Sterling Integrator® **UNIX/Linux Non-Cluster Upgrade** Version 5.1

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Upgrade Overview

UNIX/Linux Non-Cluster Environment Upgrade Overview

Use this guide to upgrade the Sterling Integrator or software in a UNIX/Linux non-cluster (single node) environment. This guide includes pre-upgrade and post-upgrade processes. Additional upgrade documents include:

- System Requirements
- Release Notes
- Pre-Upgrade Analysis

It is important to remember that upgrading to 5.1 involves a full installation of Sterling Integrator. You need to prepare for an upgrade the same way that you would prepare for an installation. It is also recommended that you thoroughly test this process in a test or development environment prior to implementing in a production environment.

This upgrade does not overwrite your current Sterling Integrator directory structure on disk. Instead, it creates a new installation of Sterling Integrator 5.1 that will point to and upgrade the database of your current installation of Sterling Integrator. This means your original instance will no longer be operational after performing the upgrade. After the upgrade, you will be starting your Sterling Integrator instance only from the newly created directory structure.

For new installations, use the Sterling Integrator 5.1 UNIX/Linux Non-Cluster Installation Guide.

Assumptions for this Guide

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

Intended Audience

This document is intended for use by:

System Administrators

- Installation Engineers
- Database Administrators

Upgrade Scenarios

Upgrade Scenarios

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

Upgrade Scenario	Example
Operating system and the database are the same between the old Gentran Integration Suite version and Sterling Integrator 5.1	If you are upgrading from Gentran Integration Suite 4.3 (on HPUX 11.11 and using Oracle 10.1.0.4 RAC) to Sterling Integrator 5.1 (on HPUX 11.11 and using Oracle 11g RAC), the upgrade steps are as follows:
	Export the configuration data.
	Back up the database.
	Upgrade to Sterling Integrator.
Database upgrade before the upgrade to Sterling Integrator 5.1 when the old Gentran Integration Suite database is not supported by Sterling Integrator 5.1	If you are upgrading from Gentran Integration Suite 4.0 (on Solaris 9 and using DB2 8.1 Fixpack 5) to Sterling Integrator 5.1 (on Solaris 9 and using DB2 9.2), the upgrade steps are as follows:
	Export the configuration data.
	Back up the database.
	• With help from a database administrator (DBA), copy the database to DB2 9.2.
	Back up the newly created database.
	Upgrade by pointing to the newly created database. If the upgrade stops, and leaves the newly created database in an incomplete state, you can re-start the upgrade using the backup of the database.
Your Gentran Integration Suite operating system is not supported by Sterling Integrator 5.1	If you are upgrading from Gentran Integration Suite 4.0 (on RH EL 3.0 and using MySQL) to Sterling Integrator 5.1 (on RH EL 5.0 and using MySQL), the upgrade steps are as follows:
	Export the configuration data and back up the database. Export the MySQL database.

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Upgrade Scenario	Example
	 Copy the exported MySQL database to the destination database server and import into the new MySQL database. Upgrade to Sterling Integrator 5.1 on the RH EL 5.0 machine and identify the MySQL database during the upgrade.

Upgrade Impacts

Upgrade Impacts Overview

This documentation provides information on how system behavior has changed based on upgrading your system from 4.3 (or later) to 5.1. You need to review all of the information before you begin your upgrade.

Backups Are Not Generated During Install, Upgrade, Patch or Hotfix

Before you begin an upgrade to Sterling Integrator 5.1, review the following backup information.

In Sterling Integrator 5.1, some of the standard resources installed during install, upgrade, patch, or hotfixes use the import mechanism available to customers to load the standard resources into the database. The standard import mechanism by default creates a backup of the table containing the resource prior to importing to provide the ability to restore to the previous state if later it was decided that the import should not have been performed. This table backup was also being performed by default during the basic installation processes. And, since the import mechanism was sometimes used multiple times during the installation processes, some of the tables were backed up several times. Depending on the size of the table, this could add a very large amount of time to the installation process. Since it is recommended that a backup is completed prior to beginning any of these installation processes, the default behavior has changed to not perform the backup by default. If you would like backups to be performed, then SKIPIMPORTBACKUP=false should be added to sandbox.cfg file.

Capitalization Insensitivity for Header Value

For AS3, when searching for a header value in a multipart/report, you do not need to consider whether the header value contains any capitalization. The search has been enhanced to be capitalization insensitive.

For example, the following searches will result in a match:

- Multipart/Report
- Multipart/report
- multipart/Report
- multipart/report

The search would not find the following as a match:

• MulTiPart/RePorT

CA Certificates Impacts

Before you upgrade to Sterling Integrator 5.1, you need to review CA certificates upgrade information.

Users may add multiple copies of the same certificates to the database. Having multiple copies of the same certificate in the database is not, in principle, a problem for the system except for the minor amount of wasted storage. Each copy has a different object ID in the database and is a separate database object.

The specific changes in this release is the ability to easily populate the product database with the set of authority root certificates distributed with the JVM.

Perimeter Server Installation

Silent install is the **now** the default installation mode. If you want to complete the Perimeter Server installation using an interactive mode, you need to use the following command:

java -jar ps_4400.jar -interactive

Retry Logic Added to WebSphereMQ Suite Adapter PUT Service

Retry logic has been added to the WebSphereMQ Suite. To accommodate this new functionality, you need to configure two new parameters for the PUT service:

- wsmq_send_retryCount
- wsmq_send_retrySleepInterval

To configure the new parameters:

- 1. Log into the application.
- 2. From the **Admin Console Home**, you need to start the Graphical Process Model (GPM).
- 3. Log into the GPM.

You will need a User ID and Password.

- 4. In the GPM, select **View > Stencil > Services**.
- 5. Select **File > New**.
- 6. Drag the WebSphereMQ Suite Put Message Service from the All Services pane into the center pane.
- 7. Double click the **WebSphereMQ Suite Put Message Service**.
- 8. Select the configuration from the **Config** dropdown.
- 9. Enter the number of retries in to the **wsmq_send_retryCount** value.
- 10. Enter the sleep interval in seconds in to the wsmq send retrySleepInterval value.
- 11. Save the changes to the service configuration.
- 12. Exit from the GPM.

Services and Adapters - Show Advance State Button

Before you begin an upgrade to Sterling Integrator 5.1, review the following Show Advance State button information.

In Sterling Integrator 5.1, the Show Advanced State check box has been removed from the Services Configuration search screen. Instead, the default has been changed to always show the advanced state without needing to check a check box on the search screen to display it.

Some Certificate Fields Are Optional

When generating certificate keys, the following fields were mandatory in the previous release, but now are optional entries:

- alt.name.dns
- alt.name.IP

Support for Multiple AS2 Organizations

Before you begin an upgrade to Sterling Integrator 5.1, review the following schema information.

Sterling Integrator 5.1 now supports multiple sponsoring organizations and multiple partners for AS2. During upgrade, the single organization will be flagged as the default organization. Once you have upgraded to 5.1, a prefix designation is used to differentiate between an AS2 organization (AS2_ORG_) and an AS2 partner (AS2_PART_). Each of these will require the full configuration of a trading partner to allow for a partner to trade with multiple organizations as well as an organization that trades with multiple partners.

