEPT_LICENSE	(Required) Indicates if the user accepts the license agreement. Default: YES
JVM_LOC	(Required) Full path to JDK directory.
LICENSE_FILE_PATH	(Required) Full path to a valid license file.
SI_LICENSE_AVAILABLE	(Optional) Indicates if a license is being passed in and is required for the installation. Default: YES
JCE_DIST_FILE	(Required) Full path to unlimited strength JCE policy file. If present, this file will overwrite the JCE file in the JDK.
INSTALL_DIR	(Required) Directory that includes the bin subdirectory (where many commands are stored) and the properties subdirectory (where many properties are stored). The INSTALL_DIR property cannot point to a pre-existing directory, or the installation will fail. It can include the following: <ul style="list-style-type: none">• The installation directory that you specify during an interactive installation.• The subdirectory "install".
INSTALL_IP	(Required) Host name or IP address. Valid values: <ul style="list-style-type: none">• localhost (default)• (your IP address or host name) If you are installing Sterling Integrator on VMware, provide the IP address of the virtual machine; not the IP address of the VMware host. For example, if 10.251.124.160 is the IP address of the VMware server and 10.251.124.156 is the IP address of the Window 2003 server it is hosting, you should use the 10.251.124.160 as the IP address to install the Sterling Integrator.

Entry	Description
	<p>Caution: Before applying an IPv6 address, see <i>IPv6 Capabilities</i> section in <i>System Requirements</i> guide.</p> <p>If you use an IPv6 address, use a fully qualified address that includes square brackets around the address, and a zero (0) between colons where there are no other numbers. For example, use [fe80:0:0:0:213:72ff:fe3c:21bf] instead of fe80::213:72ff:fe3c:21bf.</p> <p>If you are installing with IPv6 address, comment the Host Name mapping to IPv4 address and retain the mapping to IPv6 address in the host file located in \etc\sysconfig\networking\profiles\default\ hosts directory.</p> <p>You must install using a host name, not an IPv6 address, otherwise the Lightweight JDBC adapter and Graphical Process Modeler (GPM) will not work.</p>
PORT1	<p>(Required) Base port for ASI server. Ports are assigned consecutively from this port.</p> <p>Example: 12345</p> <p>Default: 8080</p>
APSERVER_PASS	<p>(Required) Passphrase used to secure all encrypted data in database.</p>
SI_ADMIN_MAIL_ADDR	<p>(Required) E-mail address for the administrative user.</p> <p>Example: abc@xyz.com</p>
SI_ADMIN_SMTP_HOST	<p>(Required) Valid SMTP host through which the system can e-mail the administrative user.</p> <p>Example: mail.xyz.com</p>
FIPS_MODE	<p>(Optional) Indicates if you are using FIPS (Federal Information Processing Standards) mode.</p> <p>Valid values:</p> <ul style="list-style-type: none"> • true - Enable FIPS mode. • false (default) - Disable FIPS mode.
DB_VENDOR	<p>(Required) Database vendor.</p> <p>Valid values:</p> <ul style="list-style-type: none"> • Oracle • MSSQL2005 (use this value for Microsoft SQL 2005 and 2008) • DB2 • MySQL (default)
DB_CREATE_SCHEMA	<p>(Required) Indicates if you want the database schema automatically created.</p> <p>Valid values:</p> <ul style="list-style-type: none"> • true (default) - Automatically create the schema. • false - Manually create the schema.

Entry	Description
	If you create the database schema manually, restart the installation procedure in a new installation directory. You can delete the installation directory created earlier.
DEBUG	(Optional) Records events that occur during the installation in InstallSI.log file. Valid values: <ul style="list-style-type: none"> • true - records events that occur during the installation. • false (default) - does not record the events that occur during installation.
DB_USER	(Required) Database user name.
DB_PASS	(Required) Database password.
DB_DATA	(Required) Database catalog name.
DB_HOST	(Required) Database host name. Default: localhost
DB_PORT	(Required) Database port.
DB_DRIVERS	(Required) Full path to JDBC driver files. If DB_VENDOR is: <ul style="list-style-type: none"> • Oracle, MSSQL, or MySQL, specify one driver. • DB2, specify two drivers. If you specify more than one driver, use colons (:) to separate the file names. Examples: <ul style="list-style-type: none"> • <code>JDBC_driver_dir\db2jdbc.jar</code> • <code>JDBC_driver_dir\db2_1_jdbc.jar:JDBC_driver_dir\db2_2_jdbc.jar</code>
UPGRADE	(Required if upgrading) Indicates if you are upgrading. Default: false
ORACLE_USE_BLOB	(Required if DB_VENDOR=Oracle) Indicates the data type to use for caching. <ul style="list-style-type: none"> • true (default) - BLOB (binary large object) • false - Long Raw
MSSQL2005	(Required for Microsoft SQL Server 2005) This attribute is case-sensitive. <ul style="list-style-type: none"> • Set this attribute to the default value of true. • (All other servers) Do not include this attribute.
JDK64BIT	Indicates if a 32-bit or 64-bit JDK is being used. Refer to the <i>System Requirements</i> to determine the type of JDK for your operating system. Valid values:

