Sterling Integrator®

UNIX/Linux Non-Cluster Installation

Version 5.0

Sterling Commerce
An IBM Company

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Chapter 1

Introduction

Use the Sterling Integrator *5.0 UNIX/Linux Non-Cluster Installation Guide* to install Sterling Integrator 5.0 in a UNIX/Linux non-cluster (single node) environment.

This guide focuses on these installation tasks, including:

* Setting up the database
* Installing the Sterling Integrator software
* Configuring installation utilities
* Configuring Sterling Integrator for a non-English environment
* Using Sterling Integrator with Gentran:Server for UNIX

For upgrades, use the Sterling Integrator *5.0 UNIX/Linux Non-Cluster Upgrade Guide*.

Setting Up the Database (UNIX or Linux)

Creating and Configuring the Database Server (UNIX/Linux)

You must install, create, and configure a database so that each Sterling Integrator instance has a dedicated schema and login for the database.

Caution: If you are reinstalling the Sterling Integrator, be aware that data in your existing database will be deleted. To prevent this, either back up the existing database or save it under a different name.

Caution: After creating and configuring your database, recycle the database to apply the changes.

In a UNIX/Linux environment, the Sterling Integrator can support the following databases:

◆ Oracle®

◆ DB2

◆ Microsoft SQL Server

◆ MySQL

Note: MySQL is case-insensitive for searches with string values. For example, the search results will be the same when you search for users 'Admin' and 'admin'. As a result, it impacts searches for maps, business processes, services, mailboxes, user names, and other data stored in the database.

See *System Requirements* for supported version information.

Database Sizing (UNIX/Linux)

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

Capacity Planning

There are many factors to consider when estimating the amount of disk space that will be required for the Sterling Integrator. As a result, trying to consider all growth factors is impractical because the user may not know the answers to many questions that are required to do a detailed forecast. Over the years the cost of disks has dramatically decreased, and the capacity and speed of disks has increased. The method of how

information system managers order disk capacity has also changed from purchasing disk arrays that are dedicated to a particular database server and project to the concept of SANS.

The Sterling Integrator provides a methodology to estimate your initial disk requirements. Consider the confidence that you have in your data estimates when making the final purchase decision and adjust accordingly. After the initial purchase and production deployment, disk growth should be tracked for future purchase forecasts.

Tracking and Estimating Future Disk Requirements

You should track your actual database storage usage and the number of database records regularly. Correlating these two metrics enabled you to plan your future disk requirements. Moreover, determining the average amount of space used for each order line or shipment line, enables you to accurately predict your future growth requirements.

Using an Oracle Database (UNIX/Linux)

You can use an Oracle database for maintaining information on Sterling Integrator. The following sections provide the necessary steps to install and configure an Oracle database for production.

To use an Oracle database, follow this process:

- Create the database. Refer to the Oracle documentation for information about creating the database, including creating a schema repository, login, and tablespace. Be sure to install the correct version and patches.
- Refer *Configuring an Oracle Instance (UNIX/Linux)* on page 8 to configure an Oracle instance.
- Refer *Configuring Rollback in Oracle* on page 10 to configure rollback in Oracle.
- Refer *Installing the JDBC Driver in Oracle (UNIX/Linux)* on page 10 to install JDBC driver in Oracle.
- Refer *Enabling Failover in a Multiple Node Oracle RAC Database Cluster (UNIX/Linux)* on page 11 to enable failover in multiple node RAC database cluster.

Configuring an Oracle Instance (UNIX/Linux)

To configure an Oracle instance to work with Sterling Integrator, follow these steps:

1. If you do not have Oracle installed, follow the installation procedures in your Oracle installation manuals. Ensure that you have installed the supported version and patches. See *System Requirements* for supported version information.
2. Run the create instance procedure. Use `AL32UTF8` as character set.
3. Configure the `INIT<INSTANCE_NAME>.ORA` file for Oracle. Sterling Integrator requires the following parameter settings in your Oracle database:

Parameter	Value
Number of open cursors (OPEN_CURSORS)	Greater than or equal to 2000