The AS2_TRADEPART_INFO and AS2_EMAIL_INFO tables have been modified and the AS2_PROFILE table is newly introduced. Updates to these tables will occur during the SI in-place upgrade process in the following manner:

- Identify the default organization and populates the AS2_PROFILE table with organization information. A default organization is an AS2 organization profile named "profile_ORGANIZATION" present in the system before upgrade.
- Identify partner records and populates the AS2_PROFILE table with partner information.
- Populate the new columns of table AS2_TRADEPART_INFO with the default organization information.
- Populate the new PROFILE_ID column in the AS2_EMAIL_INFO table with the profile id of the AS2 organization profile present in the system.

Web Services

Before you begin an upgrade to Sterling Integrator 5.1, review the following web services information.

In Sterling Integrator 5.1, many of the Web Services configuration settings that were generated from the WebServices Provider Configuration UI have moved from the property files into database tables. This change was made to allow a single location of these settings in cluster environments and to ensure that these settings would not be reset during patch installation.

After you have completed your upgrade to Sterling Integrator 5.1, you should run the convertWSSoaProperties script found in the installation bin folder. This script reads the settings from the property file and places them into the proper database tables. You can then review the results in the WebServices Provider Configuration UI.

Windows 2003 Does Not Start with Silent Install

If you used the silent install method for your upgrade, you must manually run the InstallWindowsService.cmd file to register the service.

MySQL Upgrade Impacts

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 5.1 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 5.1).
- A database that you can use in your old version of Sterling Integrator.

Task	Which database	MySQL Upgrade Checklist	Your Notes
1	New external	Install an external MySQL database.	
	database	Refer to MySQL documentation for information about installing the database. Be sure to install the correct version and patches.	
		See System Requirements 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:	
		CREATE DATABASE database_name	
		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:	
		• Only required when moving from MySQL version earlier than 5.0	
		Use the following command:	
		Alter table SCHEMAS rename to XMLSCHEMAS	

Task	Which database	MySQL Upgrade Checklist	Your Notes
7	Previous database	Perform a MySQL database export. As part of the export, you will have a backup copy of the database.	
8	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: Alter table XMLSCHEMAS rename to SCHEMAS	
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
max_connections	500
max_allowed_packet	100M
default-table-type	INNODB
wait_timeout	31536000
max_write_lock_count	500000
transaction-isolation	READ-COMMITTED
character-set-server	utf8
binlog_format	mixed
table_open_cache	512
key_buffer_size	384M
sort_buffer	512K
connect_timeout	15
innodb_data_file_path	ibdata1:400M:autoextend
innodb_data_home_dir	/install_dir/mysql/var/
innodb_log_group_home_dir	/install_dir/mysql/var/
innodb_flush_log_at_trx_commit	1
innodb_mirrored_log_groups	1

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Parameter	Value
innodb_log_files_in_group	3
innodb_file_io_threads	4
innodb_lock_wait_timeout	600
innodb_log_file_size	5M
innodb_log_buffer_size	8M
innodb_buffer_pool_size	128M
innodb_additional_mem_pool_size	32M

Review the innodb_buffer_pool_size and the innodf_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:

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

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

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

Import the Data to the New Version of MySQL Database

Before you begin:

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

To import the exported data:

Enter:

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

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

Upgrade Planning Information

Upgrade Planning Information

Before you begin an upgrade you should:

- Read and become familiar with this document so that you have a clear understanding of what the upgrade requires.
- Review upgrade scenarios to determine which scenario you want to use.
- Review and record system configuration information.
- Review and record performance and tuning information.

Upgrade Planning Checklist

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

#	Upgrade Planning Checklist	Your Notes
1	Read through this entire document so that you have a clear understanding of what the upgrade requires.	
2	Download and review the following information from the Sterling Integrator 5.1 library page http://www.sterlingcommerce.com/Documentation/SI51/HomePage.htm . • System Requirements - With each release, Sterling Commerce introduces leading edge technology to improve and enhance its software. Review the System Requirements to confirm that your system and databases meet the requirements for this release. • Release Notes - Review the release notes to obtain information about issues and resolutions which have been identified for this release of Sterling Integrator. • What's New in this Release - Review this guide to find out about new features and functionality provided in this release of Sterling Integrator.	

#	Upgrade Planning Checklist	Your Notes
3	Review the Customer Center Knowledgebase and search for any additional information on upgrade issues.	
4	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.	
5	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.	
6	Record your performance tuning configuration.	
	You will need to restore these settings after the system has been upgraded.	
7	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.	
8	Determine if you have edited any of the pre-defined business processes.	
	If you are upgrading from 4.2 or if you are upgrading from 4.3 and are using the 5.0 GA or 5001 Media, 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.	
	If you are upgrading from 4.3 and are using the 5002 Media or later, customized business processes are preserved in the system and remain as the default.	
9	Determine if you have edited any of the property files (.properties or .properties.in).	
	The upgrade process overwrites these property files, unless these changes were made using the customer_overrides.properties file. Your previous property file edits might not be applicable this version of Sterling Integrator.	
10	Determine if you edited any of the following cdinterop files:	
	cdinterop-proxy-records.properties	
	cdinterop-spoe-auth.properties	
	cdinterop-spoe-policy.propertiescdinterop-user-records.properties	
	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.	

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#	Upgrade Planning Checklist	Your Notes
11	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.	
12	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 by using the Sterling Integrator EJB Adapter. This does not represent a WebLogic server for deploying the Application Console.	
13	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.	
14	Review the EDI Sequence Check Queue to ensure that no interchanges are in the queue. The EDI Sequence Check Queue is used for X12 and EDIFACT sequence and duplicate checking.	

Supporting Information and Detailed Procedures

Access the Sterling Integrator Knowledgebase

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

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

Prepare Your System for the Upgrade

Prepare Your System for the Upgrade

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

- Pre-Upgrade System Checklist
- Pre-Upgrade Database Checklist
- Pre-Upgrade Operating System Verification Checklist

Pre-Upgrade System Checklist

Before you begin an upgrade, you need to:

#	Pre-Upgrade System Checklist	Your Notes
1	Use the system requirements to verify that your system hardware and software meet the requirements specified for this release.	
	Verify you have the correct:	
	 Patches required by Java™ for the operation system Version of the JDK JDK Patches Absolute path to JDK and patches Database must match the version listed in the requirements 	
	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.	
2	Review your current system to determine if you need to apply a patch prior to upgrading.	
	If you have recently applied a hot patch, the hot patch may not be included in the latest patch. If you are not on the latest patch, the upgrade will fail. The following are the minimum patch level for upgrading to this release:	
	• Release 4.0 - Patch 4.0.3-5	
	Release 4.1 - base release or any patch	
	Release 4.2 - base release or any patch	

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#	Pre-Upgrade System Checklist	Your Notes
	Release 4.3 - base release or any patch	
3	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.	
	If you do not verify the IP addresses, your system may not operate properly after installing Sterling Integrator.	
4	If you are using a non-English environment, confirm that you are using the appropriate character set.	
5	Verify the file system has adequate free disk space.	
6	Obtain the most recent upgrade media.	
	It is a best practice to check the Product Updates & Downloads site to ensure you have the latest version of the media.	
7	Backup your Sterling Integrator installation directory and the database.	
	If there are problems with your upgraded system, the only way to ensure that you can roll-back to your previous version is to back up Sterling Integrator and the database.	
8	Archive your data.	
	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.	
9	Purge any unneeded data.	
10	Export any business objects that can not be upgraded. Including business processes, service configurations, trading partners, maps, etc.	
	The exported business object can be imported into the upgraded system if you need them.	
11	Create an process output log.	
12	Obtain/install the license file to use the new licensed features in this release.	
13	Disable the virus protection software on the server.	
	If the virus protection software is enabled, the upgrade will fail.	

