

Sterling Integrator[®]

UNIX/Linux Non-Cluster Upgrade

Version 5.0.05

Sterling Commerce
An IBM Company

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Chapter 1

Upgrade Overview: UNIX/Linux Non-Cluster Environment

Introduction

This document provides information on performing an upgrade in a UNIX/Linux non-cluster (single node) environment to Version 5.0.05. 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) database of your current installation. If you use MySQL, see the *MySQL Upgrade Impacts* on page 31.
- ◆ 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

This guide provides the following upgrade information:

- ◆ Upgrade Path Scenarios
- ◆ Upgrade Planning Information
- ◆ Prepare Your Current System for Upgrade
- ◆ Upgrade Impacts for MySQL
- ◆ Pre-Upgrade Checklist

- ◆ Upgrade the Software (GUI, Text, Silent Install)
- ◆ Validate the Upgrade
- ◆ Post Upgrade Configuration and Testing
- ◆ Post Upgrade Maintenance
- ◆ Uninstall the Software
- ◆ User Documentation
- ◆ Troubleshooting Tips

Prerequisite Knowledge

Before you begin the upgrade, you should be knowledgeable on the following topics:

- ◆ Application servers
- ◆ UNIX or Linux Operating System
- ◆ Database administration
- ◆ VI or another text editor
- ◆ System Requirements for this release of Sterling Integrator

Intended Audience

This document is intended for use by:

- ◆ System Administrators
- ◆ Installation Engineers
- ◆ Database Administrators

Assumption 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 Path Scenarios for Sterling Integrator 5.0

[Keep these general scenarios in mind as you plan for your upgrade.](#)

Scenario	Example	Upgrade Processes includes:
Operating system and the database are the same between the current Gentran Integration Suite version and Sterling Integrator 5.0	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).	<ol style="list-style-type: none"> 1. Export the configuration data and backup the database. 2. Upgrade to Sterling Integrator 5.0.
Database upgrade is needed before the upgrade to Sterling Integrator 5.0 , when the current Gentran Integration Suite database version is not supported by Sterling Integrator 5.0 .	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).	<ol style="list-style-type: none"> 1. Export the configuration data and backup the database. 2. With help from a database administrator (DBA), copy the database to DB2 9.2. 3. Backup the newly created database. 4. 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 .	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)	<ol style="list-style-type: none"> 1. Export the configuration data and backup the database. 2. Upgrade to Sterling Integrator 5.0 on the RH EL 5.0 machine while pointing to Oracle.

Supporting Information and Detailed Procedures

Upgrade 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. Apply the GDR2 hotfix. You can download it from <http://support.microsoft.com/kb/934459/>.

The Microsoft SQL Server 2005 version is now 9.00.3159.

Upgrade Planning Information

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 the upgrade impacts for MySQL
- ◆ Review and record system configuration information.
- ◆ Review and record performance and tuning information.
- ◆ Review the *Best Practices for Upgrade Testing* on page 14.
- ◆ Review the *Planning Your Maintenance Window and Production Upgrade* on page 14.

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 `si_install.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 `si_install.log` to document the error. If you later get past the original problem causing the upgrade to error, notify 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.

Upgrade Planning Checklist

To assist you with your upgrade planning, review the following planning checklist:

Upgrade Planning Checklist	Your Notes
<p>Read through this entire document so that you have a clear understanding of what the upgrade requires.</p>	
<p>Download and review the following information from the Sterling Commerce Customer Center, Documentation library: http://www.sterlingcommerce.com/Documentation/SI50/homepage.htm</p> <ul style="list-style-type: none"> ◆ <i>System Requirements</i> - With each release, Sterling Commerce introduces leading edge technology to improve and enhance its software. Review the <i>System Requirements</i> to confirm that your system and databases meet the requirements for this release. ◆ <i>Release Notes</i> - Review the release notes to obtain information about issues and resolutions which have been identified for this release of Sterling Integrator. ◆ <i>What's New in this Release</i> - Review this guide to find out about new features and functionality provided in this release of Sterling Integrator. 	
<p>Review the Support Center Knowledgebase and search for any information on upgrade issues.</p>	
<p>Collect information on third-party libraries used for adapter configurations that were added to your current release. You will need to add each of these libraries to the upgraded system.</p>	
<p>Locate any configuration file changes for JDBC adapter or Lightweight JDBC adapter in your current release. You will need to copy these changes to the upgraded system.</p>	
<p>Record your performance tuning configuration. You will need to restore these settings after the system has been upgraded.</p>	
<p>Review and note the adapters, business processes, and other configurations in your current release. This information will help you identify the need for updating transport messages, third-party adapters, or configurations to adapters, such as File System or Command Line adapters.</p>	
<p>Determine if you have edited any of the pre-defined business processes. The upgrade process overwrites pre-defined business processes. Your customized business processes are preserved in the system, but they are not the default business process after the upgrade.</p>	

Upgrade Planning Checklist	Your Notes
<p>Determine if you have edited any of the property files (.properties or .properties.in). Your previous property file edits might not be applicable in Sterling Integrator 5.0.</p>	
<p>Determine if you have a customer_overrides.properties file. Since the upgrade process installs a new installation directory, non-system property files need to be moved to the new installation directory. For example, make a backup copy of the customer_overrides.properties file before upgrading. Then, copy it to the newly upgraded installation after the upgrade program completes.</p>	
<p>Determine if you edited any of the following cdinterop files:</p> <ul style="list-style-type: none"> ◆ cdinterop-proxy-records.properties ◆ cdinterop-spoee-auth.properties ◆ cdinterop-spoee-policy.properties ◆ cdinterop-user-records.properties <p>You must back them up before upgrading. The cdinterop files do not have initialization (*.in) files. After the upgrade, use the backup version of the files in your upgraded installation.</p>	
<p>Determine if you have LDAP (Lightweight Directory Access Protocol) configuration information in the security.properties file. This information will automatically be moved to the authentication_policy.properties file.</p>	
<p>Determine whether Sterling Integrator is using an application server (JBoss™, WebLogic® or WebSphere®). Sterling Integrator does not require an application server for installation or at runtime. Sterling Integrator supports integration with JBoss and WebLogic during the installation. You can also integrate with WebSphere, JBoss, or WebLogic after installing version 5.0 by using the Sterling Integrator EJB Adapter. This does not represent a WebLogic server for deploying the Application Console.</p>	
<p>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.</p>	

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 DBS versions have you tested the new configuration?

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)

Supporting Information and Detailed Procedures

Access the Sterling Integrator Knowledgebase

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

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**.

Prepare Your Current System for the Upgrade

Preparing Your Current System for the Upgrade

Review and complete each of the following checklists:

- ◆ *Prepare Your System for the Upgrade Checklist* on page 15
- ◆ *Prepare Your Database Upgrade Checklist* on page 17
- ◆ *Verify Your Operating System Upgrade Checklist* on page 18

Prepare Your System for the Upgrade Checklist

System Checklist for Upgrades	Your notes
<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 operating system◆ Version of the JDK◆ JDK Patches◆ JCE (entire package)◆ Absolute path to the JDK files and patches◆ Database must match versions listed in the System 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>	

System Checklist for Upgrades	Your notes
<p>Review your current system to determine if you need to apply a patch prior to upgrading. The following are the minimum patch levels for upgrading to this release:</p> <ul style="list-style-type: none"> ◆ Release 4.0 - Patch 4.0.3-5 ◆ Release 4.1.1 - Base installation ◆ Release 4.2 - Base installation ◆ Release 4.3 - Base installation 	
<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>	
<p>If you are using a non-English environment, confirm that you are using the appropriate character set.</p>	
<p>Obtain the most recent upgrade media from the Sterling Commerce Customer Center.</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>	
<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 backup Sterling Integrator and the database.</p>	
<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>	
<p>Purge any unneeded data.</p>	
<p>Export any custom business objects that you have determined can not be upgraded. These may include business processes, service configurations, trading partners, maps, etc.</p> <p>The exported business objects can be imported into the upgraded system if you need them.</p>	
<p>Determine if you have any incompatible data that needs to be modified or deleted.</p> <p>This is an optional task. 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>	

System Checklist for Upgrades	Your notes
<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>	
<p>Create an process output log.</p>	
<p>Obtain and install the license file to use the new licensed features in this release.</p>	
<p>Disable the virus protection software on the server.</p> <p>If the virus protection software is enabled, the upgrade will fail.</p>	