Parameter	Value
Shared pool size (SHARED_POOL_SIZE)	Greater than or equal to 90000000
Large pool size (LARGE_POOL_SIZE)	Greater than or equal to 614400
Java pool size (JAVA_POOL_SIZE)	Greater than or equal to 20971520
Number of processes (PROCESSES)	Greater than 500
	Must be greater than the number of connections required by all nodes of Sterling Integrator.
	Sum of all max pool sizes in Sterling Integrator + Possible usage of buffer connections from the Sterling Integrator pools + Connections required for other operational management tools
	This setting needs to be set high enough to accommodate the expected peak connections from Sterling Integrator plus the possible usage of buffer connections from the Sterling Integrator pools as well as additional connections for other operational management tools.
Log buffer (LOG_BUFFER)	Greater than or equal to 163840
Database block size (DB_BLOCK_SIZE)	Greater than or equal to 8192
Sort area size (SORT_AREA_SIZE)	Greater than or equal to 65536 (for backward compatibility with Oracle 9i database).
Sort area retained size (SORT_AREA_RETAINED_SIZE)	Greater than or equal to 65536 (for backward compatibility with Oracle 9i database).
Max extends	Unlimited
Character set	AL32UTF8
NLS length semantics (NLS_LENGTH_SEMANTICS)	CHAR
SGA maximum size (SGA_MAX_SIZE)	1 GB to n GB, depending on the amount of physical memory on your database server. If the server is running only this database, up to 80% of physical memory.
SGA components total size (SGA_TARGET)	
PGA target aggregate memory (PGA_AGGREGATE_TARGET)	
Cursor sharing (cursor_sharing)	Exact
Timed Statistics (timed_statistics)	True
Optimizer mode (optimizer_mode)	All_rows
Database cache size (db_cache_size)	Greater than or equal to 19200

Note: When you change the multi-byte character set to CHAR by setting nls_length_semantics = CHAR, Oracle reserves space equivalent to 'n' chars, which is more than 'n' bytes.

4. Identify or create a tablespace for Sterling Integrator user tables and indexes to reside.

5. Create a user for Sterling Integrator.

    Unless specifically stated for a given task, the Sterling Integrator user does not require database administrator (DBA) privileges.

    The following are the privileges required by the Sterling Integrator administrative user for creating and modifying the Oracle database:

    - ◆ GRANT "CONNECT" TO SI_USER

    - ◆ ALTER USER SI_USER DEFAULT ROLE "CONNECT"

    - ◆ GRANT CREATE SEQUENCE TO SI_USER

    - ◆ GRANT CREATE TABLE TO SI_USER

    - ◆ GRANT CREATE TRIGGER TO SI_USER

    - ◆ GRANT SELECT ON CTXSYS.CTX_USER_INDEXES TO SI_USER

    - ◆ GRANT SELECT ON SYS.DBA_DATA_FILES TO SI_USER

    - ◆ GRANT SELECT ON SYS.DBA_FREE_SPACE TO SI_USER

    - ◆ GRANT SELECT ON SYS.DBA_USERS TO SI_USER

    - ◆ GRANT SELECT ON SYS.V_$PARAMETER TO SI_USER

Note: Ensure that the user who is responsible for creating and modifying the Oracle database has a specified quota (extent) assigned to him in the tablespace even if the user was assigned an unlimited tablespace when the user was created. Otherwise, the installer will throw the *ORA-01950: no privileges on tablespace name* error.

Note: If you are using Oracle AQ, then grant the AQ_ADMINISTRATOR_ROLE permission.

Configuring Rollback in Oracle

You can rollback changes in Oracle using AUTO UNDO management. It is recommended that you use this option. This will avoid any manual monitoring of UNDO segments.

If a server is upgraded from Oracle 8i, set the UNDO_MANAGEMENT=AUTO parameter in init<SID>.ora. Your database administrator needs to determine the UNDO_RETENTION setting. Ensure that the file system, which has the UNDOTBS1 tablespace, has enough space to use the AUTOGROW setting.

Installing the JDBC Driver in Oracle (UNIX/Linux)

The Sterling Integrator requires the appropriate JDBC driver for Oracle database. These drivers are thin client based pure Java JDBC 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.