Pre-Upgrade Database Checklist

Before you begin an installation, you need to:

#	System Verification Tasks	Your Notes
	If required, copy the Microsoft SQL Server 2000 Database to an SQL Server 2005 Database.	
	This is an optional procedure, and it is the customer's responsibility to perform it. (Sterling Commerce Customer Support can not help with this procedure.)	
	If you are using Oracle 8i with Sterling Integrator 4.0, upgrade to Oracle 9i before upgrading to Sterling Integrator 5.1.	
	If you plan to import an Oracle 9 or Oracle 10 database, while upgrading to Sterling Integrator 5.1, you must import the database without the indexes.	
	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 5.1 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.	

Pre-Upgrade Operating System Verification Checklist

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

For the Operating System	Operating System Configuration Checklist	Your Notes
HP-UX Operating System	Verify these settings: • Verify kernel parameters and establish the following minimum settings by running kctune command: • kctune max_thread_proc 1024 • kctune maxdsiz 2147483648 • kctune maxdsiz_64bit 8589934592 • kctune maxssiz 369098752 • kctune maxssiz_64bit 536870912 • Run ulimit utility, verify, and establish the following minimum settings: • ulimit -d = 2097152 (in kilobytes) or higher • ulimit -s = 360448 (in kilobytes) or higher	
AIX Operating System	You must specify the name of the installation directory name. The installation process creates the directory and beneath it, a directory called "install". To ensure that /install_dir/install has the necessary permissions, AIX users must run the following command on the parent directory of /install_dir/install before installation: chmod -R a-s <absolute path="">/install_dir_parent</absolute>	

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For the Operating System	Operating System Configuration Checklist	Your Notes
	where install_dir_parent is the directory in which /install_dir/install will be created.	
	For example, to specify	
	AIX_1/applications/test1/my_install as your installation directory, you could run the command from the AIX_1/applications directory (directly above the test1 directory):	
	chmod -R a-s test1	
	or from another location on the file system:	
	chmod -R a-s /AIX_1/applications/test1	
	This ensures that when the <i>my_install</i> directory is created during installation, it inherits the correct permissions from test1.	
Linux Operating System	You need to disable SELinux by enter the following:	
•	/etc/sysconfig/selinux: SELINUX=disabled	
	Ensure that /etc/hosts has short-names first for all entries. For example, 127.0.0.1localhostlocalhost.localdomain	
	If the base locale is English, verify:	
	that the LANG variable is en_US LANG variable is exported	
RedHat Enterprise Linux Operating	Make the following system changes:	
System	If the base locale for the system is English, edit the /etc/sysconfig/i18n file by changing the SUPPORTED variable from en_US.utf8 to en_US. You can also allow multiple support using the following format: en_US.utf8:en_US Save and close the /etc/sysconfig/i18n file. Edit the /etc/security/limits.conf file by adding the following lines:	
	•* hard nofile 8196	
	•* soft nofile 4096	
	•* hard memlock 3000000	
	• * soft memlock 3000000 • * hard nproc 16000	
	• * soft nproc 16000	
	•* hard stack 512000	
	•* soft stack 512000	
	This updates the system ulimits. For nofile, the recommended value is unlimited.	
	Save and close the /etc/security/limits.conf file. Reboot the system.	
Solaris Operating System	Set the following entries in the /etc/security/limits file:	
	nofiles = 4096 (recommended value is unlimited) set rlim_fd_max=4096 (limit is 65535) - hard limit	

For the Operating System	Operating System Configuration Checklist	Your Notes
	set rlim_fd_cur=4096 - soft limit	
	To make the setting effective as the hard limit, reboot the server or run the following command:	
	kill -1 inetd	
	To make the setting effective as the soft limit, use the parent shell configuration (for example, .profile). Then, reboot the server.	

Supporting Information and Detailed Procedures

Verify Your System Meets the System Requirements

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

The installation strictly enforces the following *System Requirements*:

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

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

Obtain Upgrade Media for 5.1

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

To obtain the most recent version of upgrade media:

- 1. Go to https://customer.sterlingcommerce.com.
- 2. Enter your **User Name** and **Password**.
- 3. 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 5.1.
- 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. Click Submit.

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

Download the JCE Distribution File for the IBM JDK 1.6

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

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

To obtain the zip file for the IBM JDK 1.6:

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

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

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

You will need this information during the installation process.

Download the JCE Distribution File for the SUN JDK 1.6

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

To obtain this file for the Sun JDK 1.6:

- 1. Open your browser and navigate to http://java.sun.com/javase/downloads/index.jsp.
- 2. At the bottom of the page (Additional Resources), locate the **Java Cryptography Extension (JCE) Unlimited Strength Jurisdiction Policy Files 6** and click **Download**.
- 3. Click the jce policy-6.zip link start the download.
- 4. Save the jce_policy-6.zip file to your system.
- Record the directory and the zip file name.
 You will need this information during the installation process.

License File

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

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

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

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

Obtain a License File

To obtain a license file:

- 1. Navigate to the Sterling Commerce Customer Center (https://customer.sterlingcommerce.com).
- 2. Click Support Center > Sterling Integrator > Key Requests.
- 3. Enter the following information:
 - Company Name
 - Contact Name
 - Phone Number
 - Fax number
 - Email Address

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

4. Click Submit.

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

Install the License Key

To install the license key from the command line:

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

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

Configure Snapshot for Microsoft SQL Server

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

Enter the following command to enable the snap shot feature:

ALTER DATABASE db_name SET READ_COMMITTED_SNAPSHOT ON;

Create Process Output Log

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

To create a process output log:

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

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

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

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

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

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

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

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

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

```
USE database_name

Go

EXEC sp_grantdbaccess 'login_name', 'user_name'

Go

EXEC sp_addrolemember 'db_owner', 'username'

Go

CHECKPOINT

Go

USE master

Go

EXEC sp_defaultdb 'username', 'database_name'

Go
```

Note:

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

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

Note:

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

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

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

Information Gathering Checklist

Information Gathering Checklist for Upgrade (UNIX/Linux Non-Cluster)

Before you begin the upgrade, you should review the information in the Information Gathering Checklist. The checklist contains all of the information that you will need to have while running the upgrade scripts. Supporting information and details are included at the end of this chapter.