Entry	Description
	<ul style="list-style-type: none"> • true (default) - 64-bit • false - 32-bit
Icons	<p>(Required) Indicates whether to create a desktop icon for accessing Sterling Integrator.</p> <p>Valid values:</p> <ul style="list-style-type: none"> • true - Create a desktop icon. • false (default) - Do not create a desktop icon. <p>If you created a desktop icon and use Windows Servers 2008, you will need to perform the <i>Configure the Sterling Integrator Desktop Icon for Windows Server 2008</i> the procedure after the installation has been completed.</p>

The following entries do not directly correlate to prompts in the installation procedure. Use these entries to customize or document your installation.

Entry	Description
DB_DRIVERS_VERSION	<p>(Optional) Free form version string for JDBC driver. This is informational only.</p> <p>Example: 8_1_5</p>
LOAD_FACTORY_SETUP	<p>(Optional) Indicates whether factory setup should be loaded during installation. To manually set LOAD_FACTORY_SETUP to false after an installation where LOAD_FACTORY_SETUP=true (the default value), change LOAD_FACTORY_SETUP to false in sandbox.cfg file.</p> <p>Valid values:</p> <ul style="list-style-type: none"> • true (default).- loads factory setup during installation. • false - does not load factory setup during installation. Run loadDefaults command after installation.
CONFIG_GS	<p>(Optional) Indicates whether integration with Gentran Server should be configured.</p> <p>Default: No</p>
NO_DBVERIFY	<p>(Optional) Valid values are true or false. When set to true during installation and installservice, dbverify will not be run.</p> <p>This means that the Sterling Integrator will not generate DDL to make the database like the XML entity repository.</p>
JDBC_VENDOR	<p>JDBC driver vendor. Used when multiple vendors are available (DB2 iSeries: DB2APP, DB2TOOLBOX, DB2).</p> <p>Default: Microsoft</p>
DB_CLEAN	<p>Indicates if database should be wiped at the beginning of the installation.</p> <p>Default: no</p>

Example - Silent Installation File

The following is an example of a silent installation file. In this example, the database used is MYSQL.

```
INSTALL_DIR=E:\\install_dir\\install
PORT1=55400
LICENSE_FILE_PATH=E:\\Install\\depot\\Full_License_Dev.xml
#Install Properties
APSERVER_PASS=password
SI_LICENSE_AVAILABLE=YES
REINIT_DB=true
SI_ADMIN_MAIL_ADDR=myemail@myemail.com
SI_ADMIN_SMTP_HOST=installmachine
JAVA_DEBUG=0
ACCEPT_LICENSE=YES
JCE_DIST_FILE=E:\\Install\\depot\\1_6_0\\jce_policy-6.zip
FIPS_MODE=false
DB_CREATE_SCHEMA=true
JDK64BIT=true
JVM_LOC=E:\\jdk1.6.0_xx
INSTALL_IP=devb2bvm01
OS_WIN=true
##MSSQL
DB_USER=sysadmin
DB_DATA=dbdata_sysadmin
DB_PASS=passw05d
DB_HOST=dbhostname
DB_PORT=1433
DB_DRIVERS=E:\\Install\\depot\\MSSQL_3_0\\sqljdbc4.jar
DB_DRIVERS_VERSION=3_0
DB_VENDOR=MSSQL2005
MSSQL2005=TRUE
```

Upgrade Sterling Integrator Using a Silent Installation File (Windows Non-Cluster)

Before you begin:

- If you are using FTP to copy the files, verify that your session is set to binary mode.
- The directory path to SI.jar cannot include any spaces.
- *install_dir* refers to the installation directory where the software is installed

To upgrade Sterling Integrator using a silent installation file:

1. From the installation media, copy SI.jar to a Windows directory.
2. Set up your silent installation file and record the file location.
3. Start the upgrade using one of the following methods:

For Windows Server 2003 or earlier	For Windows Server 2008
<ul style="list-style-type: none">• From a command prompt (or from the Run dialog box), enter the following command:	<ul style="list-style-type: none">• Click Start.• Right-click Command Prompt and select Run as administrator.

For Windows Server 2003 or earlier	For Windows Server 2008
<pre>absolutePath\bin\java -Xmx512m -jar \absolutePath\SI.jar -f \absolutePath\SilentInstallFile</pre>	<p>The Administrator: Command Prompt dialog box is displayed.</p> <ul style="list-style-type: none"> Enter the following command: <pre>absolutePath\bin\java -Xmx512m -jar \absolutePath\SI.jar -f \absolutePath\SilentInstallFile</pre>

The upgrade begins. The program verifies support for your operating system and JDK. You can follow the progress of your installation through the InstallSI.log file. If the installation stops, check the InstallSI.log file for details.

- Determine if you need to apply any maintenance patches to the installation.
Refer to *Maintenance (Patches and Hot-fixes)* to see information on how to install the latest patch.