Prepare Your Database Upgrade Checklist

Database Upgrade Checklist	Your Notes
<p>Copy the Microsoft SQL Server 2000 Database to an SQL Server 2005 Database.</p>	
<p>If you are using Oracle 8i with Sterling Integrator 4.0, upgrade to Oracle 9i before upgrading to Sterling Integrator 5.0.</p>	
<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>	
<p>If you are using MySQL and are moving to a new MySQL version, you will need to export the data from the previous version of MySQL and import it into the newer version of MySQL.</p> <p>If you are moving from a MySQL version prior to 5.0 (for example 4.3), you will need to rename the SCHEMAS table to XMLSCHEMAS prior to the export or the export will fail, due to a reserved word error.</p> <p>When you copy your database, if you encounter <i>Data Overflow</i> or <i>Invalid Time Format</i> errors while copying the WORKFLOW_CONTEXT table, run this query:</p> <pre>UPDATE WORKFLOW_CONTEXT SET ENTERQ = NULL, EXITQ = NULL where ENTERQ IS NOT NULL OR EXITQ IS NOT NULL</pre>	

Verify Your Operating System Upgrade Checklist

Before you begin the upgrade, you need to verify your operating system configuration, by using the following checklist:

Operating System	Operating System Upgrade Checklist	Your Notes
HP-UX Operating System	<p>Verify these settings:</p> <ul style="list-style-type: none"> ◆ Verify kernel parameters and establish the following minimum settings by running <code>kctune</code> command: <pre>kctune max_thread_proc 1024 kctune maxdsiz 2147483648 kctune maxdsiz_64bit 8589934592 kctune maxssiz 369098752 kctune maxssiz_64bit 536870912</pre> ◆ Run <code>ulimit</code> utility, verify, and establish the following minimum settings: <pre>ulimit -d = 2097152 (in kilobytes) or higher ulimit -s = 360448 (in kilobytes) or higher</pre> 	
AIX Operating System	<p>You must specify the name of the directory to be created for the Sterling Integrator. The upgrade process creates the directory and beneath it, a directory called "install".</p> <p>To ensure that <code>/install_dir/install</code> has the necessary permissions, AIX users must run the following command on the parent directory of <code>/install_dir/install</code> before installation:</p> <pre>chmod -R a-s <absolute path>/install_dir_parent</pre> <p>where <code>install_dir_parent</code> is the directory in which <code>/install_dir/install</code> will be created.</p> <p>For example, to specify <code>AIX_1/applications/test1/my_install</code> as your installation directory, you could run the command from the <code>AIX_1/applications</code> directory (directly above the <code>test1</code> directory):</p> <pre>chmod -R a-s test1</pre> <p>or from another location on the file system:</p> <pre>chmod -R a-s /AIX_1/applications/test1</pre> <p>This ensures that when the <code>my_install</code> directory is created during installation, it inherits the correct permissions from <code>test1</code>.</p>	

Operating System	Operating System Upgrade Checklist	Your Notes
Linux Operating System	<p>You need to disable SELinux. Enter:</p> <pre data-bbox="396 363 719 417">/etc/sysconfig/selinux: SELINUX=disabled</pre> <p>Ensure that <code>/etc/hosts</code> has short-names first for all entries. For example, 127.0.0.1localhostlocalhost.localdomain</p> <p>Make the following system change:</p> <ol style="list-style-type: none"> 1. If the base locale for the system is English, edit the <code>/etc/sysconfig/i18n</code> file by changing the LANG variable from <code>en_US.utf8</code> to <code>en_US</code>. Save and close the <code>/etc/sysconfig/i18n</code> file. 2 Reboot the system. 	
RedHat Enterprise Linux Operating System	<p>Make the following system changes:</p> <ol style="list-style-type: none"> 1. If the base locale for the system is English, edit the <code>/etc/sysconfig/i18n</code> file by changing the SUPPORTED variable from <code>en_US.utf8</code> to <code>en_US</code>. You can also allow multiple support using the following format: <code>en_US.utf8:en_US</code> Save and close the <code>/etc/sysconfig/i18n</code> file. 2. Edit the <code>/etc/security/limits.conf</code> file by adding the following lines: <pre data-bbox="431 1150 829 1451">* hard nofile 8196 * soft nofile 4096 * hard memlock 3000000 * soft memlock 3000000 * hard nproc 16000 * soft nproc 16000 * hard stack 512000 * soft stack 512000</pre> <p>This updates the system ulimits.</p> <p>Note: For <code>nofile</code>, the recommended value is unlimited.</p> 3. Save and close the <code>/etc/security/limits.conf</code> file. 4. Reboot the system. 	

Operating System	Operating System Upgrade Checklist	Your Notes
Solaris Operating System	<ul style="list-style-type: none"> ◆ Set the following entries in the /etc/security/limits file: <pre style="margin-left: 20px;">nfiles = 4096 (recommended value is unlimited) set rlim_fd_max=4096 (limit is 65535) - hard limit set rlim_fd_cur=4096 - soft limit</pre> ◆ To make the setting effective as the hard limit, reboot the server or run the following command: <pre style="margin-left: 20px;">kill -1 inetd</pre> ◆ To make the setting effective as the soft limit, use the parent shell configuration (for example, .profile). Then, reboot the server. 	

Prepare Your System Supporting Information and Detailed Procedures

Verify Your System Meets Hardware and Software Requirements

Verify that your system meets the hardware and software requirements specified for this release in the System Requirements. The following system requirements are strictly enforced:

- ◆ Operating system version must match requirement exactly.
- ◆ The minimum patch level for the operating system is enforced, but you can apply higher patch levels.
- ◆ JDK version must match requirement exactly.
- ◆ JCE (entire package, not just the Localpolicy.jar by itself).
- ◆ The disk space is a minimum for the installation. The system should be separately sized to handle whatever load is going to be put on the system.
- ◆ Database must match versions listed in requirements.
- ◆ JDBC driver version, supports exact matches and wildcard matches.

If any of the above requirements are not met, the upgrade will fail and print/log a report of all items that were non-compliant.

Review the EDI Sequence Check Queue

The EDI Sequence Check Queue is used for X12 and EDIFACT sequence and duplicate checking. Before you begin the upgrade, you should 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 processed after upgrade because the EDI compliance report serialized format has changed.

After the upgrade, 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 develope 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.

JCE Distribution File

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

You must obtain the entire JCE (all the zip folders, whether you are using the SUN or IBM JCE). You can not choose the Localpolicy.jar by itself.

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

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

Obtain the JCE Distribution File for Solaris and HP-UX

To obtain JCE that matches for JDK for Sun (Solaris) and HP-UX:

1. Open your browser and navigate to <http://java.sun.com/javase/downloads/index.jsp>.
2. At the bottom of the page, locate *Java Cryptography Extension (JCE) Unlimited Strength Jurisdiction Policy Files*.
3. Click the appropriate link to start the download.
4. Save the file to your system.
5. Record the directory and the zip file name. You will need this information during the installation process.

Obtain the JCE Distribution File for AIX and LINUX

To obtain this file for the IBM JDK 1.5 (AIX, Linux):

1. Open your browser and navigate to <https://www14.software.ibm.com/webapp/iwm/web/reg/pick.do?source=jcesdk>.
2. Enter your **IBM ID** and **password**. If you do not have an IBM ID, follow the IBM registration instructions provided on the Sign In page.

3. Click **Submit**.
4. Select *Unrestricted JCE Policy files for SDK 1.4.2* and click **Continue**.
Note: The Unrestricted JCE Policy files for the 1.4.2 SDK are also used for the 1.5.0 SDK.
5. Review your personal information and the license agreement.
 Select **I agree** check box and click **I confirm** to continue.
6. Download the *unrestrict142.zip* file to your system.

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

Install the JDBC Driver in SQL Server

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

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 enter 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 enter 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.

Obtain Upgrade Media for Sterling Integrator 5.0

To obtain the most recent version of upgrade media:

1. Go to <https://customer.sterlingcommerce.com>.
2. Enter your **User Name** and **Password**.
3. Click **Support Center**.
4. Under **Product Support**, select **Sterling Integrator > Product Updates & Downloads**.
5. Under the **Upgrading Sterling Integrator/GIS**, select **Request Upgrade Jar File - Sterling Integrator Version 5.0**.

6. Enter the following information for a 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
7. Select the adapter which you are running from the list.
8. Add any additional comments.
9. Click **Submit**.