The checklist contains:

- Brief descriptions for tasks, while more detailed procedures are provided after the checklist
- Information you need to gather to prior the starting the upgrade

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

#	Information Gathering Checklist for Upgrade	Your Notes
1	Determine which upgrade method you are going to use: • GUI-based • Text-based • Silent Installation	
2	Determine if you are going to run the pre-upgrade checks during the upgrade.	
3	Decide which type of security certificates you will use: The default self-signed SSL (Secure Sockets Layer) certificate that is automatically installed. A Certificate Authority-related certificate that you install before installing the software.	
4	If you are using an Oracle, Microsoft SQL Server, or DB2 database, decide if you are going to manually or automatically apply Database Definition Language (DDL) Statements (schema) to the database.	
5	If you are using an Oracle 11.1 database, you must set it up for native compilation by allocating space and by setting the plsql_native_library_dir parameter.	
6	Determine if the database password need to be encrypted.	

#	Information Gathering Checklist for Upgrade	Your Notes
7	Record the Hostname on which you plan to install the software.	
8	Determine if you are going to use FIPS (Federal Information Processing Standards) mode.	
9	Record the Directory Name where you plan to install the software.	
10	Record the Login to host machine	
11	Record the Password to the host machine.	
12	Record the path to the JDBC drivers.	
13	Record the path to the installation wizard and file name.	
14	Record the path to JDK.	
15	Record the path to the License File.	
16	Record the path to JCE file.	
17	Record the Host IP address.	
18	Record the Initial Port Number.	
19	Record the System passphase.	
20	Record the Administrative e-mail address to which system alert messages are sent.	
21	Record the Database vendor name.	
22	Record the Database user name.	
23	Record the Database password.	
24	Record the Database (catalog) name.	
25	Record the Database host name.	
26	For Oracle, Microsoft SQL Server, or MySQL, record the Path and file name for the JDBC Driver.	
27	For DB2, record the Absolute paths and file names for two JDBC drivers.	

Supporting Information and Detailed Procedures

Pre-Upgrade Checks

Pre-upgrade checks reviews Oracle, SQL Server, and DB2 database environments prior to starting the upgrade. This is an optional installation feature which looks for are common upgrade errors. The pre-upgrade checks ensure:

- SI_VERSION table exists
- Database character set is correct for Oracle and DB2
- Schedule start times are not later than the end times
- Passphrase entered matches the existing passphrase in the database

- Database implementation for Oracle Long Raw and BLOB
- User has permission to perform the upgrade
- Collation settings are validated for MS SQL
- OBJECT_NAME is table SCI_ENTITY is no longer than 100 characters
- Default schema you identified during upgrade matches the existing database

If any of these item are not validated, the upgrade fails. You are provided with an error message and must correct the situations and then restart the upgrade.

Security Certificates

Before you begin the installation, 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 the software.

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.

UNIX Accounts

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

Port Numbers

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

- A range of 200 consecutive open ports between 1025 and 65535 are required for this installation.
- The initial port number represents the beginning port number in the range.
- Make sure that port numbers in the port range are not used by any other applications on your system.

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

Database Definition Language (DDL) Statements

When you install Sterling Integrator, you can manually apply Database Definition Language (DDL) statements to your database tables instead of requiring the installation process to do it directly. This option is not available for MySQL databases.

This feature increases database security by reducing the database permissions of the Sterling Integrator database user. The rights to database objects 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.

If you:	Then
Choose to manually apply the DDL statements	Before you begin the installation, you will need to manually create the database schema using the SQL files in the /install_dir/install/repository/scripts directory.

If you:	Then	
	You need to apply the DDL statements in a specific order. To find an example of the correct order, run an installation where the database schema was applied automatically and then look in the installation log file.	
	The installation process will validate the database with a Sterling Integrator tool called DBVerify and warn you if there are issues, and will exit the installation.	
Choose NOT to manually apply the DDL statements	The installation will apply the DDL statements.	

Upgrade the Software

General UNIX/Linux Upgrade Information

Use one of the following methods to upgrade your system:

- Upgrade using the GUI-Based method
- Upgrade using the Text-Based method
- Upgrade using the Silent Install File method

The following are some general guidelines:

- If you are on Linux, do not use any soft/symbolic links in the path to the SCIInstallWizard.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 cannot be longer than 108 bytes.
- The directory path to cannot include any spaces.
- 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.

General UNIX/Linux Installation Wizard Information

The installation wizard provides:

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

Guidelines for IPv6 Addresses

Before using an IPv6 address during an installation, see IPv6 Capabilities section in System Requirements.

Consider the following IPv6 address information when planning the installation:

- 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 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.
- If you are using an IPv6 address and are going to configure Sterling Integrator as a dual stack host, after you complete the installation, you will need to add the IPv6 address (as the admin_host.3 property) to the noapp.properties_platform_ifcresources_ext .in file.

Upgrade using GUI-Based Method

Before you begin:

- You should have completed the *Information Gathering Checklist for Upgrade*.
- 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.
- Upgrade Pre-check is not available for MySQL.

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

- 1. From the upgrade media, copy SCIInstallWizard.jar and 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 Sterling Integrator Installer 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 your JCE file.
- 10. Enter the path to installation directory. If the directory does not exist, click **Yes** at the prompt *The directory does not exist, create it?*

The installer creates the directory (*install_dir*). Below the installation directory, the installer creates a directory named *install*. This directory contains the installation files.

- 11. Enter the path to the Sterling Integrator install jar file.
- 12. Enter the explicit IP address for the server or use the default value of localhost.
- 13. Enter the initial port number or use the default value of 8080.
- 14. Enter your system passphrase.
- 15. Re-enter the system passphrase.
- 16. Enter the administrative 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 disable FIPS mode.
- 19. Select the database that you want to use (Oracle, Microsoft SQL Server, DB2, or MySQL).
- 20. Select all options that apply to this upgrade:

Choices:	Action
This installation is an upgrade from a prior version	Select this option. By default, this check box is not selected.
This installation is for a cluster node 2 or higher	Do not select this option.
(Skip for MySQL) Apply database schema automatically?	 If yes, no action required. The default is to automatically apply the DDL statements. If you want to manually create the database schema, then clear the Apply database schema automatically check box. After the installation wizard stops, you must perform these additional steps: Manually create the database schema. Rename or delete the install_dir directory. Start the installation wizard again. When you are executing the scripts, it is important to execute the SQL scripts in a particular order. The SQL script order is dependant on the database configured with your system. See the database documentation for further information. Important: In version 5.1 of Sterling Integrator, there is an issue with this feature and the installation wizard. For information on the corrective workaround, see InQuira Article
Verbose install?	NFX11576. By default, the check box is not selected. Select the check box to generate the installation log. The events that occur during the installation are recorded in InstallSI.log file.

- 21. Enter the database connection information.
 - Database user name.
 - Database password (and confirmation).
 - Database catalog name.
 - Database host name. In Oracle, do not use an IP v6 address for the host name.
 - Database port.
 - (Oracle, Microsoft SQL Server, and MySQL only). Absolute path and file name for one JDBC driver file.
 - (DB2 only) Absolute paths and file names for two JDBC driver files. Use the Type-4 JDBC driver. This type of driver converts JDBC calls into the network protocol used directly by DB2, allowing a direct call from 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 documentation for slow performance in Oracle.