Configure the Sterling Integrator Desktop Icon for Windows Server 2008

User Access Control (UAC) is a security component in Windows Server 2008. If you enable the UAC, it affects the installation process and the daily processing for Sterling Integrator. If you disable the UAC, which requires a reboot, the installation process and daily processing for Sterling Integrator remains the same as in previously supported Windows version.

If you installed or upgraded the Sterling Integrator on a Windows Server 2008 and you created a desktop icon for Sterling Integrator, you must complete this task in order for the desktop icon to work.

- Right-click on the Sterling Integrator **desktop icon**.
- Click **Properties**.
- In the Shortcut tab, click **Advanced**.
- Select the check box for **Run as Administrator**.
- Click **OK** to apply the changes to Advanced Properties.
- Click **OK**.

Validate the Upgrade

Validate the Upgrade Checklist (Windows)

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

Number	Validate Installation Task	Completed
1	Start the Sterling Integrator in Windows.	
2	Access Sterling Integrator.	
3	Validate the Installation.	
4	Stop the Sterling Integrator.	

Start Sterling Integrator (Windows)

To start Sterling Integrator:

1. Double-click the Sterling Integrator icon on your Windows desktop.
2. Navigate to `\install_dir\install\bin` using one of the following methods:

For Windows Server 2003 or earlier	For Windows Server 2008
Open a command prompt window (from the Run dialog box).	Complete the following steps: <ul style="list-style-type: none">• Click Start.• Right-click Command Prompt and select Run as administrator. The Administrator: Command Prompt dialog box is displayed.

3. Enter `StartWindowsService.cmd`.

The final startup processes run, concluding with the following messages:

Open your Web browser to `http://host:port/dashboard`

where *host:port* is the IP address and port number on your system.

4. Record the URL address so that you can access Sterling Integrator.

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 Upgrade

Validate the upgrade 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 (Windows)

To stop Sterling Integrator in a Windows environment:

1. From the Administration Menu, select **Operations > System > Troubleshooter**.
2. Click **Stop the System** and wait for shutdown to complete.

Stop Sterling Integrator (Hardstop Windows)

To stop Sterling Integrator in a Windows environment:

1. Navigate to `\install_dir\install\bin` using one of the following methods:

For Windows Server 2003 or earlier	For Windows Server 2008
Open a command prompt window (from the Run dialog box).	Complete the following steps: <ul style="list-style-type: none">• Click Start.

For Windows Server 2003 or earlier	For Windows Server 2008
	<ul style="list-style-type: none">• Right-click Command Prompt and select Run as administrator. <p>The Administrator: Command Prompt dialog box is displayed.</p>

2. Enter `hardstop.cmd`.

You should receive a message that services have been stopped. Services include Noapps, Opsserver, WebDav, and Database-related service.

Post Upgrade Configuration and Testing

Post Upgrade Configuration and Testing Checklist (Windows Non-Cluster)

The upgrade is complete. You need to now perform some post upgrade procedures. Review all of the procedures in the checklist. Some procedures may not be required.

#	Post Upgrade Configuration and Testing Checklist	Your Notes
1	Determine if You Need to Apply a Maintenance Patch	
2	Change Default Passwords	
3	Disable Services	
4	Download Sterling Integrator Tools	
5	Determine if you need to make any changes to Network Interface Bindings	
6	Enable Business Processes	
7	Configure Property Files	
8	Add cdinterop Files	
9	Review the EDI Sequence Check Queue	
10	Configure Document File Systems	
11	Add Third-Party Libraries	
12	Configure Services and Adapters	
13	Configure File System Adapter and Command Line2 Adapters	
14	Configure Odette FTP Adapter	

#	Post Upgrade Configuration and Testing Checklist	Your Notes
15	Add Advanced File Transfer Tab	
16	Restore Performance Tuning Configuration	
17	Reconfigure Archive Settings	
18	Correct Missing Manager ID	
19	Test Business Process Functionality	
20	Restore customer_overrides.properties File	
21	Test Trading Partner Certificates	
22	Test Inbound and Outbound Communication Channels	
23	Test Disaster Recovery/Failover Scenarios	
24	Test Your Upgraded Operating System or Database	

Determine If You Need to Apply a Maintenance Patch (Windows)

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.

Note: 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.

Patch 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

Before you install the patch, review the following items:

- Preserve your custom changes to system resources.
- The patch installation may use one or more patch property override files. These files will be named *propertyFile_patch.properties*. Do not alter these files.
- Property changes made directly in *.properties or *.properties.in files may be overwritten during the patch installation. Properties overridden using the customer_overrides.properties file are not affected. Sterling Commerce recommends that you maintain property file changes using (when possible) the customer_overrides.properties file. For more information about this file, refer to the property file documentation.
- If you edited any of the cdinterop files, you must back them up before applying the patch. The cdinterop files do not have initialization (*.in) files. After applying the patch, use the backup version of the files in your patched installation. These files include the following files: cdinterop-proxy-records.properties; cdinterop-spoee-auth.properties; cdinterop-spoee-policy.properties; and cdinterop-user-records.properties.