Enabling Failover in a Multiple Node Oracle RAC Database Cluster (UNIX/Linux)

To enable failover in a multiple node Oracle RAC database cluster in UNIX/Linux, do the following:

1. Navigate to the *install_dir*/install/properties directory.

2. In the sandbox.cfg file, add a new property for ORACLE_JDBC_URL, which contains the Oracle RAC connection URL.

   The following example shows the suggested URL form and the way it is organized. However, the property value must be one string of text starting with ORACLE_JDBC_URL=. Your database administrator (DBA) can modify this URL as needed.

```
jdbc:oracle:thin:@
  (DESCRIPTION=
    (ADDRESS_LIST=
      (FAILOVER=ON)
      (LOAD_BALANCE=OFF)
      (ADDRESS=(PROTOCOL=TCP)(HOST=myhost1)(PORT=1521))
      (ADDRESS=(PROTOCOL=TCP)(HOST=myhost2)(PORT=1521))
     )
     (CONNECT_DATA = (SERVER = DEDICATED)(SERVICE_NAME = myservicename))
   )
```

Note: Sterling Integrator, Release 5.0 Build 5004 or later supports client-side load balancing in RAC environment. If you want to enable load balancing, you can set LOAD_BALANCE=ON in the JDBC URL.

3. In the customer_overrides.properties file, add the following read timeout properties for the pools:

   ```
   jdbcService.oraclePool.prop_jdbc.readTimeout=90000
   jdbcService.oraclePool_local.prop_jdbc.readTimeout=90000
   jdbcService.oraclePool_NoTrans.prop_jdbc.readTimeout=90000
   ```

4. Run the ./setupfiles.sh command from the *install_dir*/install/bin directory.

Using a DB2 Database (UNIX/Linux)

You can use a DB2 database for maintaining information on Sterling Integrator. The following sections provide the necessary steps to install and configure a DB2 database for production.

To use a DB2 database, follow this process:

◆ If you do not have DB2 installed, follow the installation procedures in your DB2 Installation manual.

   See *System Requirements* for supported version information.

◆ Create the database. Refer to the DB2 documentation for information about creating the database, including creating a schema repository, login, and tablespace. Be sure to install the correct version and patch.

Note: The installation script creates tables and indexes. Certain tables require a page size of 32K. You should have a tablespace to accommodate such tables. DB2 automatically places tables and indexes in the available tablespaces using its internal logic. You can move the tables to a different tablespace after the installation is complete.

◆ Refer *Installing Client Components, Compilers, and Fix Pack* on page 12 to install client components, compilers, and fix pack.

◆ Refer *Setting Parameters for DB2* on page 12 to set parameters.

◆ Refer *DB2 Database User Privileges* on page 13 to set database user privileges.

◆ Refer *Installing JDBC Drivers for DB2* on page 13 to install JDBC drivers.

Installing Client Components, Compilers, and Fix Pack

The Sterling Integrator uses stored procedures for DB2. Be sure to install the client components and compilers before you install the fixpack. You must install or set up the following components:

1. Install the Administration client.

2. Install the necessary fix pack after you install the client components and compilers. Otherwise, the clients will overwrite the fix pack binaries.

3. Set the path for the compiler by using the **db2set** command.

For more information about these tasks, see the IBM documentation.

Setting Parameters for DB2

Sterling Integrator requires the following parameter settings in your DB2 database:

Parameter	Value
DB2_SKIPDELETED	ON
DB2_SKIPINSERTED	ON
DB2_NUM_CKPW_DAEMONS	0
DB2LOCK_TO_RB	STATEMENT
LOCKLIST	AUTOMATIC
MAXLOCKS	AUTOMATIC If AUTOMATIC is not supported: 100
Database Code Set	UTF-8

For information about other parameter settings in your DB2 database, see the Sterling Integrator *5.0 Performance Management* documentation.

DB2 Database User Privileges

The DBADM role is required for performing administrative operations in the DB2 database.

Installing JDBC Drivers for DB2

For DB2, install the appropriate DB2 JDBC Type 4 driver and any correlating patches. See *System Requirements* for supported version information.

You can obtain these files from the IBM Web site. After you obtain this JDBC driver, record the absolute path to its location on your system. You must supply this absolute path during installation.