- 22. Review and confirm the database information.
- 23. (Skip if using MySQL) For Oracle, MSSQL and DB2, do you want to run the Upgrade Pre-check? Upgrade Pre-check is not available for MySQL.

If the pre-check generates an error message, you will need to resolve the error situation, before the upgrade can be restarted.

- If yes, click Next. Default is Yes. Then you will need to Confirm Running Upgrade Pre-Check.
- If no, click **No** to skip the pre-check.
- 24. Review the default **Install Actions**. The following check boxes are automatically selected for an upgrade. You cannot clear them.
 - Verify Operating System is supported
 - Verify the selected JDK is supported
 - Install Components
 - Save install files
 - Clean Up Files
- 25. Select the appropriate JDK. By default, the 64-bit JDK is selected.
- 26. If you want to create a desktop icon for launching Sterling Integrator, select the check box . By default, the check box is not selected.
- 27. Click **Next** to continue.

The **Installation Progress** screen appears. You can click **Show Details** 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 **Show Details**.

For more detailed information about the installation, refer to the /install_dir/install/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/install directory)
- InstallSI.log (in the /install_dir/install directory)
- 29. If you are using the AIX operating system and are using IPv6:
 - Navigate to the /install_dir/install/properties
 - Add the following to the sandbox.config file: IPV4STACk=false
 - Navigate to the /install dir/install/bin
 - Enter ./setupfile.sh
- 30. Start Sterling Integrator.

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

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

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

Where *host* is the IP address and *port* is port number where the system resides.

31. After performing the upgrade, determine if you need to apply any patches.

Upgrade Using the Text-Based Method

Before you begin:

- You should have completed the *Information Gathering Checklist for Upgrade*.
- 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.
- Upgrade Pre-check is not available for MySQL.
- 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, refer to your *Information Gathering Checklist for Upgrade* and follow these steps:

- 1. From the upgrade media, copy SCIInstallWizard.jar and 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 installation wizards 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 value 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 path to installation directory. If the directory does not exist, click **Yes** at the prompt *The directory does not exist, create it?*

The installer creates the directory (*install_dir*). Below the installation directory, the installer creates a directory named *install*. This directory contains the installation files.

- 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.
- 14. Enter your system passphrase.
- 15. Enter your system passphrase again to confirm it.
- 16. Enter the administrative 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 value is **false**.
- 19. Enter the number of the database vendor (Oracle, Microsoft SQL Server, DB2, or MySQL).
- 20. At the *This installation is an upgrade from a prior version prompt*, enter **true** to continue as an upgrade.
- 21. (Skip for MySQL) At the *Apply database schema automatically?* prompt:
 - To automatically apply the database schema, press **Enter**. The default is to automatically apply the DDL statements.
 - To manually create the database schema, enter false. After the installation wizard stops, you must perform these additional steps:
 - 1. Manually create the database schema.
 - 2. Rename or delete the *install_dir* directory.
 - 3. Start the installation wizard again.

When you are executing the scripts, it is important to execute the SQL scripts in a particular order. The SQL script order is dependant on the database configured with your system. See the database documentation for further information.

Important: In version 5.1 of Sterling Integrator, there is an issue with this feature and the installation wizard. For information on the corrective workaround, see InQuira Article NFX11576.

- 22. Do you want to upgrade information to be stored in the InstallSIlog file (Verbose Install)?
 - If no, press **Enter**. Default value 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). If you enter the database password incorrectly at the first password prompt (not the confirmation prompt), you will have to re-start the installation.
 - Database catalog name.
 - Database host name. In Oracle, do not use an IP v6 address for the host name.
 - Database host port number
 - (Oracle and Microsoft SQL Server only) Absolute 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 to the DB2 server.
 - (Oracle only) At the *What Datatype would you like to use?* prompt, choose a data type for caching (BLOB or Long Raw).

For	Step:
BLOB (binary large object) columns	Enter 1 (the default value). 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.
Long Raw data type	Enter 2.

- 24. Review the Database Information.
- 25. (Skip if using MySQL) For Oracle, Sequel and DB2, do you want to run upgrade pre-checks? Upgrade Pre-check is not available for MySQL.
 - If yes, enter 1. To confirm that you want to run the upgrade pre-check, press **Enter**.
 - If no, enter 2.

If the pre-check generates an error message, you will need to resolve the error situation, before the upgrade can be restarted.

- 26. 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 value), press **Enter**.
- 27. Do you want to create a desktop icon for accessing Sterling Integrator?
 - If yes, enter true.
 - If no, press **Enter**. Default value 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.

28. 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)
- 29. If you are using the AIX operating system and are using IPv6:
 - Navigate to the /install_dir/install/properties
 - Add the following to the sandbox.config file: IPV4STACk=false
 - Navigate to the /install dir/install/bin
 - Enter ./setupfile.sh
- 30. 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 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 later.

31. After performing the upgrade, determine if you need to apply any patches.

Silent File Method for Upgrading

To use a 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 the file name and location.

Create the Silent Install File for an Upgrade

You need to create a silent install file using a text editor. The following entries correlate to prompts in the upgrade procedure.

Silent Install File Entry	Description	
IPV4STACK	(Required for AIX) Set this parameter to false. For example: IPVSTACK=false	
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: /absolutePath/Full_License.xml	

Silent Install File Entry	Description	
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: /absolutePath/unrestrict123.zip	
INSTALL_DIR	(Required) The directory that includes directories like bin and properties. The INSTALL_DIR property cannot point to a pre-existing directory or the installation will fail. The path to this directory might include the following: • The installation directory that you specify during an interactive installation. • The subdirectory install. Although you can enter your own path, the /install_dir/install path matches the path that is created during an interactive installation. It also matches the path that is used in documentation.	
UPGRADE	(Required) Indicates if you are upgrading. Default: false	
DB_VENDOR	(Required) Database vendor. Valid values: Oracle MSSQL2005 (use this value for Microsoft SQL 2005 and 2008) DB2 MySQL	
INSTALL_IP	(Required) Host IP address. Valid values: • localhost (default) • (your IP address) Caution: Before applying an IPv6 address, see IPv6 Capabilities section in 5.1 System Requirements guide. 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 5.1 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.	
PORT1	(Required) Base port for ASI server. Ports are assigned consecutively from this port.	