- Information about the patch installation is automatically logged to `\install_dir\install\logs\InstallService.log`.
- If you need to rollback a patch, see the *Patch Change Report*.

Change Default Passwords

This upgrade changes the administrative password to the default password.

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

Disable Services

The upgrade process enables services that might have been disabled before the upgrade. If you want to disable these services again, you must disable them in after the upgrade process.

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.

Changes to Network Interface Bindings

To increase the security of the Administrator Console User Interface, the system only binds 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.

Update Property File for Network Interface Binding Changes

On the server where the system resides, edit the `noapp.properties.in` file.

1. Locate the **admin_host** parameter.

The default settings are:

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

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

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

2. Correct the parameters as necessary.
3. If no interface is being displayed, edit `hostname1` so that it correctly identifies the primary network interface that accesses the system.
4. If an additional network interface needs to access the system, add an additional `admin_host` entries.
For example: `admin_host.3 = hostname2`
5. Stop Sterling Integrator.
6. Navigate to the `install_dir`.
7. Navigate to the bin directory.
8. Run the `setupfiles.sh` (UNIX) or `setup.cmd` (Windows).
9. Start Sterling Integrator.

Update Dashboard for Network Interface Binding Changes

For the Dashboard user interface, the system provides unrestricted binding to network interfaces through the perimeter server. To restrict access to the Dashboard user interface, you can adjust property settings so that only one network interface accesses the system.

On the server where the system resides, edit the `perimeter.properties.in` file.

1. Locate the `localmode.interface` parameter. The default setting is unrestricted.
Unrestricted Setting (Default)
`localmode.interface=*`
2. To restrict access to the Dashboard, enter the network interface that you want to support.
Restricted Setting
`localmode.interface=hostname1`
3. Stop Sterling Integrator.
4. Navigate to the `install_dir`.
5. Navigate to the bin directory.
6. Run the `setupfiles.sh` (UNIX) or `setup.cmd` (Windows).
7. Start Sterling Integrator.

Enable Business Processes

During the upgrade process, your customized business processes are preserved, but they may not be the default business process. Review the business processes and enable the customized versions.

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:

- For UNIX, */install_dir/install/properties* directory
- For Windows, *\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
- Securing the Interop Servlet

Add cdinterop Files

During the upgrade, the cdinteropt files were replaced. Copy the customized version into the upgrade.

Review the EDI Sequence Check Queue

The EDI Sequence Check Queue is used for X12 and EDIFACT sequence and duplicate checking. You can check the contents of the queue through the UI (Trading Partner > Document Envelopes > EDI Sequence Check Queue). Any interchanges that are in the queue will not be able to be processed after upgrade because the EDI compliance report serialized format has changed.

If you installed the 5005 media or upgrade to 5005 and higher, the EDI Post Processor displays the following error:

```
The compliance report for interchange <interchange document ID> could not be
deserialized because the format has changed. The entry for this interchange should
be manually removed from the EDI Sequence Check Queue through the UI, and the
inbound deenvelope workflow should be rerun (WF ID <wfid>).
```

If you receive this error, you should follow the instructions in the error message to correct the situation.

Configure Document File Systems

If you use a File System as your document storage method, determine and record the path to the File System.

You will need the File System path structure so that after the upgrade, you can copy/mount the documents to the new installation directory. The directory structure (path to the File System) must be the same in the current and in the upgraded system.

Add Third-Party Libraries

If you added third-party libraries to configure adapters for the previous release, you need to add each of the libraries again after you complete the upgrade. See the documentation for each third party adapter you use.

Configure File System Adapter and Command Line2 Adapters (Windows)

You must configure your File System and Command Line2 adapters before you remove the previous release directory. Reconfigure any File System and Command Line2 adapters that were configured to use directories or scripts in the installation directory for the previous release. Ensure that you create new directories and save scripts outside of the current installation directory and edit each configuration to use the appropriate directories and scripts.

Consider the following:

- If you are using the Command Line2 adapter and have located the CLA2Client.jar file anywhere other than the default location, you must replace it with the new version. For information about the default location and how to start the Command Line2 adapter, see the *Command Line2 adapter*.
- If you are upgrading to Sterling Integrator 5.0 from a version lower than 4.0.1 and are using the Command Line2 adapter, you must update the version of the CLA2Client.jar file with the CLA2Client.jar located in the `\install_dir\install\client\cmdline2` directory. If you installed the CLA2Client.jar file anywhere other than the default location, you must replace each copy of the file with the new version. If you only installed it in the default location, the update occurs automatically during the upgrade process.
- If you are upgrading to Sterling Integrator 5.0 from a version prior to 4.0 and are using the Command Line adapter, you must update the version of the CLAClient.jar file with the CLA2Client.jar located in the `\install_dir\install\client\cmdline2` directory. If you installed the CLAClient.jar file anywhere other than the default location, you must replace each copy of the file with the new version. If you only installed it in the default location, the update occurs automatically during the upgrade process.