If the JDBC driver provided by your database vendor is distributed among multiple files, you must place all the files that comprise the JDBC driver into one .jar file. Follow these steps to create one .jar file:

1. Identify all the vendor database jar files for the JDBC driver.

2. Create a temporary working directory (`mkdir wd; cd wd`).

3. Extract the contents of each file used for the JDBC driver using the jar utility into the temporary working directory (`jar xvf <jdbc.jar>` for each supplied jar file).

   Note: Various Sterling Integrator scripts specify a DB_DRIVER. The DB_DRIVER specified must include all of these JAR files. The DB_DRIVER setting is located in sandbox.cfg. To make changes to the DB_DRIVER setting, edit and save the file, then run `./setupfiles.sh`.

4. Bundle the files in the temporary working directory into one file using the jar utility (jar cvf new.jar*).

5. Record the absolute path to the .jar file you created on the Preinstallation Checklist.

The type-4 driver does not require a separate Java listener running on the database server. Instead, connect directly to the DB2 port.

Using a Microsoft SQL Server Database (UNIX/Linux)

You can use an SQL Server database for maintaining information on Sterling Integrator. The following sections provide the necessary steps to install and configure a SQL Server database for production.

To use Microsoft SQL Server database, follow this process:

◆ If you do not have SQL Server installed, follow the installation procedures in your SQL Server Installation manual. Refer to the SQL Server documentation for information about creating the database, including creating a schema repository, login, and tablespace. Be sure to install the correct version and patch. Sterling Integrator supports Microsoft SQL Server Enterprise and Standard versions. See *System Requirements* for supported version information.

Refer *Installing Microsoft SQL Server 2005 Service Pack and Hotfix* on page 14 to install service pack and hotfix

Note: Ensure that Named Pipes & TCP/IP protocols are enabled in the network utility of the SQL Server.

◆ Refer *Configuring Microsoft SQL Server Database* on page 14 to configure SQL Server database.

  ◆ Refer *Setting Database Parameters in SQL Server* on page 14 to set SQL Server parameters.

- ◆ Refer *SQL Server Database User Privileges* on page 15 to set SQL Server user privileges.

- ◆ Refer *Configuring Snapshot for Microsoft SQL Server 2005* on page 15 to configure snapshot.

◆ Refer *Installing the JDBC Driver in SQL Server* on page 15 to install JDBC driver.

Installing Microsoft SQL Server 2005 Service Pack and Hotfix

Note: For SQL Server 2005, do not use case-sensitive column names in the database. Case-sensitive names will prevent the SQL Server 2005 System Management Console from loading.

To install Microsoft SQL Server 2005:

1. Install Microsoft SQL Server 2005 base release.

2. Install Microsoft SQL Server 2005 Service Pack 2. You can download it from http://www.microsoft.com/downloads/details.aspx?familyid=D07219B2-1E23-49C8-8F0C-63FA18F 26D3A&displaylang=en.

3. Apply the cumulative hotfix package. You can download it from http://support.microsoft.com/default.aspx?scid=kb;EN-US;933097.

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

5. The Microsoft SQL Server 2005 version is now 9.00.3159.

Configuring Microsoft SQL Server Database

You need to configure your SQL Server database for running in a production environment with the Sterling Integrator. To configure a SQL Server database for a production environment, you must:

- ◆ Set database parameters in SQL Server.

- ◆ Set SQL Server database user privileges.

- ◆ Configure snapshot for SQL Server 2005.

Setting Database Parameters in SQL Server

To create a database, ensure that the collation property you select supports all the characters for your database.

The following parameter settings are required in your SQL Server database:

Parameter	Value
Collation Setting	SQL_Latin1_General_CP850_BIN
Sort order	Binary
Security authentication	SQL Server and Windows
Torn Page Detection	Off

SQL Server Database User Privileges

In SQL Server, you must grant DBO (Database Owner) permission to the user. The DB_DDLADMIN role is required for creating objects in the SQL Server database.