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

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 delete 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. Review the list 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
- ◆ MBIAAdd
- ◆ MBIDocView
- ◆ MBIExtract
- ◆ MBIPathList
- ◆ MBIQuery
- ◆ MBIRollBackExtract
- ◆ MBISearch
- ◆ MBISelfRegistration
- ◆ Purge
- ◆ PurgeAll
- ◆ Recover.bpml
- ◆ Restore
- ◆ RestoreService
- ◆ Schedule_AssociateBPsToDocs
- ◆ Schedule_AutoTerminateService
- ◆ Schedule_BackupService
- ◆ Schedule_BPEpirator
- ◆ 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_ProducedMsgPurgeService
- ◆ Schedule_PurgeService
- ◆ Schedule_RetentionProcessor
- ◆ Schedule_Scheduled_AlertService
- ◆ SMTPNotification
- ◆ TimeoutEvent

Create a 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).

To create a process output log, do the following:

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`, enter `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 Database

This is an optional procedure. It is the customer's responsibility to perform this procedure. Sterling Commerce Customer Support can not 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 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.
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 (i.e., `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
```

License File

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

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

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

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

Obtain a License File

To extend your temporary key, obtain the permanent key, or request changes to a permanent key you already have:

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.

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 file 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) when Sterling Integrator is running.

Upgrade Impacts for MySQL

MySQL Upgrade Impacts

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 database. Be sure to install the correct version and patches. See <i>System Requirements</i> for supported version information.	
2	New external database	Update the MySQL Parameters.	
3	New external database	Create the database. For example, you can run the following command to create the database: <code>CREATE DATABASE database_name</code> Refer to MySQL documentation for information about creating the database.	
4	New external database	Create a user account and grant permissions.	
5	New external database	Install the JDBC Driver for MySQL.	
6	Previous database	Rename the SCHEMAS table to XMLSCHEMAS to avoid reserved word collision: <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	Perform a MySQL database export. As part of the export, you will have a backup copy of the database.	
8	Previous database	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. Use the following command: <code>Alter table XMLSCHEMAS rename to SCHEMAS</code>	
9	New external database	Import the exported data for MYSQL into the new external database.	

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

Parameter	Value
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:

1. 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 Checklist

Information Gathering Checklist for Upgrades

Before you start the upgrade you should review the information in the Information Gathering Checklist. This checklist contains all of the information that you to have while running the upgrade scripts. Supporting information for topics and tasks are included at the end of this chapter. You may want to make a copy of the following checklist and use it to record the information you collect:

#	Information Gathering Checklist for Upgrades	Your Notes
1	Determine which upgrade method you are going to use: <ul style="list-style-type: none"> ◆ GUI-based ◆ Text-based ◆ Silent File 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	Decide if you are going to manually or automatically apply Database Definition Language (DDL) Statements (schema) to the database. This only applies to Oracle, SQL Server 2005, or DB2 databases.	
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>plsql_native_library_dir</code> parameter.	
5	Determine if you are going to use FIPS (Federal Information Processing Standards) mode.	
6	Record the Hostname on which you plan to install Sterling Integrator.	

#	Information Gathering Checklist for Upgrades	Your Notes
7	Record the Directory Name where you plan to install Sterling Integrator.	
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 to which system alert messages are sent	
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, determine if you are using BLOB or Long Raw for the data type. Record the data type.	
26	Record the Path and file name for the JDBC Driver (Oracle, Microsoft SQL Server 2005, and MySQL).	
27	For DB2 only, record the Absolute paths and file names for two JDBC drivers.	

Supporting Information and Detailed Procedures

Security Certificates

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

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

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

Port Numbers

During installation, you are prompted to specify the initial port number for Sterling Integrator.

To specify an initial port number, follow these guidelines:

- ◆ Sterling Integrator requires a range of 100 consecutive open ports between 1025 and 65535.
- ◆ The initial port number represents the beginning port number in the range.
- ◆ The port range starts with the initial port number and ends with the number that equals the initial port number plus 100. For example, if you specify 10100, then you need to make sure that 10100 through 10199 are not used by any other applications on your system.

For the other ports after the initial port, you can accept the default port number suggested by the installation program, or you can individually re-assign pre-assigned default port numbers within the specified port range. During installation, about 50 default ports are pre-assigned for different services. For example, if you do not want `xxx32` (10132) to be a default port, you could assign that port to `xxx97` or another number within the port range.

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

UNIX Accounts

In a UNIX or Linux environment, you must create a UNIX administrative account on the host server for each installation of Sterling Integrator. For example, if you want to create a test environment and a production environment, you need to create two UNIX accounts on the host server, one for the test and one for the production environment. For more information about creating UNIX accounts, see your operating system documentation.

Database Definition Language (DDL) Statements

When you install Sterling Integrator, you can manually apply database definition language (DDL) statements to your database tables (only for Oracle, SQL Server 2005, and DB2) instead of requiring the installation process to do it directly. This enables you to apply DDL statements for database creation separately from the installation. If you do not choose to manually apply the DDL, the installation will apply both the DDL and the resources. The DDLs generated for one database vendor will be different from another.

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

The DDLs generated for Oracle are:

- ◆ EFrame_IndexAdds.sql
- ◆ EFrame_Sequence.sql
- ◆ EFrame_TableChanges.sql

The DDLs generated for DB2 are:

- ◆ EFrame_TableChanges.sql
- ◆ EFrame_IndexAdds.sql

The DDLs generated for MS SQL 2005 are:

- ◆ EFrame_TableChanges.sql
- ◆ EFrame_IndexDrops.sql
- ◆ EFrame_IndexAdds.sql

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. For more information, refer to the utilities configuration documentation.

The application of DDLs should be done in the same order as 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 schema automatically?* prompt.

Apply the DDL statements manually and restart the upgrade 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 upgrade process will continue and complete without any errors. The upgrade process will validate the database with a Sterling Integrator tool called DBVerify and warn you if there are issues, and will exit the installation.

Determine Data Type for Oracle in UNIX

To determine the data type for Oracle in UNIX:

1. Navigate to the directory where the property files reside.
2. Enter:

```
grep BLOB $install_dir/properties/sandbox.cfg
```

- ◆ If ORACLE_USE_BLOB=true is returned, you are using BLOB
- ◆ If ORACLE_USE_BLOB=false or nothing is returned, you are using Long Raw

Upgrade the Software

Introduction

Use one of the following methods to upgrade your system:

- ◆ GUI-Based method
- ◆ Text-Based method
- ◆ Silent Installation method

General UNIX/Linux Information

The following are some general installation guidelines:

- ◆ If you are on Linux, do not use any soft/symbolic links in the path to the SCInstallWizard.jar file.
- ◆ If you are using FTP to copy the files, verify that your session is set to binary mode.
- ◆ If you are using AIX with the DB2 database, the directory path can not be longer than 108 bytes.
- ◆ The directory path to SI.jar can not include any spaces.

General Installation Wizard Information

The installation wizard provides:

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

IPv6 Guidelines

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

Consider the following guidelines:

- ◆ 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**.
- ◆ If you are installing Sterling Integrator 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.
- ◆ You must install using a host name, not an IPv6 address, otherwise the Lightweight JDBC adapter and Graphical Process Modeler (GPM) will not work.
- ◆ If you are using an Oracle database, do not use an IP v6 address for the host name.

Upgrade Using GUI-Based Method

Before you begin:

- ◆ You should have completed the *Information Gathering Checklist for Upgrades* on page 36.
- ◆ The license file must reside on the host machine on which the application is being upgraded. If you saved the license file to a Windows client, transfer the license file to the host.
- ◆ This upgrade changes the administrative password to the default password. After the upgrade, change the password back to the administrative password to minimize security risks. This is the Admin password for logging into the UI (`/dashboard` or `/ws`).
- ◆ `install_dir` refers to the installation directory where the new software will be 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. You should create a new installation directory before you begin the upgrade.
- ◆ `parent_install` is the directory one level above the `install_dir` directory.
- ◆ Ensure that the `parent_install` directory has the proper permissions set using the `chmod` command.
- ◆ If you are installing Sterling Integrator on VMware, provide the IP address of the virtual machine; not of the IP address 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 Window 2003 server it is hosting, you should use the 10.251.124.160 as the IP address to install Sterling Integrator.

To upgrade Sterling Integrator, refer to your pre-upgrade checklist and perform these steps:

1. From the upgrade media, copy `SCIInstallWizard.jar` and `SI.jar` to a UNIX/Linux directory.
2. Log in to a Windows machine.
 - a. Start X server in your UNIX/Linux server using an X Windows client tool.
 - b. Log in to your UNIX/Linux environment.

- c. Set the display to use your server as a client using the following command:

```
export DISPLAY=server:0.0
```

3. Navigate to your working directory. For example, `cd parent_install`.

4. Enter:

```
/path_to_java/bin/java -jar /absolutePath/SCIInstallWizard.jar
```

The program verifies support for your operating system and JDK. It also verifies that your operating system is patched to the required level.

The installation wizard is displayed.

5. Click **Next** to start the installation wizard.
6. Review the **License conditions** and click **Accept** to accept the terms.
7. Enter the full path to the **JDK directory**.
8. Enter the full path to the **license file**.
9. Enter the full path to the **unlimited strength JCE policy** file.
10. Enter the path to **installation directory** where you want to install the upgrade software. If the new installation directory does not exist, click **Yes** at the prompt *The directory does not exist, create it?* The installer creates the directory. This directory is referred to as *install_dir* in subsequent prompts.
- Below the installation directory, the installer creates a directory named **install**. This directory contains the installation files.
11. Enter the path to the Sterling Integrator **install jar** file.
12. Enter the explicit **IP address** or **Hostname** for the server or use the default value of localhost.
13. Enter the **Initial Port** number or use the default value of 8080.
- 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.
14. Enter your **system passphrase**.
15. Re-enter the **system passphrase**.
16. Enter the **e-mail address** to which you want system alert messages sent.
17. Enter the **SMTP Mail Server** (IP address or host name) that you want to use for system alert messages and other administrative notices.
18. If you want to enable **FIPS** (Federal Information Processing Standards) mode, select the checkbox. The default is FIPS mode is disabled.
19. Select the database that you want to use (Oracle, Microsoft SQL Server 2005, DB2, or MySQL). Default is MySQL.
20. Select *This installation is an upgrade from a prior version*. Default is the check box is not selected (new install).
21. (Skip if using MySQL) If you do not want to *Apply database schema automatically*, clear the checkbox. The default is to automatically apply DDL statements. 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.

22. If you want to generate an installation log for debugging information, select the *Verbose install*. The events that occur during the installation are recorded in `InstallSI.log` file. Default - the check box is not selected.
23. Enter the database connection information:
 - ◆ Database user name
 - ◆ Database password (and confirmation of password)
 - ◆ Database catalog name
 - ◆ Database host name
 - ◆ Database port
 - ◆ (Oracle, Microsoft SQL Server 2005, and MySQL) 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 Sterling Integrator 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.
24. Review and confirm the **Database Information**.
25. Review the default **Install Actions**. The following checkboxes are automatically selected for an upgrade. You can not clear them.
 - ◆ *Verify Operating System is supported*
 - ◆ *Verify the selected JDK is supported*
 - ◆ *Install Components*
 - ◆ *Save install files*
 - ◆ *Clean Up Files*
26. Select the appropriate **JDK**. Default is 64-bit JDK.
27. If you want to create a desktop icon for launching Sterling Integrator, select the check box. Default - check box is not selected.

The **Installation Progress** screen appears.

You can click the **Show Details** button to confirm your installation information before starting the installation.

28. Click **Install** to finish the upgrade.

The **Installation Progress** screen shows the general progress of the installation through different stages. For more information about these stages, click the **Show Details** button.

For more detailed information about the installation, refer to the */install_dir/PreInstallSI.log* file. If the installation stops, check the *PreInstallSI.log* file for details. 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 *install_dir* directory)
- ◆ *InstallSI.log* (in the *install_dir/install* directory)

29. Start Sterling Integrator.

It might take several minutes for the Sterling Integrator components to initialize and start up.

If the Sterling Integrator does not start or if you receive a message about an invalid or corrupt license file, go to *Troubleshooting Tips* on page 81.

When startup is finished, a message like the following is displayed:

Open your Web browser to <http://host:port/admin/?module=platform>

host is the IP address, *port* is where Sterling Integrator resides on your system.

30. After performing the upgrade, refer to *Post Upgrade Maintenance* on page 70 to install the latest patch.

Upgrade Using the Text-Based Method

Before you begin:

- ◆ You should have completed the *Information Gathering Checklist for Upgrades* on page 36.
- ◆ If you are installing Sterling Integrator on VMware, provide the IP address of the virtual machine; not of the IP address 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 Window 2003 server it is hosting, you should use the 10.251.124.160 as the IP address to install Sterling Integrator.
- ◆ The license file must reside on the host machine on which the application is being upgraded. If you saved the license file to a Windows client, transfer the license file to the host.
- ◆ This upgrade changes the administrative password to the default password. After the upgrade, change the password back to the administrative password to minimize security risks. This is the Admin password for logging into the UI (/dashboard or /ws).
- ◆ *install_dir* refers to the installation directory where the new software will be 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. You should create a new installation directory before you begin the upgrade.
- ◆ *parent_install* is the directory one level above the *install_dir* directory.
- ◆ Ensure that the *parent_install* directory has the proper permissions set using the `chmod` command.
- ◆ If at any time you wish to go back and change any input previously entered, you will have to re-start the installation. You can abort the installation by pressing **Ctrl + C** and then re-starting the installation.
- ◆ Run `stty kill ^U` command before starting the upgrade. If your `.profile` or `.<shell> rc` file includes the `stty kill` command by default, ignore this.

To upgrade Sterling Integrator, refer to your pre-upgrade checklist and perform these steps:

1. From the upgrade media, copy `SCIInstallWizard.jar` and `SI.jar` to a UNIX/Linux directory.
2. Navigate to your working directory. For example, `cd parent_install`.
3. Enter: `/path_to_java/bin/java -jar /absolutePath/SCIInstallWizard.jar`
The Sterling Integrator wizard starts.
4. Press **Enter** to start the upgrade.
5. Press **Enter** to review the license agreement. You can page through the agreement by entering **n** and pressing **Enter** at each page or you can go directly to the end of the agreement, press **Enter** until you reach the *Do you accept the license?*
6. Press **Enter** to accept the **license** agreement. Default is **Y**.
7. Enter the full path of your **JDK directory**.
8. Enter the full path to the **license file**.
9. Enter the full path to unlimited strength **JCE policy file**.
10. Enter the full path name to the **installation directory** where you want to install the upgrade software. If the installation directory does not exist, when prompted enter **Y** to create the directory.

11. Enter the path to the Sterling Integrator **install jar** file.
12. Enter an explicit **IP Address** or **Host Name**. Default is localhost.
13. Enter the **initial port number**. Default is 8080.
 The installation program validates the initial port number and confirms that you have enough disk space for the installation. These port assignments are written to the `/install_dir/install/properties/sandbox.cfg` file.
14. Enter your system **passphrase**.
15. Enter your system **passphrase** again to confirm it.
16. Enter the **e-mail address** to which you want system alert messages sent.
17. Enter the **SMTP mail server** host name that you want to use for system alert messages and other administrative notices.
18. Do you want to use **FIPS** (Federal Information Processing Standards) mode?
 - ◆ If yes, enter **true**.
 - ◆ If no, press **Enter**. Default is **false**.
19. Enter the number of the **database** vendor (Oracle, Microsoft SQL Server 2005, DB2, MySQL). Default is MySQL.
20. At the *This installation is an upgrade from a prior version prompt*, enter **true** to continue as an upgrade.
21. (Skip if using MySQL) Do you want to automatically apply **DDL statements**?
 - ◆ If yes, press **Enter**. Default is **true**. The upgrade applies both the DDL and the resources.
 - ◆ If no, enter **false**. 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.
22. Do you want to upgrade information to be stored in the InstallSIlog file (*Verbose Install?* prompt)
 - ◆ If no, press **Enter**. Default is **false**.
 - ◆ If yes, enter **true**. The events are recorded in InstallSI.log file.
23. Configure your database by entering the following information:
 - ◆ Database user name
 - ◆ Database password (and confirmation)
 - ◆ Database catalog name
 - ◆ Database host name.
 - ◆ Database host port number
 - ◆ (Oracle, Microsoft SQL Server 2005, MySQL) Path and file name for one JDBC driver