The CLA instances are now pointing to the CLA2 Service definition. After importing old service instances of CLA onto Sterling Integrator 5.0, you need to reconfigure the imported CLA services to re-set the Remote Name and Remote Port service configuration parameters. For more information, refer to the documentation for the Command Line Adapter and Command Line2 Adapter.

Configure Odette FTP Adapter

If you use the Odette FTP Adapter and are using the Partner Profile XML file version 2.00 used in Gentran Integration Suite 4.3, you must modify it to match the new Partner Profile version 3.00. To modify the XML file, refer to the following table:

Section	Name of Structure or Field	Action	Comment
Partner Profiles	<GeneralParameters> <PartnerProfileVersion>3.00 </PartnerProfileVersion> </GeneralParameters>	Use correct version label of the Partner Profile.	New Version label: 3.00
Physical Partner	Description	Add field and description content	Mandatory in OFTP Partner database
Physical Partner	SubMailbox	Add field, if used.	Optional
Physical Partner	<AuthenticationCertificate type = "..."> <Subject>string</Subject> <Issuer>string</Issuer> <Serial> Bignumber_string </Subject> </AuthenticationCertificate>	Add Structure, if used.	OFTP 2.0: Mandatory for security only. Structure may be repeated.
Physical Partner	<AuthenticationCertificate type ="Private Key"> <Subject>string</Subject> <Issuer>string</Issuer> <Serial>Bignumber_string </Subject> </AuthenticationCertificate>	Add Structure, if used.	OFTP 2.0: Mandatory for security only.
Physical Partner/ CAPI	DWindowSize	Delete field	
Physical Partner/ IP	IPFilter		Uses IPv4 or IPv6 addresses.
Physical Partner IP	SSL	Add field, if used.	OFTP 2.0: Mandatory for security only.
Physical Partner IP	CipherStrength	Add field, if used.	OFTP 2.0: Mandatory for security only.

Physical Partner IP	<SSLCertificate type = "..."> <Subject>string</Subject> <Issuer>string</Issuer> <Serial> Bignumber_string </Subject> </SSLCertificate>	Add structure, if used.	OFTP 2.0: Mandatory for security, only. Structure may be repeated.
Physical Partner Contract	Description	Add field and description content.	Mandatory in OFTP Partner database.
Physical Partner Contract	MultipleLoginSessions		Now used.
Physical Partner Contract	DuplicateFilePeriod	Rename DuplicateFileProcessingTestings To DuplicateFilePeriod	
Physical Partner Contract	SessionLogLevel	Add fields.	Optional
Physical Partner Contract	GroupNameList	Add fields, if used.	Optional
Physical Partner Contract	SecureAuthentication	Add fields.	OFTP 2.0: Mandatory
Physical Partner Contract	<TimeScheduleTable> ... <TimeScheduleTable>	Delete structure and create schedules in the Scheduler.	Initiator Business Process and Business Process user fields are still used.
Physical Partner Contract	OdetteFTPAPILevel	Rename OdetteAPILevel to OdetteFTPAPILevel	
Logical Partner	Description	Add field and description content.	Mandatory in OFTP Partner database.
Logical Partner	<FileServiceCertificate type = "..."> <Subject>string</Subject> <Issuer>string</Issuer> <Serial>string</Subject> </FileServiceCertificate>	Add structure, if used.	OFTP 2.0: Mandatory for security, only. Structure may be repeated.

Logical Partner Contract	Description	Add field and description content.	Mandatory in OFTP Partner database.
Logical Partner Contract	FileTransmissionRetries	Rename FileTransmitRetries to FileTransmissionRetries	
Logical Partner Contract	SignedEERPREquest	Add field, if used.	
Logical Partner Contract	EERP/NERPSignatureCheck	Add field, if used.	
Logical Partner Contract	File Signing	Add field, if used.	
Logical Partner Contract	File Encryption	Add field, if used.	
Logical Partner Contract	CipherSuite	Add field, if used.	
Logical Partner Contract	File Compression	Add field, if used.	
Logical Partner Contract	CharEncoding	Add field, if used.	
Logical Partner Contract	Receive VirtualFilenamePattern	Add field, if used.	
Logical Partner Contract	EERPTimeout	Rename WaitForEERP to EERPTimeout	
Logical Partner Contract	FileScheduleTimeout	Add field, if used.	
Logical Partner Contract	InboundBusinessProcess	Add field, if used.	Optional
Logical Partner Contract	InboundBusinessProcessUser	Add field, if used.	Optional, if no Inbound business process is specified.

After changing the Partner Profile for version 3.00, import the Partner Profile into the new Odette FTP Partner Profile database. For additional information, see Odette FTP Partner Profile.