Configuring Snapshot for Microsoft SQL Server 2005

The snapshot feature in Microsoft SQL Server 2005 allows you to view a read-only copy of the database even when it is locked. It is recommended to configure snapshot feature as it reduces deadlocks. Run the following command to enable snapshot feature:

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

Installing the JDBC Driver in SQL Server

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

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

1. Download sqljdbc_*version_language*.tar.gz to a temporary directory.

2. To unpack the zipped tar file, navigate to the directory where you want the driver unpacked and type the following command:

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

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

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

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

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

Using a MySQL Database Server (Non-Clustered Only)

Only UNIX/Linux non-clustered installations of Sterling Integrator can use the MySQL database.

You can choose to use the MySQL database server that is bundled with Sterling Integrator. Choosing this database during the installation procedure creates and configures it for you. MySQL is installed locally on the same server as Sterling Integrator and cannot be installed on a separate server.

Starting and Stopping MySQL Database After Changing Hostname

If you change the hostname after installing Sterling Integrator, you should change the MySQL database password and then use `./control_mysql.sh` script to start or stop MySQL database.

Note: You should complete the following task only if you change the hostname.

To change the MySQL database password after changing the hostname:

1. Start the MySQL database by running the `./control_mysql.sh start` command.

2. Change the root user password to <new_hostname + old_mysqlport>. Refer to the following example command:

```
/<absolute path>/mysql/bin/mysqladmin --port=43003
--socket=/tmp/mysql.43003.sock --user=root --password=blriedlin0143003
password "blriedlin01Temp43003"
```

3. Stop the MySQL database by running the `./control_mysql.sh stop` command.

Managing Database Passwords

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

Database Password Encryption Methods

Database passwords are encrypted using one of two methods, OBSCURED or ENCRYPTED. The encryption method is decided by the value of the encryptionPrefix in propertyEncryption.properties or propertyEncryption.properties_platform_security_ext file.

Encrypting Database Passwords (UNIX)

To encrypt the database password:

1. Stop the Sterling Integrator.

2. Navigate to */install_dir*/install/bin/.

3. Enter `./enccfgs.sh`.

4. Enter `./setup.sh`.

5. Enter `./deployer.sh`.

6. Enter `./run.sh` to start the application.

7. Enter your passphrase.

Decrypting Database Passwords (UNIX)

Before you can decrypt a password, you must know the encrypted password.

1. Stop the Sterling Integrator.

2. Navigate to */install_dir*/install/properties.

3. Open the sandbox.cfg file.

4. Copy encrypted password from the database_PASS property. Use the text that appears after the *database*_**PASS**= text. For example, if *database*_**PASS**= **OBSCURED:123ABCxyz321**, you would copy the text **OBSCURED:123ABCxyz321**. (OBSCURED is the encryption method for the password.)

5. Navigate to */install_dir*/install/bin.

6. Enter **./decrypt_string.sh encrypted _password**. For encrypted_password, use the text that you copied in Step 4.

   You are prompted for the Sterling Integrator passphrase.

   Your decrypted password appears.

7. Navigate to */install_dir*/install/properties.

8. Edit the sandbox.cfg file to replace the encrypted password with the password that was returned in Step 6.

9. You need to decrypt the entry for **YANTRA_DB_PASS**. Repeat Steps 4 to 8 to decrypt YANTRA_DB_PASS.

Note: You should also decrypt any custom database pool passwords present in the customer_overrides.properties file or any other properties file.

10. Navigate to */install_dir*/install/bin.

11. Enter `./setupfiles.sh`.

12. Enter `./deployer.sh`.

13. Enter `./run.sh` to start the Sterling Integrator.

14. Enter your passphrase.

Installing in a UNIX or Linux Non-Cluster Environment

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

Preinstallation Setup Checklist for a UNIX or Linux Non-Cluster Environment

The following topics will assist you with preinstallation tasks when planning to install the Sterling Integrator in a UNIX or Linux non-cluster environment:

Note: If you are upgrading from a prior release, see the *Upgrade Guide* before continuing with the installation of the Sterling Integrator.

Note: If you are installing the perimeter server, see the perimeter server installation documentation after installing Sterling Integrator.

Checklist for UNIX or Linux Preinstallation

The preinstallation checklist contains the items you need to gather and tasks you need to complete prior to installing the Sterling Integrator.

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

◆ Use only valid alphanumeric characters and _ (underscore).

◆ Do not use spaces, apostrophes, greater than (>), less than (<), ampersand (&), or any other special characters.