 - ◆ (DB2 only) Absolute paths and file names for two JDBC drivers.

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 Sterling Integrator to the DB2 server.

- ◆ (Oracle only) At the *What Data type would you like to use?* prompt, choose a data type for caching (BLOB or Long Raw):

To use caching for BLOB (binary large object) columns, enter **1** (the default value) and press **Enter**. You can significantly improve performance by enabling the cache on the BLOB data object in Oracle. For more information, refer to the documentation for slow performance in Oracle.

To use the Long Raw data type, enter **2**.

24. Review the **Database Information**.

25. Is this a 32 or 64-bit JDK?

- ◆ If you are using a 32-bit JDK, enter **1**.
- ◆ If you are using a 64-bit JDK (default).

26. Do you want to create a desktop icon for accessing Sterling Integrator?

- ◆ If yes, enter **true** at the *Create Desktop Icons (Windows & Linux)* prompt.
- ◆ If no, press **Enter**. Default is **false**.

The upgrade automatically continues.

The screen displays the progress of your upgrade. You can follow more detailed progress of your installation through the PreInstallSI.log file in your installation directory. If the installation stops, check the PreInstallSI.log for details.

27. When the upgrade is finished, the system displays the following message:

BUILD SUCCESSFUL

Total time: nn minutes nn seconds

Installation Wizard completed. Please see the installation guide for next steps.

Installation information is in the following files:

- ◆ ant.install.log (in the *install_dir* directory)
- ◆ InstallSI.log (in the *install_dir/install* directory)

28. Start Sterling Integrator.

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 where Sterling Integrator resides on your system.

Depending on system load, it may take several minutes for the UI to be ready.

Make a note of the URL address so that you can access Sterling Integrator later.

29. After performing the upgrade, refer to *Post Upgrade Maintenance* on page 70 to install the latest patch.

Silent Installation Upgrade Method

Use the following procedures to perform an upgrade using the silent installation method:

1. *Create the Silent Install File* on page 49
2. *Upgrade Using the Silent Installation File* on page 54

Create the Silent Install File

To use a manually edited silent installation file, you must first create a silent installation file using a text editor. The file must contain the entries marked as required in the following table. When you are finished editing the file, record its name and location. You will use this information during the installation.

If possible, use a silent installation file from an interactive installation as an example for your silent installation file. Also, use the `antinstall-config.xml` file in `SCInstallWizard.jar` to check the names and default values for the entries.

Entry	Description
The following entries correlate to prompts in the installation procedure described in <i>Upgrade Using the Text-Based Method</i> on page 46. Read through that procedure when creating your silent installation text file.	
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. Example: <code>/absolutePath/Full_License.xml</code>
SI_LICENSE_AVAILABLE	Indicates if a license is being passed in and is required for 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. Example: <code>/absolutePath/unrestrict123.zip</code>

Entry	Description
INSTALL_DIR	<p>(Required) The directory that includes directories like bin (where many commands are stored) and properties (where many property files are stored). The path to this directory might include the following:</p> <ul style="list-style-type: none"> ◆ The installation directory that you specify during an interactive installation. ◆ The subdirectory install. ◆ The INSTALL_DIR property refers to the installation directory where the new software will be 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. <p>Although you can enter your own path, the <i>install_dir/install</i> path matches the path that is created during an interactive installation. It also matches the path that is used in documentation. For example, an instruction to stop Sterling Integrator reads:</p> <ol style="list-style-type: none"> 1 Navigate to <i>install_dir/install/bin</i>. 2 Run the <i>hardstop.sh</i> command.
UPGRADE	<p>(Required if upgrading) Indicates if you are upgrading. Default: false</p>
DB_VENDOR	<p>(Required) Database vendor. Valid values:</p> <ul style="list-style-type: none"> ◆ Oracle ◆ MSSQL2005 ◆ DB2 ◆ MySQL

Entry	Description
INSTALL_IP	<p>(Required) Host IP address.</p> <p>Valid values:</p> <ul style="list-style-type: none"> ◆ localhost (default) ◆ (your IP address) <p>If you are installing Sterling Integrator on VMware provide the IP address of the virtual machine; not of the IP address 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 Window 2003 server it is hosting, you should use the 10.251.124.160 as the IP address to install Sterling Integrator.</p> <p>Caution: Before applying an IPv6 address, see <i>IPv6 Capabilities</i> section in Sterling Integrator <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 Sterling Integrator with IPv6 address, comment the Host Name mapping to IPv4 address and retain the mapping to IPv6 address in the host file located in <code>/etc/sysconfig/networking/profiles/default/hosts</code> 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> <p>Default: (blank)</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>
REINIT_DB	<p>(Required) Indicates if database should be initialized.</p> <ul style="list-style-type: none"> ◆ For a single node installation and node 1 of a cluster, this property is true. ◆ For node 2 and higher of a cluster, this property is false. <p>Default: true</p>

Entry	Description
FIPS_MODE	(Optional) Indicates if you are using FIPS (Federal Information Processing Standards) mode. Valid values: <ul style="list-style-type: none"> ◆ true - Enable FIPS mode. ◆ false (default) - Disable FIPS mode.
ORACLE_USE_BLOB	(Required if DB_VENDOR=Oracle) Indicates if you are using the BLOB data type. Default: true
DB_USER	(Required) Database user name. Example: abcd_123_1
DB_PASS	(Required) Database password. Example: xyz
DB_DATA	(Required) Database catalog name. Example: abcd
DB_HOST	(Required) Database host name. Example: abcd Default: localhost
DB_PORT	(Required) Database port. Example: 1234
DB_DRIVERS	(Required) Full path to JDBC driver file(s). If DB_VENDOR is: <ul style="list-style-type: none"> ◆ Oracle, MSSQL2005 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"> ◆ <i>JDBC_driver_dir</i>\jdbc.jar ◆ <i>JDBC_driver_dir</i>\db2_1_jdbc.jar:<i>JDBC_driver_dir</i>\db2_2_jdbc.jar
DB_CREATE_SCHEMA	(Required if DB_VENDOR=Oracle, MSSQL2005, or DB2) Indicates if you want the database schema automatically created. Valid values: <ul style="list-style-type: none"> ◆ true (default) - Automatically create the schema. ◆ false - Manually create the schema. If you create the database schema manually, restart the installation procedure in a new installation directory. You can delete the installation directory created earlier. This feature is not supported on MySQL.

Entry	Description
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.
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: <ul style="list-style-type: none"> ◆ true (default) - (64-bit) ◆ false - (32-bit)
Icons	Indicates if you want to create a desktop icon for accessing Sterling Integrator. Valid values: <ul style="list-style-type: none"> ◆ true - Create a desktop icon. ◆ false (default) - Do not create a desktop icon.
INTERNAL_MYSQL	(Required if DB_VENDOR=MySQL) Set this attribute to the default value of false.
The following entries do not directly correlate to prompts in the installation procedure described in <i>Upgrade Using the Text-Based Method</i> on page 46. Use these entries to customize or document your installation.	
DB_DRIVERS_VERSION	Free form version string for JDBC driver. This is informational only. Example: 8_1_5
JDBC_VENDOR	JDBC driver vendor. Used when multiple vendors are available (DB2 iSeries: DB2APP, DB2TOOLBOX, DB2). Default: Microsoft
LOAD_FACTORY_SETUP	Indicates whether factory setup should be loaded during installation Valid values: <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. <p>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>
CONFIG_GS	Indicates whether integration with Gentran Server should be configured. Default: No
NO_DBVERIFY	Valid values are true/false. When set to true during installation and installservice, dbverify will not be run. This means that the Sterling Integrator will not generate DDL to make the database like the XML entity repository.

Upgrade Using the Silent Installation File

Before you begin:

- ◆ You must have created the silent installation file.
- ◆ *install_dir* refers to the installation directory where the new software will be 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* is the directory one level above the *install_dir* directory.
- ◆ Ensure that the *parent_install* directory has the proper permissions set using the `chmod` command.

To install Sterling Integrator using a silent installation file:

1. From the upgrade media, copy `SI.jar` to a UNIX/Linux directory.
2. Set up your silent installation file and record its location.
3. Navigate to your working directory. For example, `cd parent_install`.
4. To start the upgrade, enter:

```
/absolutePath/bin/java -jar /absolutePath/SI.jar -f
/absolutePath/SilentInstallFile
```

The installation starts. You can follow the progress of the installation on screen.

The upgrade installation program verifies support for your operating system and JDK. It also verifies that you have enough space for the upgrade installation.

When the installation is finished, the system displays the following message:

Installation has completed successfully.

5. Start Sterling Integrator.

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

Open your Web browser to [URL]

Depending on system load, it may take several minutes for the UI to be ready.

Make a note of the URL address so that you can access Sterling Integrator later.

The system returns you to a UNIX/Linux prompt.

6. After performing the upgrade, refer to *Post Upgrade Maintenance* on page 70 to install the latest patch.

Validate the Upgrade

Validate the System Upgrade

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

- ◆ *Start Sterling Integrator* on page 55
- ◆ *Access Sterling Integrator* on page 56
- ◆ *Validate the Upgrade* on page 56
- ◆ *Stop Sterling Integrator* on page 56

Start Sterling Integrator

To start Sterling Integrator:

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

```
./run.sh
```

3. Enter the passphrase.

If you enter the wrong passphrase, Sterling Integrator exits with the error *Error 'I' starting SI*. To resume, run the `run.sh` command again.

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 where Sterling Integrator resides on your system.

Depending on system load, it may take several minutes for the UI to be ready.

4. Make a note of the URL address so that you can access Sterling Integrator later.

The system returns you to a UNIX/Linux prompt.

Access Sterling Integrator

To log in to Sterling Integrator:

1. Be sure that Sterling Integrator is installed and running.
2. Open a browser window and enter the address displayed at the end of startup.
The login page displays.
3. 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

You can validate the installation by testing a sample business process. Follow these steps:

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

To stop Sterling Integrator in a UNIX or Linux environment, you can run either a soft stop or a hard stop script:

- ◆ A soft stop halts Sterling Integrator after all the business processes finish running.
- ◆ A hard stop halts Sterling Integrator without waiting for business processes to finish.

To run a soft stop from the User Interface:

1. Access Sterling Integrator.
2. From the **Administration Menu**, select **Operations > System > Troubleshooter**.
3. Click **Stop the System**.

To run a soft stop from the command line:

1. Navigate to `/install_dir/install/bin`.
2. Enter `./softstop.sh`.
3. Enter your passphrase.

To run a hard stop:

Caution: Running a hard stop could result in loss of data in unfinished processes.

1. Navigate to `/install_dir/install/bin`.
2. Enter `./hardstop.sh`.

Post Upgrade Configuration and Testing

Post Upgrade Configuration and Testing

The upgrade is complete. You need to now perform some post upgrade procedures. Use the following Checklist to keep track of the post upgrade procedures. Some procedures may not be required. You may want to refer to the *Upgrade Planning Checklist* on page 12 which you completed in the planning phase.

Post Upgrade Configuration/Testing Checklist	Your Notes
<i>Apply Patch</i> on page 58	
<i>Change Default Passwords</i> on page 58	
<i>Changes to Network Interface Bindings</i> on page 58	
<i>Download Sterling Integrator Tools</i> on page 60	
<i>Disable Services</i> on page 60	
<i>Enable Business Processes</i> on page 60	
<i>Test Business Process Functionality</i> on page 60	
<i>Configure Property Files</i> on page 61	
<i>Restore customer_overrides.properties File</i> on page 61	
<i>Review the EDI Sequence Check Queue</i> on page 61	
<i>Add cdinteropfiles</i> on page 62	
<i>Add Third-Party Libraries</i> on page 62	
<i>Configure Document File Systems</i> on page 62	
<i>Configure Services and Adapters</i> on page 62	
<i>Configure JDBC Adapter and Lightweight JDBC Adapter</i> on page 63	
<i>Configure File System Adapter and Command Line2 Adapters</i> on page 63	

Post Upgrade Configuration/Testing Checklist	Your Notes
<i>Configure Odette FTP Adapter on page 63</i>	
<i>Add the Advanced File Transfer Tab on page 66</i>	
<i>Reconfigure Archive Settings on page 67</i>	
<i>Correct Missing Manager IDs on page 67</i>	
<i>Add the Advanced File Transfer Tab on page 66</i>	
<i>Test Trading Partner Certificates on page 68</i>	
<i>Test Inbound and Outbound Communication Channels on page 68</i>	
<i>Test Disaster Recovery/Failover Scenarios on page 68</i>	
<i>If you have a clustered environment, Test Your Upgraded Operating System or Database on page 69</i>	
<i>If you upgraded your OS or database, Test Your Upgraded Operating System or Database on page 69</i>	

Apply Patch

Determine if you upgraded system needs to have any patches applied. For more information, see *Post Upgrade Maintenance* on page 70.

Change Default Passwords

This upgrade changes the administrative password to the default password. After the upgrade, change the password back to the administrative password to minimize security risks. This is the Admin password for logging into the UI (/dashboard or /ws).

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.

Changes to Network Interface Bindings

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

1. On the server where Sterling Integrator resides, edit the `noapp.properties.in` file.
 - a. Locate the **admin_host** parameter. The default settings are as follows:

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

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

Default entries

```
admin_host.1    = hostname1
admin_host.2    = localhost
```
 - b. Correct the parameters as necessary.

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

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

Edited entries

```
admin_host.1    = hostname1
admin_host.2    = localhost
admin_host.3    = hostname2
```
2. Stop Sterling Integrator.
3. Run the `setupfiles.sh` utility located in the `/install_dir/install/bin` directory.
4. Restart Sterling Integrator.

For the Dashboard user interface, Sterling Integrator version 5.0 provides unrestricted binding to network interfaces through the perimeter server. To restrict access to the Dashboard user interface, you can adjust property settings so that only one network interface accesses Sterling Integrator.
5. On the server where Sterling Integrator resides, edit the `perimeter.properties.in` file.
 - a. Locate the **localmode.interface** parameter. The default setting is unrestricted, as shown below.

Unrestricted Setting (Default)

```
localmode.interface=*
```
 - b. To restrict access to the Dashboard, enter the network interface that you want Sterling Integrator to support.

Restricted Setting