Add Advanced File Transfer Tab

The Advanced File Transfer tab will not be enabled by default after an upgrade. If you have a license for Advanced File Transfer, perform the following steps to add the Advanced File Transfer tab:

1. Log in as **Admin**.
2. Click **Manage Layout**.
3. Click **Add Pane**.
4. Enter the following name: `Advanced File Transfer`
5. Click **Apply**.
6. Click the **customize** icon for the new **Advanced File Transfer** tab.
7. Click **Add Portlet**.
8. Select the Add box for **Advanced File Transfer Management**.
9. Click **Apply**.
10. Select **Clear Borders and Title** from the Decoration menu.
11. Click **Save and Apply**.

Reconfigure Archive Settings

The upgrade does not automatically reconfigure the archive configuration. You must reconfigure the Backup Directory setting in Archive Manager after an upgrade.

To reconfigure your Archive settings, use the following procedure:

1. From the **Administration Menu**, select **Operations > Archive Manager**.
2. Next to **Configure Archive Settings**, click **Go!**
3. If a message displays about the UI Lock, click **OK** to continue.
4. Click **Next**.
5. Update the Backup Directory field with the correct path information:
6. Click **Save**.
7. Confirm the settings and click **Finish**.

Correct Missing Manager IDs

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

Test Business Process Functionality

Once upgrade is complete many of the system business processes will work out of the box. Double check their functionality and ensure they work to completion without error. Also run any custom created Business Processes that came across from your previous version of the software. You may have to manually run the business processes if the schedules are not enabled. In order to test custom Business Processes, you may need to configure communication adapters or drop files to a pickup directory. The adapter configurations may need to be updated to reflect the new system and directories and those directories may need to be created. This will be apparent in any errors arising from testing the processes.

You can use the Business Process usage page to find business processes that ran or have failed. In addition, you can review the system logs to help you determine why a business process has failed or if any other errors are thrown by the application.

Restore customer_overrides.properties File

Copy the customer_overrides.properties file from */install_dir/install/properties* of the previous installation to */install_dir/install/properties* of upgrade.

Test Trading Partner Certificates

Many of the partner certificates from the older software version are still in place, and valid in the upgraded instance. If the upgrade is a new installation, then the certificates can be exported/imported using the resource manager. Do not use the certificate wizard to export certificates as this generates a new certificate, which will be invalid in an already configured Business Process. Some certificates will include a common name indicating the system on which it was generated. If the hostname/IP changes, it can cause problems with certificate usage since a partner expects the data to originate from a specific host indicated in the certificate.

Because of this, it's an essential practice to test all processes which involve certificates.

Test Inbound and Outbound Communication Channels

FTP, HTTP, and Connect Direct are examples of communication protocols which interact with the outside world. When application systems move over to new hardware, many network configurations need to change accordingly (for example, Perimeter Servers, Firewall Ports, End-To-End login and validation). All communication channels used in previous versions must be tested accordingly. This may involve contacting Trading Partners to send test data or simulating Trading Partner communication load internally from one system to another. It is important to test the simplest scenario first since many initial problems in communication are easily identifiable and may resolve communication issues not apparent in a complex process.

Test Disaster Recovery/Failover Scenarios

Disaster Recovery and Failover is an important aspect of any 24x7 application. The mindset should always encompass a "what-if" logic for worst case scenarios and plan accordingly. At a minimum, file system and Database backups should be performed on a regular basis. It is common for network issues to arise between

the application and the database or the outside world. This can be simply tested by disabling the network interface (unplugging or thru administrator tools). Consider the following questions:

- How does the system and any running Business Process's recover under these conditions?
- Is autorecovery turned on for your important Business Process's and do they run to completion?
- What occurs if you disable a particular adapter or you have a host file system issue?

Disaster recovery should be well tested for when failure problems occur. Alternate Sterling Integrator host and database hardware should be ready along with the proper IP Address licensing to use those systems. Sterling Integrator clusters are a good option, since they inherently handle nodes going offline for maintenance or in a disaster scenario.

Test Your Upgraded Operating System or Database

All Sterling Integrator installation environments should conform to the supported matrix which includes OS level, JDK version, and database server and driver versions. Many of these checks are done during installation or when the system is started. Do not ignore any warning message given about this subject since the system was only tested on those combinations. Review the System Requirements guide to make sure all OS or database level configurations are proper.

Monitoring of the overall system should be performed when running any kind of test and especially during performance testing. CPU utilization and file system performance can be easily observed using embedded OS tools (for example, top, iostat, netstat). Database Administrators should be on hand to observe any database issues (for example, excessive log writes, table scans, etc.).

Installation Maintenance

Installation Maintenance

From time to time, you will need to apply either a patch or a hotfix to your Sterling Integrator installation:

- 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. You should periodically check the web site to verify that you have the most recent patch.
- Hot-fix is one or more fixes applied to a specific existing patch.

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.

Determine If You Need to Apply a Maintenance Patch (Windows)

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.

Note: 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.