Silent Install File Entry	Description
	Example: 12345 Default: 8080
APSERVER_PASS	(Required) Passphrase used to secure all encrypted data in database. Default: (blank)
SI_ADMIN_MAIL_ADDR	(Required) E-mail address for the administrative user. Example: abc@xyz.com
SI_ADMIN_SMTP_HOST	(Required) Valid SMTP host through which the system can e-mail the administrative user. Example: mail.xyz.com
REINIT_DB	(Required) Indicates if database should be initialized. For a single node installation, this property is true. (Default)
FIPS_MODE	(Optional) Indicates if you are using FIPS (Federal Information Processing Standards) mode. Valid values: • 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

Silent Install File Entry	Description
DB_DRIVERS	 (Required) Full path to JDBC driver files. If DB_VENDOR is: Oracle, MSSQL, or MySQL, specify one driver. DB2, specify two drivers. If you specify more than one driver, use colons (:) to separate the file names.
	Examples: • JDBC_driver_dir/jdbc.jar • JDBC_driver_dir/db2_1_jdbc.jar:JDBC_driver_dir/db2_2_jdbc.jar
DB_CREATE_SCHEMA	(Required) Indicates if you want the database schema automatically created. Valid values: • 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.
DEBUG	(Optional) Records events that occur during the installation in InstallSI.log file. Valid values: • true - records events that occur during the installation. • false (default) - does not record the events that occur during installation.
JDK64BIT	(Optional) 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: • true (default) - (64-bit) • false - (32-bit)
Icons	(Optional) Indicates if you want to create a desktop icon for accessing . Valid values: • true - Create a desktop icon. • false (default) - Do not create a desktop icon.

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

Silent Install File Entry	Description	
DB_DRIVERS_VERSION	(Optional) Free form version string for JDBC driver. This is informational only. Example: 8_1_5	

Silent Install File Entry	Description
JDBC_VENDOR	(Optional) JDBC driver vendor. Used when multiple vendors are available (DB2 iSeries: DB2APP, DB2TOOLBOX, DB2). Default: Microsoft
LOAD_FACTORY_SETUP	(Optional) Indicates whether factory setup should be loaded during installation Valid values: • true (default) loads factory setup during installation. • false - does not load factory setup during installation. Run loadDefaults command after installation. To manually set LOAD_FACTORY_SETUP to false after an installation where LOAD_FACTORY_SETUP=true (the default value), change LOAD_FACTORY_SETUP to false in sandbox.cfg file.
CONFIG_GS	(Optional) Indicates whether integration with Gentran Server should be configured. Default: No
NO_DBVERIFY	(Optional) Valid values are true/false. When set to true during installation and installservice, dbverify will not be run. This means that the will not generate DDL to make the database like the XML entity repository.

Upgrade Using the Silent Install File

If you are using AIX and IPv6, you must set the IPVSTACK parameter to false in the silent installation file. To upgrade using a silent installation file, refer to your preinstallation checklist and follow the steps below:

- 1. From the upgrade media, copy to a UNIX/Linux directory.
- 2. If you want to run the upgrade pre-check, from the upgrade media, copy SCIUpgradePreCheck.jar to a UNIX/Linux directory.
- 3. Set up your silent installation file and record the file name and location.
- 4. Navigate to your working directory.
- 5. If you want to run the pre-check, enter the following command, which includes paths to the JDK, the SCIUpgradePreCheck.jar file, and the silent installation file:

/absolutePath/bin/java -jar /absolutePath/SCIUpgradePreCheck.jar -f /absolutePath/SilentInstallFile

The validation starts. If the pre-check generates an error message, you must resolve the error situation, before the upgrade can be restarted.

When the pre-check finishes without any errors, the system displays the following message:

SI upgrade pre-check has been completed successfully

6. To start the upgrade, enter: /absolutePath/bin/java -jar /absolutePath/ -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.

- 7. (Skip this step if you are applying database schema automatically.) If you are going to manually create the database schema, the installation will stop. After it has stopped, you need to perform the following steps:
 - 1. Manually create the database schema.
 - 2. Rename or delete the *install dir* directory.
 - 3. Start the silent installation again.

When you are executing the scripts, it is important to execute the SQL scripts in a particular order. The SQL script order is dependant on the database configured with your system. See the database documentation for further information.

Important: In version 5.1 of Sterling Integrator, there is an issue with this feature and the installation wizard. For information on the corrective workaround, see InQuira Article NFX11576.

8. After performing the upgrade, determine if you need to apply the latest patch.

Validate the Upgrade

Validate the Upgrade Checklist

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

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

Start Sterling Integrator

To start Sterling Integrator:

- 1. Navigate to /install_dir/install/bin.
- 2. Enter ./run.sh.
- 3. Enter your passphrase.

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

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

Access Sterling Integrator

To log in to Sterling Integrator:

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

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

Validate the Installation

Validate the installation by testing a sample business process:

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

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

Stop Sterling Integrator (Hard Stop)

A hard stop halts the system without waiting for business processes to finish. Hard stops may result in loss of data in unfinished processes.

To run a hard stop:

- 1. Navigate to /install_dir/install/bin.
- 2. Enter ./hardstop.sh.
- 3. Enter your passphrase.

Stop Sterling Integrator (Soft Stop)

A soft stop halts the system after all the business processes finish running. To soft stop in a UNIX or Linux environment:

- You can select **Operations > System > Troubleshooter** and click **Stop the System**.
- You can perform the soft stop from the command line interface.

To run a soft stop from the command line:

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

Post Upgrade Configuration

Post Upgrade Configuration Checklist

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

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

#	Post Upgrade Configuration Checklist	Your Notes
15	Add Advanced File Transfer Tab	
16	Restore Performance Tuning Configuration	
17	Reconfigure Archive Settings	
18	Correct Missing Manager ID	

Determine if You need to Apply a Maintenance Patch in UNIX/Linux Environment

Patches contain cumulative fixes for a specific version of Sterling Integrator. Patch files are available at:

https://customer.sterlingcommerce.com.

Because each patch contains the fixes from previous patches, you only need to install the most recent patch. Patch files are named using the following naming convention:

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

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

si <release number> build <build number> patch info.pdf

Before you install the patch, review the following items:

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

Change Default Passwords

This upgrade changes the administrative password to the default password.

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

Disable Services

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

Download Sterling Integrator Tools

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

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

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

Changes to Network Interface Bindings

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

Update Property File for Network Interface Binding Changes

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

1. Locate the **admin_host** parameter.

The default settings are:

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

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

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

2. Correct the parameters as necessary.

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

Update Dashboard for Network Interface Binding Changes

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

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

1. Locate the localmode.interface parameter. The default setting is unrestricted.

Unrestricted Setting (Default)

localmode.interface=*

2. To restrict access to the Dashboard, enter the network interface that you want to support.

Restricted Setting

localmode.interface=hostname1

- 3. Stop Sterling Integrator.
- 4. Navigate to the *install_dir*.
- 5. Navigate to the bin directory.
- 6. Run the setupfiles.sh (UNIX) or setup.cmd (Windows).
- 7. Start Sterling Integrator.

Enable Business Processes

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

Property Files Configuration

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

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

- For UNIX, /install_dir/install/properties directory
- For Windows, \install_dir\install\properties directory

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

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

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

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

Add cdinterop Files

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

Review the EDI Sequence Check Queue

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

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

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

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

Configure Document File Systems

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

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

Add Third-Party Libraries

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

Configure 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

The following adapters need special consideration following an upgrade:

- JDBC Adapter and Lightweight JDBC Adapter
- File System Adapter and Command Line2 Adapters
- Odette FTP Adapter

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.

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 release. Ensure that you create new directories and save scripts outside of the current installation directory and edit each configuration to use the appropriate directories and scripts.