```
localmode.interface=hostname1
```
6. Stop Sterling Integrator.
7. Run the `setupfiles.sh` utility located in the `/install_dir/install/bin` directory.
8. Restart Sterling Integrator.

Download Sterling Integrator Tools

Sterling Integrator includes tools that run on a desktop or personal computer. After you upgrade you need to install the following tools:

- ◆ Map Editor and associated standards
- ◆ Graphical Process Modeler
- ◆ Web Template Designer
- ◆ MESA Developer Studio. This features requires a separate license in addition to your license for Sterling Integrator. Plug-ins include:
 - ◆ MESA Developer Studio Software Development Kit (SDK)
 - ◆ MESA Developer Studio Skin Editor
- ◆ Reporting Services, which requires MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports. This features requires a separate license in addition to your license for Sterling Integrator.

For more information about a tool, refer to the documentation for that tool. Conflicting IP addresses can cause problems when you download a desktop tool. See *Troubleshooting: UNIX or Linux Environment*.

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 Sterling Integrator 5.0.

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 process and enable the customized versions.

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 Process's 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 Process's, 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.

Configure Property Files

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

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

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

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

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

- ◆ LDAP user authentication
- ◆ Prevention of cross-site script vulnerabilities
- ◆ Logging configuration
- ◆ Process-specific property file settings
- ◆ Securing the Interop Servlet

Restore customer_overrides.properties File

Copy the customer_overrides.properties file from `/install_dir/install/properties` of the previous installation to `/install_dir/properties` of 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. 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 develope 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.

Add cdinteropfiles

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

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

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.

Configure Services and Adapters

You may need to reconfigure services and adapters after an upgrade. During an upgrade, packages for services and adapters are reprocessed to update the service configurations.

After an upgrade, the configurations of default adapters and services are re-set to their default configurations. This includes directory paths, which are restored to their default paths. You need to reconfigure those adapters and services, which include, but are not limited to:

- ◆ All default FTP adapters
- ◆ All default SFTP adapters
- ◆ Connect:Enterprise UNIX Server Adapter
- ◆ OdetteFTP Adapter
- ◆ SAP Suite Adapter
- ◆ SWIFTNet Client Service
- ◆ SWIFTNet Server Adapter

If you modified the standard configuration for a service or adapter, you may need to reconfigure or reactivate the service or adapter following an upgrade. You may also need to reconfigure adapters that used directories or scripts in the installation directory of your previous release.

Examples of services and adapters that commonly need to be reconfigured following an upgrade include:

- ◆ Federation adapter
- ◆ FTP adapter
- ◆ System services such as the Alert service and the BP Fault Log adapter

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

Configure JDBC Adapter and Lightweight JDBC Adapter

Storage locations of the database pool properties that allow the JDBC adapter and the Lightweight JDBC adapter to communicate with your external database have been streamlined. The `poolManager.properties` file has been eliminated and some of its pool properties are now included in the `jdbc.properties` file, along with some new properties. You will need to manually update your existing `jdbc_customer.properties.in` file to add some new database pool properties. If you do not have a `jdbc_customer.properties.in` file, create one since `customer.properties` are not affected by product updates. The specific actions necessary depend on your current installation.

Configure File System Adapter and Command Line2 Adapters

You must configure your File System and Command Line2 adapters before you remove the previous release directory. Reconfigure any File System and Command Line2 adapters that were configured to use directories or scripts in the installation directory for the previous Sterling Integrator release. Ensure that you create new directories and save scripts outside of the release 5.0 installation directory and edit each configuration to use the appropriate directories and scripts.

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

Command Line2 Adapter

If you are using the Command Line2 adapter and have located the `CLA2Client.jar` file anywhere other than the default location, you must replace it with the new version. For information about the default location and how to start the Command Line2 adapter, see the Command Line2 adapter information in the online Documentation site.

If you are upgrading to Sterling Integrator 5.0 from a version lower than 4.0.1 and are using the Command Line2 adapter, you must update the version of the `CLA2Client.jar` file with the `CLA2Client.jar` located in the `/install_dir/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.

Command Line Adapter

If you are upgrading to Sterling Integrator 5.0 from a version prior to 4.0 and are using the Command Line adapter, you must update the version of the `CLAClient.jar` file with the `CLA2Client.jar` located in the `/install_dir/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.

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 DuplicateFileProcessing Testings To DuplicateFilePeriod	
Physical Partner Contract	SessionLogLevel	Add fields.	Optional
Physical Partner Contract	GroupNameList	Add fields, if used.	Optional
Physical Partner Contract	SecureAuthentication	Add fields.	OFTP 2.0: Mandatory
Physical Partner Contract	<TimeScheduleTable> ... <TimeScheduleTable>	Delete structure and create schedules in the Sterling Integrator Scheduler instead.	Initiator Business Process and Business Process user fields are still used.
Physical Partner Contract	OdetteFTPAPILevel	Rename OdetteAPILevel to OdetteFTPAPILevel	
Logical Partner	Description	Add field and description content.	Mandatory in OFTP Partner database.
Logical Partner	<FileServiceCertificate type = "..."> <Subject>string</Subject> <Issuer>string</Issuer> <Serial>string</Subject> </FileServiceCertificate>	Add structure, if used.	OFTP 2.0: Mandatory for security, only. Structure may be repeated.
Logical Partner Contract	Description	Add field and description content.	Mandatory in OFTP Partner database.
Logical Partner Contract	FileTransmissionRetries	Rename FileTransmitRetries to FileTransmissionRetries	
Logical Partner Contract	SignedEERPRequest	Add field, if used.	
Logical Partner Contract	EERP/NERPSignatureCheck	Add field, if used.	
Logical Partner Contract	File Signing	Add field, if used.	
Logical Partner Contract	File Encryption	Add field, if used.	

Logical Partner Contract	CipherSuite	Add field, if used.	
Logical Partner Contract	File Compression	Add field, if used.	
Logical Partner Contract	CharEncoding	Add field, if used.	
Logical Partner Contract	Receive VitualFilenamePattern	Add field, if used.	
Logical Partner Contract	EERPTimeout	Rename WaitForEERP to EERPTimeout	
Logical Partner Contract	FileScheduleTimeout	Add field, if used.	
Logical Partner Contract	InboundBusinessProcess	Add field, if used.	Optional
Logical Partner Contract	InboundBusinessProcess	Add field, if used.	Optional, if no Inbound business process is specified.

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

Add the Advanced File Transfer Tab

The Advanced File Transfer tab in the Dashboard interface will not be enabled by default after the upgrade. You will need to configure the Dashboard to enable the tab.

If you have a license for Advanced File Transfer, perform the following steps to add the Advanced File Transfer tab:

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

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

Correct Missing Manager IDs

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

Restore Performance Tuning Configuration

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

Before completing this procedure, you need to review the information in the *Add the Advanced File Transfer Tab* on page 66.

To restore the performance tuning configuration:

1. From Sterling Integrator **Administration Menu**, select **Operations > System > Performance > Tuning**.
2. Under Edit, click **Go!**
3. Click **Edit settings**.
4. Complete the Performance Tuning Wizard, using the settings you obtained from the previous release.

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 monitor. 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.)

Post Upgrade Maintenance

Post Upgrade Maintenance

Use the following information to determine and apply patches to your newly upgraded system.

- ◆ *Determine Which Patch to Apply* on page 70.
- ◆ *Install the Current Maintenance Patch in UNIX or Linux* on page 71.
- ◆ *Install a Hot-Fix* on page 72.
- ◆ *Apply a Patch To a Remote Perimeter Server in UNIX or Linux* on page 74.

If you are using a perimeter server in a DMZ, you will need to perform this procedure.

Determine Which Patch to Apply

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.

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.

The patch installation may use one or more patch property override files. These files will be named *propertyFile_patch.properties*. Do not alter these files. Additionally, property changes made directly in *.properties* or *.properties.in* files may be overwritten during the patch installation. Properties overridden using the *customer_overrides.properties* file are not affected.

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

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

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

```
si_<release number>_build_info.pdf
```

Both the .jar and the .txt files are available on the Sterling Commerce Support Web site, at <https://support.sterlingcommerce.com>.

Install the Current Maintenance Patch in UNIX or Linux

To install the latest patch for Sterling Integrator in a UNIX or Linux environment:

1. Go to the Sterling Commerce Support Web site, at <https://support.sterlingcommerce.com>
2. Download the most recent patch file for your version of Sterling Integrator and record the absolute path to the downloaded file. If you use FTP, use Binary mode. Do not rename the file.
3. Verify that the database server is up and ready to accept connections.
4. Stop Sterling Integrator.
5. Perform a full backup of Sterling Integrator installation directory, including all subdirectories.
6. Perform a backup of your 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. Navigate to the installation directory for Sterling Integrator. Enter:

```
cd /install_dir/install/bin
```

10. Enter:

```
./InstallService.sh si_<release number>_build_<build number>.jar
```

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

If the patch attempts to modify the database schema and the modification fails, you will receive an error message about the failure. The message provides the error message code from the database and the SQL command that failed. The failure information is also logged to the system.log file and to the patch.log file.

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

Install a Hot-Fix

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

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

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

To install a hot-fix on a UNIX or Linux system:

1. Log in to the computer that you are installing the hot-fix on.
2. Is the database password encrypted? If **Yes**, decrypt the password. For more information, see the database password decryption documentation.
3. At the command line, 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 *caseid* is the ID number you received from Customer Support. For example, `c123.jar`, where 123 is the ID number.

Note: You can put the file to any directory for which you have write permission.

7. Stop Sterling Integrator.
8. Navigate to `/install_dir/install/bin`.
9. Enter the following command to install the hot-fix:


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

Caution: You may need to complete this step twice depending on the patch. Read the output from the `InstallService.sh` script carefully to see if you need to complete this step twice.
10. If you decrypted the database password in step 2, re-encrypt the password. For more information, see database password encryption documentation.
11. Restart Sterling Integrator.
12. Navigate to `/install_dir/install/bin`. Enter `run dump_info.sh` to verify that the hot-fix was successfully installed.

Hot-Fix Package Delivery Method

The hot-fix package delivery method has changed effective Sterling Integrator, Release 5.0 Build 5006 onwards. The hot-fix package will be delivered as a jar file that contains only the files that were modified. However, the installation procedure for a hot-fix remains the same. Refer to *Install a Hot-Fix* on page 72 for hot-fix installation procedure.

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

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

- ◆ Hot-fix version is maintained in the hotfix.properties file. It does not update the SI_VERSION table. Run `dumpinfo.sh` command to display the hot-fix version. You can also verify the hot-fix version in Sterling Integrator Support user interface page.
- ◆ Size of the hot-fix package is small.
- ◆ Hot-fix must be installed on the same build version that was used to build it. For example, if a test system is on Sterling Integrator, Release 5.0 Build 5006 and the hot-fix is built for 5006, it can be installed on that test system. However, if the production system is on Sterling Integrator, Release 5.0 Build 5005, you must apply Sterling Integrator, Release 5.0 Build 5006 prior to applying the hot-fix.
- ◆ You can locate the hot-fix read me file in the Sterling Integrator root (*install_dir*) directory. For example, *install_dir/hotfix_readme.txt*.
- ◆ If you have Sterling File Gateway installed in your environment, the hot-fix for Sterling File Gateway is installed automatically.

Apply a Patch To a Remote Perimeter Server in UNIX or Linux

To update a remote perimeter server in UNIX or Linux:

1. Update your installation of Sterling Integrator with the latest maintenance patch. Obtain the maintenance patch file from the Sterling Commerce Support on Demand web site, at <https://support.sterlingcommerce.com>. These patches have a name that identifies a build number. For example, `si_50_build_5001.jar`. For more information, refer to the maintenance patch documentation.
2. Locate your perimeter server patch file in the `/install_dir/install/packages` directory of your installation of Sterling Integrator. For maintenance patches, obtain the file from the Sterling Commerce Support on Demand Web site, at <https://support.sterlingcommerce.com>. These patch files have a name that identifies a version number. For example, `ps_2006.jar`.
3. Copy the file to a directory on the remote server.
4. Stop the perimeter server using the `stopPs.sh` command.
5. To begin the installation, enter the following command:

```
/absolutePath/bin/java -jar filename.jar -interactive
```

Note: You can install perimeter server either in silent mode or in interactive mode. The default installation mode is silent. In the silent mode, you should specify the details in a silent file, whereas in the interactive mode, you should enter the value each time a prompt appears. Append the `install` command with the `-interactive` flag to install through the interactive mode.

absolutePath is the directory name where the Java version is installed.

The program verifies the operating system, required patch level, and the location and version of the JDK.

6. Enter the full path to the installation directory. If you do not want to change any settings for your perimeter server, specify the same directory where the remote perimeter server was originally installed.
7. Answer the question:

There is an existing install at that location, update it while keeping existing settings?

If **yes**, the installation will proceed without additional entries.

Note: If you want to change any of the settings, you must use a new directory, or delete the old installation before performing the new installation. You can not overwrite an existing installation, and you can not use an existing directory that does not contain a valid installation. The existing installation must be Sterling Integrator 5.0 or later.

When the perimeter server is installed, the following message is displayed:

Installation of Perimeter Service is finished

8. Change to the installation directory.
9. Enter `startupPs.sh` to start the perimeter server.

DB Checksum Tool

A checksum is a simple redundancy check used to detect errors in data. In Sterling Integrator 5.0, a verification process is used to compare the checksum between the existing default resource and the resource

added after applying a patch. 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 creates and dumps the checksum from the database. The tool can reset and initialize the checksum value in the database checksum table. It can also display any particular default resource and the modified resource.

The DB Checksum tool can perform the following operations:

- ◆ Create unique numbers for the default resource checksum and store it in the database.
- ◆ Generate difference in checksum between default resource and system resource.
- ◆ Output resource checksum information from the database by resource name, object name, and object type.

Perform Checksum using DB Checksum Tool

To perform a DB Checksum:

1. Navigate to `/install_dir/bin`.
2. Enter the following command:

```
db_checksum_tool.sh [-c | -d | -f | -s | -p] [-i [1 | 2 | 3 | 4 | 5]] [-r
[wfd | map | schema | sii | template]] [-n <object name>] [-t <object type>]
[-o <output file>]
```

where:

- c is the mode to create the checksum in the database.
- d is the mode to dump the difference of resource checksum between the default resource and latest system resource.
- f is the mode to fix/recalculate the resource checksum in the checksum table.
- s is the mode to check the system checksum in the database.
- p is the mode to output particular checksum from the database (resource type, object name, and object type are required).
- 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.
- n is the object name (optional).
- t is the object type (optional, -1 is the value for SII and WFD resource type always).
- o is the file name to output all the messages (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

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

Additionally, you may perform the following tasks:

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

To uninstall Sterling Integrator 5.0 from a UNIX or Linux environment:

1. Stop Sterling Integrator and wait for shutdown to complete. If you begin removing files before all business processes and Sterling Integrator are stopped, you may be unable to remove Sterling Integrator successfully.
2. Backup the file system and database. This step is optional; however, by backing up the file system and database, you are ensured that Sterling Integrator is completely recoverable.
3. Go to the parent directory of your installation directory (*install_dir*).
4. Enter:

```
rm -rf install_dir
```
5. Your database remains intact even after you remove 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 Sterling Integrator used to reside.
6. Manually remove Attunity Data Connect. For more information, refer to product information provided with Attunity Data Connect software.
7. Manually remove the JDK.

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

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

- ◆ Map Editor and associated standards

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

- ◆ Graphical Process Modeler

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

- ◆ Web Template Designer

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

- ◆ (If licensed) MESA Developer Studio plug-ins, including the Software Development Kit (SDK) and Skin Editor.

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

- ◆ (If licensed) Reporting Services, which requires MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports.

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

User Documentation


User Documentation for Sterling Integrator

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

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

Access the Online Documentation

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

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

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

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

Documentation Available in PDF Format

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

Request a Documentation CD

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

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

Troubleshooting Tips

Troubleshooting Tips

Situation	Message or Symptom	Explanation/Resolution
Installing or Upgrading	You encounter errors or problems during installation or upgrade.	<p>Explanation Installation creates a log file.</p> <p>Resolution Examine the log file generated during installation:</p> <ul style="list-style-type: none"> ◆ <code>/install_dir/install/InstallSI.log</code>
Installing or Upgrading	When you entered an absolute path during installation, a message indicated that the command was not found.	<p>Explanation You entered an incorrect path. Check the information entered.</p> <p>Resolution Enter the correct path.</p>
Installing or Upgrading	During installation, you entered the absolute path to the license file. However, a message indicates that the license file can not be found.	<p>Explanation You either did not obtain the license file, the license file is corrupt, or you downloaded the license file to a PC but have not moved it to the server.</p> <p>Resolution If you need to obtain the license file, see the section <i>License File</i> on page 28. If the license file resides on a PC, save the license file to the server.</p>
Installing	Memory or ulimit errors.	<p>Explanation The installation fails with memory and ulimit errors.</p> <p>Resolution</p> <ul style="list-style-type: none"> ◆ See the <i>Viewing or Editing Performance Configuration Settings</i> in the <i>Performance</i> documentation and modify your memory settings accordingly. ◆ See the <i>Verify Your Operating System Upgrade Checklist</i> on page 18 tune the ulimit settings.

Situation	Message or Symptom	Explanation/Resolution
Installing or Upgrading	<p>If the installation or upgrade stops and the following error is in the <code>installservice.log</code>:</p> <pre data-bbox="342 359 743 558"><Error ErrorCode="java.sql.SQLException" ErrorDescription="" ErrorRelatedMoreInfo="Can't create/write to file 'C:\WIN2K03\TEMP\#sql_d38_0.MYI' (Errcode: 13)"></pre>	<p>Explanation</p> <p>Virus protection software is running.</p> <p>Resolution</p> <p>You need to disable the virus protection software and restart the installation or upgrade.</p>
Installing a desktop tool or resource	<p>Can not download any of the following:</p> <p>Note: MESA Developer Studio and Reporting Services are optional features that are purchased separately from Sterling Integrator. These features each require a separate license in addition to your license for Sterling Integrator.</p> <ul style="list-style-type: none"> ◆ Map Editor and associated standards ◆ Graphical Process Modeler ◆ Web Template Designer ◆ (If licensed) MESA Developer Studio plug-ins (Software Development Kit (SDK), Skin Editor) ◆ (If licensed) Reporting Services, which requires MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports. 	<p>Explanation</p> <p>When you install Sterling Integrator, system files are created that contain an internal IP address. If you install Sterling Integrator behind a firewall, and your firewall is configured to accept an external IP address from a client computer, you may not be able to download the desktop tools and resources. The firewall will reject the 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 Enter the following command followed by the external IP address: <code>./patchJNLP.sh external_IP address</code> 3 Stop Sterling Integrator. 4 Restart Sterling Integrator.
Accessing	<p>Attempts to access the URL for Sterling Integrator display the message: <i>Page can not be displayed</i></p>	<p>See <i>Changes to Network Interface Bindings</i> on page 58.</p>
Upgrading	<p>Memory and ulimit errors</p>	<p>Explanation</p> <p>The installation fails with memory and ulimit errors.</p> <p>Resolution</p> <ul style="list-style-type: none"> ◆ Refer to the <i>Viewing and Editing Performance Configuration Settings</i> in the <i>Performance Management</i> documentation. Modify your memory setting accordingly. ◆ Refer to the <i>Verify Your Operating System Upgrade Checklist</i> on page 18 and tune the ulimit settings.

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