Patch 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

Before you install the patch, review the following items:

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

Install a Maintenance Patch (Windows)

To install the latest patch for Sterling Integrator in a Windows 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. If you are using a database other than MySQL, verify that the database server is up and ready to accept connections.
4. Stop Sterling Integrator.
5. Perform a full backup of the Sterling Integrator installation directory, including all subdirectories.
6. Perform a backup of the database.
7. 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.
8. Is the database password encrypted? If Yes, decrypt the password.
9. Close all command prompt windows.
10. To apply the patch:

For Windows Server 2003 or earlier	For Windows Server 2008
<p>From a command prompt or the Run dialog box, enter: C:\install_dir\install\bin\InstallService.cmd <path> \ si_<version>_sp_0_patch_<number>_<app_server>. jar</p> <p>Where:</p>	<p>Complete the following steps:</p> <ul style="list-style-type: none"> • Click Start. • Right-click Command Prompt and select Run as administrator.

For Windows Server 2003 or earlier	For Windows Server 2008
<ul style="list-style-type: none"> • <path> is fully qualified path to maintenance patch file • <version> is Sterling Integrator version • <number> is patch number • <app_server> is Application server <p>Example:</p> <pre>C:\install_dir\install\bin\InstallService.cmd \patch\si_22_sp_0_patch_1_jboss.jar</pre>	<p>The Administrator: Command Prompt dialog box is displayed.</p> <ul style="list-style-type: none"> • Enter: <pre>C:\install_dir\install\bin\InstallService.cmd <path>\si_<version>_sp_0_patch_<number>_<app_server>.jar</pre> <p>Where:</p> <ul style="list-style-type: none"> • <path> is fully qualified path to maintenance patch file • <version> is Sterling Integrator version • <number> is patch number • <app_server> is Application server <p>Example:</p> <pre>C:\install_dir\install\bin\InstallService.cmd \patch\si_22_sp_0_patch_1_jboss.jar</pre>

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.

The InstallService.cmd command stops the WebDAV server used for MESA Developer Studio. To restart the server, refer to the MESA Studio documentation.

11. Press **Enter** to continue.
12. If you want to accept the license agreement, enter **Y**.
13. Enter the passphrase.

Information about the patch is displayed. After the patch has been applied, the following message is displayed: **Deployment to application server successful**

14. If you decrypted the database password, re-encrypt the password.
15. Start Sterling Integrator.

If you are using a perimeter server in the DMZ, you will to review the information on apply a patch to the perimeter server.

Install a Hot-Fix (Windows)

After you install the 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 file name of the ccaseid.jar to install from Sterling Commerce Customer Support
- Created a full backup of the Sterling Integrator
- Created a full backup of your database
- Preserve your custom changes to system resources

To install a hot-fix:

1. Log in to the computer that you are installing the hot-fix on.
2. If the database password was encrypted, decrypt the password.
3. Enter `ftp theworld.stercomm.com`.
4. Enter your user name and password. If you do not know your user name and password, contact Sterling Commerce Customer Support.
5. Enter `bin` and press **Enter** to select **Binary** as your transfer mode.
6. At the FTP prompt, enter `get ccaseid.jar`, where *ccaseid* includes the ID number you received from Customer Support.
7. Stop the Sterling Integrator.
8. Navigate to `\install_dir\install\bin`.
9. To install the hotfix:

For Windows Server 2003 or earlier	For Windows Server 2008
From a command prompt or the Run dialog box, enter: <code>C:\install_dir\install\bin\InstallService.cmd absolutePath\ccaseid.jar</code>	Complete the following steps: <ul style="list-style-type: none"> • Click Start. • Right-click Command Prompt and select Run as administrator. The Administrator: Command Prompt dialog box is displayed. <ul style="list-style-type: none"> • Enter: <code>C:\install_dir\install\bin\InstallService.cmd absolutePath\ccaseid.jar</code>

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

10. If you decrypted the database password, re-encrypt the password.
11. Start the Sterling Integrator.
12. Navigate to `\install_dir\install\bin` using one of the following methods:

For Windows Server 2003 or earlier	For Windows Server 2008
Open a command prompt window (from the Run dialog box).	Complete the following steps: <ul style="list-style-type: none"> • Click Start. • Right-click Command Prompt and select Run as administrator. The Administrator: Command Prompt dialog box is displayed.

13. Run the `dump_info` command to verify that the hot-fix was successfully installed.

DB Checksum Tool

A checksum is a simple redundancy check used to detect errors in data. 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 (Windows)

To run the DB Checksum tool in the Windows environment:

1. Navigate to `\install_dir\bin` using one of the following methods:

For Windows Server 2003 or earlier	For Windows Server 2008
Open a command prompt window (from the Run dialog box).	Complete the following steps: <ul style="list-style-type: none">• Click Start.• Right-click Command Prompt and select Run as administrator. The Administrator: Command Prompt dialog box is displayed.