Consider the following:

- If you are using the Command Line2 adapter and have located the CLA2Client.jar file anywhere other than the default location, you must replace it with the new version. For information about the default location and how to start the Command Line2 adapter, see the *Command Line2 adapter*.
- If you are upgrading to Sterling Integrator 5.1 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 UNIX directory or in the \install_dir\install\client\cmdline2 for Windows. If you installed the CLA2Client.jar file anywhere other than the default location, you must replace each copy of the file with the new version. If you only installed it in the default location, the update occurs automatically during the upgrade process.
- If you are upgrading to Sterling Integrator 5.1 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 UNIX directory or in the \install_dir\install\client\cmdline2 for Windows. If you installed the CLAClient.jar file anywhere other than the default location, you must replace each copy of the file with the new version. If you only installed it in the default location, the update occurs automatically during the upgrade process.

The CLA instances are now pointing to the CLA2 Service definition. After importing old service instances of CLA onto Sterling Integrator 5.1, 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=""></authenticationcertificate>	Add Structure, if used.	OFTP 2.0: Mandatory for security only. Structure
	<subject>string</subject>		may be repeated.
	< ssuer>string ssuer		
	<serial> Bignumber_string</serial>		
Physical Partner	<authenticationcertificate< td=""><td>Add Stucture, if used.</td><td>OFTP 2.0: Mandatory for</td></authenticationcertificate<>	Add Stucture, if used.	OFTP 2.0: Mandatory for
	type ="Private Key">		security only.
	<subject>string</subject>		
	<lssuer>string</lssuer>		
	<serial>Bignumber_string</serial>		
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< td=""><td>Add structure, if used.</td><td>OFTP 2.0: Mandatory for</td></sslcertificate<>	Add structure, if used.	OFTP 2.0: Mandatory for
	type ="">		security, only. Structure may be repeated.
	<subject>string</subject>		may be repeated.
	<lssuer>string</lssuer>		
	<serial> Bignumber_string</serial>		
Physical Partner Contract	Description	Add field and description content.	Mandatory in OFTP Partner database.
Physical Partner Contract	MultipleLoginSessions		Now used.

	ì		
Physical Partner Contract	DuplicateFilePeriod	Rename	
Contract		DuplicateFileProcessingTestings	
		To DuplicateFilePeriod	
Physical Partner Contract	SessionLogLevel	Add fields.	Optional
Physical Partner Contract	GroupNameList	Add fields, if used.	Optional
Physical Partner Contract	SecureAuthentication	Add fields.	OFTP 2.0: Mandatory
Physical Partner Contract	<timescheduletable></timescheduletable>	Delete structure and create schedules in the Scheduler.	Initiator Business Process and Business Process
	<timescheduletable></timescheduletable>		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< td=""><td>Add structure, if used.</td><td>OFTP 2.0: Mandatory for</td></fileservicecertificate<>	Add structure, if used.	OFTP 2.0: Mandatory for
	type =""> <subject>string</subject>		security, only. Structure
	<lssuer>string</lssuer>		may be repeated.
	<serial>string</serial>		
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	InboundBusinessProcessUser	Add field, if used.	Optional, if no Inbound business process is specified.

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

Add Advanced File Transfer Tab

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

- 1. Log in as Admin.
- 2. Click Manage Layout.
- 3. Click Add Pane.
- 4. Enter the following name: Advanced File Transfer
- 5. Click Apply.
- 6. Click the customize icon for the new Advanced File Transfer tab.
- 7. Click Add Portlet.
- 8. Select the Add box for **Advanced File Transfer Management**.
- 9. Click Apply.

- 10. Select **Clear Borders and Title** from the Decoration menu.
- 11. Click Save and Apply.

Restore Performance Tuning Configuration

Before you begin this procedure, you need to add the Advanced File Transfer Tab.

To restore the performance tuning configuration:

- 1. From the Administration Menu, select Operations > System > Performance > Tuning.
- 2. Next to Edit Performance Configuration, click Go!
- 3. Click Edit settings.

Reconfigure Archive Settings

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

To reconfigure your Archive settings, use the following procedure:

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

Correct Missing Manager IDs

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

Software Maintenance

Determine if You need to Apply a Maintenance Patch in UNIX/Linux Environment

Patches contain cumulative fixes for a specific version of Sterling Integrator. Patch files are available at:

https://customer.sterlingcommerce.com.

Because each patch contains the fixes from previous patches, you only need to install the most recent patch. Patch files are named using the following naming convention:

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

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

si_<release number>_build_<build number>_patch_info.pdf

Before you install the patch, review the following items:

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

Install a Maintenance Patch

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

- 1. Go to the Sterling Commerce Support on Demand Web site, at https://support.sterlingcommerce.com/user/login.aspx.
- 2. Download the most recent patch file for your version of Sterling Integrator and record the absolute path to the downloaded file. Do not rename the file. If you use FTP, you must use Binary mode.
- 3. If you are using a database other than MySQL, verify that the database server is up and ready to accept connections.
- 4. Stop Sterling Integrator.
- 5. Perform a full backup of the Sterling Integrator installation directory, including all subdirectories.
- 6. Perform a back up of the database.
- 7. If you edited any property files, ensure that the associated properties in files have the most current changes. Property files will be overwritten with the contents of the associated properties in files during the patch installation.
- 8. Is the database password encrypted? If Yes, decrypt the password.
- 9. Navigate to the directory where Sterling Integrator is installed. Enter:

```
cd /install dir/install/bin
```

10. Enter:

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

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

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

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

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

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

Install a Hot-Fix

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

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

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

To install a hot-fix:

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

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, re-encrypt the password.
- 11. Start the Sterling Integrator.
- 12. Navigate to /install_dir/install/bin.
- 13. Enter . /dump_info.sh to verify that the hot-fix was successfully installed.

DB Checksum Tool

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

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

Perform a Checksum

To run the DB Checksum tool:

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

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

Where:

- -d is the mode to dump the difference of resource checksum between the default resource and latest system resource.
- -i is the resource type integer (optional).
- 1 is WFD.
- 2 is MAP.
- 3 is SCHEMA.
- 4 is SII.
- 5 is TEMPLATE.
- -r is the resource name (optional). For example, wfd, map, schema, sii, or template.
- -o is the file name to output all the messages (optional).
- -g is the file name that lists all the ignored resources (optional).
- -h is the help screen.