2. Enter

```
db_checksum_tool.cmd [-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.

Uninstall the Software

Uninstall the Sterling Integrator from a Windows Non-Cluster Environment

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

Additionally, you may perform the following tasks:

- Manually remove the JDK that was installed
- Manually remove any desktop tools that were downloaded
- Free any database space in Oracle, Microsoft SQL Server, or DB2 databases

To uninstall the Sterling Integrator from a Windows environment:

1. Stop the Sterling Integrator and wait for shutdown to complete. Use one of the following methods to stop the system:

For Windows Server 2003 or earlier	For Windows Server 2008
<ul style="list-style-type: none">• Open a command prompt window (from the Run dialog box).• Navigate to the <code>install_dir\install\bin</code> directory.• Enter <code>hardstop.cmd</code>	<p>Complete the following steps:</p> <ul style="list-style-type: none">• Click Start.• Right-click Command Prompt and select Run as administrator. <p>The Administrator: Command Prompt dialog box is displayed.</p> <ul style="list-style-type: none">• Navigate to the <code>install_dir\install\bin</code> directory.• Enter <code>hardstop.cmd</code>

If you begin removing files before all business processes and the system is stopped, you may be unable to remove the software successfully.

2. Back up the file system and database.

This step is optional. However, by backing up the file system and database, you are ensured that the Sterling Integrator is completely recoverable.

3. Remove the installation directory by entering the following command in the parent directory of your installation directory:

```
rm -rf install_dir
```

4. If you use an Oracle, Microsoft SQL Server, or DB2 database, these remain intact even after you remove the Sterling Integrator from the server. If you no longer want to reference the data, contact your database administrator about removing unwanted tables and recovering the database space where the Sterling Integrator used to reside.
5. Manually remove the JDK:
 - a) Navigate into the `_uninst` subdirectory of your JDK installation directory
 - b) Enter `uninstall.cmd`
6. After you remove the Sterling Integrator 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 EditorRefer to the *MESA Developer Studio* guide for information about removing MESA Developer Studio.
 - (If licensed) Reporting Services, which requires MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports.
Refer to the *MESA Developer Studio* guide for information about removing Reporting Services.

User Documentation

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/SI50/homepage.htm>

After you are in the documentation library, you can:

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

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

Troubleshooting Tips

Troubleshooting Tips for Windows Environment

Situation	Message or Symptom	Explanation/Resolution
Installing	You encounter errors or problems during installation.	<p>Explanation</p> <p>The installation creates several log files that you can use to diagnose problems like the failure of an installation.</p> <p>Resolution</p> <p>Examine the log files generated during installation:</p> <ul style="list-style-type: none"> • ant.install.log (in the <i>install_dir</i> directory) • <i>install_dir</i>\PreInstallSI.log
Installing	When you entered an absolute path during installation, a message indicated that the command was not found.	<p>Explanation</p> <p>You entered an incorrect path. Check the information entered.</p> <p>Resolution</p> <p>Enter the correct path.</p>
Installing	The license file cannot be found.	<p>Explanation</p> <ul style="list-style-type: none"> • You did not obtain the license file. • The license file is corrupt. • You downloaded the license file to a PC but have not moved it to the server. <p>Resolution</p> <p>You need to obtain the license file. If the license file resides on a PC, save the license file to the server.</p>
Installing a desktop tool or resource	Cannot download any of the following: <ul style="list-style-type: none"> • Map Editor and associated standards • Graphical Process Modeler • Web Template Designer 	<p>Explanation</p> <p>When you install the Sterling Integrator, system files are created that contain an internal IP address. If you install the Sterling Integrator behind a firewall, and your firewall is configured to accept an external IP address from a client computer, you may</p>

Situation	Message or Symptom	Explanation/Resolution
	<ul style="list-style-type: none"> • (If licensed) MESA Developer Studio plug-ins, including: <ul style="list-style-type: none"> • 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. 	<p>not be able to download the desktop tools and resources. The firewall will reject the internal IP address from a client residing outside of the firewall.</p> <p>Resolution</p> <p>Modify the system files that contain the invalid IP address. Follow these steps:</p> <ol style="list-style-type: none"> 1. Navigate to <code>\install_dir\install\bin</code>. 2. Stop the Sterling Integrator. 3. Enter the following command followed by the external IP address: <pre style="background-color: #f0f0f0; padding: 5px; margin: 5px 0;">patchJNLP.cmd external_IP_address</pre> 4. Restart the Sterling Integrator.
Cluster Installation	Cluster is not working properly and your machine is running dual-stack - ipv4 and ipv6.	<p>Explanation</p> <p>You can see the node went down from User Interface, but the node is running.</p> <p>Resolution</p> <ul style="list-style-type: none"> • Find the ipv6 address in the <code>/etc/hosts</code> file and update the <code>noapp.properties.in</code> file <code>admin_host.2 = <ipv6_address></code>. • Edit the <code>jgroups_cluster.properties.in</code> file and replace the <code>&HOST_NAME</code> with the ipv6 address string and change <code>mcast_addr=FFFF::239.255.166.17</code>. • Enter <code>setupfiles.cmd</code>.

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<http://www.sterlingcommerce.com/Documentation/SI50/CopyrightPage.htm>

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