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

Patch Changes Report

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

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

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

Example: Patch Changes Report

The following is an example of a Patch Changes Report. Summary of Changes Patch ID: Platform 2.0 Patch Changes: 1287 Number of Files Deleted: 0 Number of JARs Removed: 2 Number of JARs Added: 0 Number of Files Added: 3 Number of Files Changed: 3 Number of Properties Added: 4 Number of BPs Added: 4 Number of Service Instances Added: 2 Number of Service Definitions Added: 3 Number of Templates Added: 0 Number of Reports Added: 0 Number of Maps Added: 3 Number of Schemas Added: 3 Number of Business Rules Added: 0 List of JARs Removed: JAR Removed: /SAMPLE_INSTALL_1/jar/jaf/1_0_2/activation.jar Time: Wed May 13 15:23:08 EDT 2009 JAR Removed: /SAMPLE_INSTALL_1/jar/commons_logging/1_0_3/commons-logging-api.jar Time: Wed May 13 15:23:08 EDT 2009 List of Files Added: File Added: /SAMPLE INSTALL 1/bin/sql/fix db2 schema.sql Time: Wed May 13 15:21:30 EDT 2009 File Added: /SAMPLE_INSTALL_1/bin/sql/fix_db2iseries_schema.sql Time: Wed May 13 15:21:30 EDT 2009 File Added: /SAMPLE_INSTALL_1/bin/errorQueueManager.sh.in Time: Wed May 13 15:21:30 EDT 2009 List of Files Changed: File Changed: /SAMPLE_INSTALL_1/properties/lang/en/Reports_en.properties File Changed: /SAMPLE INSTALL 1/properties/lang/es/Reports es.properties File Changed: /SAMPLE_INSTALL_1/properties/lang/fr/Reports_fr.properties List of Properties Added: Property Added: /SAMPLE INSTALL 1/properties/filesToRemove.txt Property Added: /SAMPLE_INSTALL_1/properties/filesToRemove.txt.in Property Added: /SAMPLE_INSTALL_1/properties/csr.properties.sample Property Added: /SAMPLE_INSTALL_1/properties/csr.properties.sample.in

```
List of BPs Added:
BP Added: Schedule_AssociateBPsToDocs.bpml version: 4
Time: Wed May 13 15:23:07 EDT 2009
BP Added: Recovery.bpml version: 17
Time: Wed May 13 15:23:07 EDT 2009
BP Added: Schedule_AutoTerminateService.bpml version: 10
Time: Wed May 13 15:23:07 EDT 2009
BP Added: Schedule_DBMonitorService.bpml version: 1
Time: Wed May 13 15:23:08 EDT 2009
List of Service Instances Added:
Service Instance Added: RetentionProcessor version: 2
Time: Wed May 13 15:23:28 EDT 2009
Service Instance Added: MESAHttpServerAdapter version: 1
Time: Wed May 13 15:25:11 EDT 2009
List of Service Definitions Added:
Service Definition Added: LockServiceType
Time: Wed May 13 15:22:58 EDT 2009
Service Definition Added: XAPIServiceType
Time: Wed May 13 15:22:59 EDT 2009
Service Definition Added: CleanLockServiceType
Time: Wed May 13 15:22:59 EDT 2009
List of Templates Added:
Template Added: Normalize
Time: Wed May 13 15:23:26 EDT 2009
Template Added: Derive
Time: Wed May 13 15:23:26 EDT 2009
List of Maps Added:
Map Added: IBMPutResponseToXML
Time: Wed May 13 15:24:05 EDT 2009
Map Added: http_headers
Time: Wed May 13 15:24:36 EDT 2009
Map Added: OracleHttpHeaders
Time: Wed May 13 15:24:51 EDT 2009
List of Schemas Added:
Schema Added: E5_V20_Acknowledge_Result.dtd from file:
E5_V20_Acknowledge_Result
Time: Wed May 13 15:24:36 EDT 2009
Schema Added: E5_V20_Acknowledge_Submit.dtd from file:
E5_V20_Acknowledge_Submit
Time: Wed May 13 15:24:36 EDT 2009
Schema Added: E5_V20_APIs_Result.dtd from file: E5_V20_APIs_Result
Time: Wed May 13 15:24:36 EDT 2009
```

Uninstall the Software

Uninstall the Sterling Integrator

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

Additionally, you may perform the following tasks:

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

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

- 1. Stop the Sterling Integrator and wait for shutdown to complete. If you begin removing files before all business processes and the Sterling Integrator are stopped, you may be unable to remove the Sterling Integrator successfully.
- 2. Back up the file system and database.
 - This step is optional. However, by backing up the file system and database, you are ensured that the Sterling Integrator is completely recoverable.
- 3. Remove the installation directory by entering the following command in the parent directory of your installation directory:

```
rm -rf install_dir
```

- 4. If you use an Oracle, Microsoft SQL Server, or DB2 database, these remain intact even after you remove the Sterling Integrator from the server. If you no longer want to reference the data, contact your database administrator about removing unwanted tables and recovering the database space where the Sterling Integrator used to reside.
- 5. Manually remove the JDK:
 - a) Navigate into the _uninst subdirectory of your JDK installation directory
 - b) Enter ./uninstall.sh
- 6. After you remove the Sterling Integrator from the server, you can remove Eclipse, and any tools that were downloaded to the desktop, including the following:
 - Map Editor and associated standards

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

• Graphical Process Modeler

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

• Web Template Designer

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

- (If licensed) MESA Developer Studio plug-ins, including:
 - MESA Developer Studio Software Development Kit (SDK)
 - MESA Developer Studio Skin 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

Sterling Integrator User Documentation

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

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

Access the Online Documentation

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

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

After you are in the documentation library, you can:

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

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

Request a Documentation CD

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

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

Troubleshooting Tips

Troubleshooting Tips: UNIX/Linux Non-Cluster Environment

Situation	Message or Symptom	Explanation/Resolution
Installing	You encounter errors or problems during installation.	Explanation
		The installation creates several log files that you can use to diagnose problems like the failure of an installation.
		Resolution
		Examine the log files generated during installation:
		ant.install.log (in the <i>install_dir</i> directory) <i>install_dir</i> /PreInstallSI.log
Installing	When you entered an absolute path during installation, a message indicated that the command was not found.	Explanation
		You entered an incorrect path. Check the information entered.
		Resolution
		Enter the correct path.
Installing	The license file cannot be found.	Explanation
		You did not obtain the license file.
		The license file is corrupt.
		• You downloaded the license file to a PC but have not moved it to the server.
		Resolution
		You need to obtain the license file. If the license file resides on a PC, save the license file to the server.
Installing a desktop tool or resource	Cannot download any of the following:	Explanation
		When you install the Sterling Integrator, system files are created
	Map Editor and associated standardsGraphical Process Modeler	that contain an internal IP address. If you install the Sterling Integrator behind a firewall, and your firewall is configured to accept an external IP address from a client computer, you may

Situation	Message or Symptom	Explanation/Resolution
	Web Template Designer (If licensed) MESA Developer Studio plug-ins, including:	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.
	MESA Developer Studio	Resolution
	MECA Dovolopor Ctudio Clain	Modify the system files that contain the invalid IP address. Follow these steps:
		 Navigate to /install_dir/install/bin. Enter the following command followed by the external IP address:
		./patchJNLP.sh external_IP_address
CI		3. Stop the Sterling Integrator.4. Restart the Sterling Integrator.
Installing	Memory and ulimit errors.	Explanation
		The installation fails with memory and ulimit errors.
		Resolution
		 Refer to the Viewing and Editing Performance Configuration Settings in the Performance Management documentation. Modify your memory setting accordingly. Refer to the Operating System Configuration Checklist and tune the ulimit settings.
Installing (HP-UX 11.31)	the @ key is not recognized.	Explanation
		The @ key is being mapped to kill or eol, it needs to be mapped to another character.
		Resolution
		This resolution only applies to HP-UX 11.31.
		Map the @ key to another character.
		Note: If you need want to see what the key is mapped to, use the stty -a command.

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