You may want to make a copy of the following checklist and use it to record the information you collect. The sections following the checklist included detailed explanations of some of the items on the checklist.

Step	Description	Your Notes
1	Verify that your system meets the hardware and software requirements specified for this release. For more information, refer to *Checking System Requirements* on page 25.	
2	Verify that your system has the patches required by Java™ for the operating system. For HP, you must run the HP JConfig utility to obtain the required patches and kernel modifications.	
3	For systems with multiple IP addresses, verify that the IP address on which the Sterling Integrator resides is accessible by any client computer that is running a browser interface. For all Linux operating systems only, ensure that /etc/hosts has short-names first for all entries. For example, 127.0.0.1localhostlocalhost.localdomain **Note:** You must create your own domain name. Do not use the example. **Caution**: If you do not verify the IP addresses, your system may not operate properly after installing Sterling Integrator.	
4	Verify that all client computers are using Microsoft Internet Explorer 6.x or later.	
5	If you are using a non-English environment, confirm that you are using the appropriate character set.	
6	Determine and record information about the JDK. ◆ Version of the JDK ◆ Absolute path to the JDK files and patches For more information, refer to *Installing the Java Software Development Kit* on page 26.	

Step	Description	Your Notes
7	Decide which of the following 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 Sterling Integrator. For more information, refer to *Security Certificates* on page 26.	
8	Obtain the unlimited strength JCE distribution file. For more information, refer to *Downloading the JCE Distribution File* on page 26.	
9	Determine and record the initial port number to be used by the Sterling Integrator. For more information, refer to *Determining Port Numbers* on page 27.	
10	Verity that a UNIX user account exists on the host server for each installation of the Sterling Integrator. For more information, refer to *Creating a UNIX Account* on page 28.	
11	Set Umask to 002.	
12	Determine and record information to set up default system alerts from the Sterling Integrator: ◆ The Administrative e-mail address to which system alert messages are sent. ◆ The SMTP Server IP address used for sending alert messages.	
13	Determine and record the directory in which you plan to install the Sterling Integrator. For all installation methods (GUI, text-based, manually edited silent install file), you must install into a new directory to be created by the installation process. The installation process will fail if a pre-existing directory is specified. Keep the following in mind when selecting a directory: ◆ The file system must have adequate free disk space. ◆ The name of the directory is case sensitive. The installation process creates the directory and beneath it, a directory called "install". Subdirectories like the bin and properties directories are directly beneath the install directory.	

Step	Description	Your Notes
14	Determine and record the passphrase you want to use for the Sterling Integrator system.	
	During installation, you are prompted twice to type the passphrase, which is not displayed when you type it.	
15	Obtain the license file and record the absolute path and file name to the license file. Be sure that the path name and the file name consist of alphanumeric, ".", "_" and "-" characters.	
	For more information, refer to *Obtaining a License File* on page 28.	

Note: The next step is only for Sterling Integrator systems that use the HP-UX operating system.

Step	Description	Your Notes
16	For the HP-UX operating system, establish 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	

Step	Description	Your Notes
Note: The next two steps are only for Sterling Integrator systems that use the AIX operating system.		
17	During the installation process, you specify the name of the directory to be created for the Sterling Integrator. The installation process creates the directory and beneath it, a directory called "install".	

During the installation process, you specify the name of the directory to be created for the Sterling Integrator. 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
```

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 `my_install` directory is created during installation, it inherits the correct permissions from test1.

Step	Description	Your Notes

19	The `ncargs` value specifies the maximum allowable size of the ARG/ENV list (in 4K byte blocks) when running exec() subroutines. Set `ncargs` value to 16 or higher.
	
	 Run the following commands to display and change the `ncargs` value.
	
	 ◆ To display the current value of ncargs:
	
	 `lsattr -El sys0 -a ncargs`
	
	 ◆ To change the current value of ncargs:
	
	 `chdev -l sys0 -a ncargs=`*NewValue*
	
	 Note: The `lsattr` and `chdev` command options are `-El` (lowercase L) and `-l` (lowercase L) respectively.
	
	 Change the following default entries in the /etc/security/limits file:
	
	 `fsize = -1`
	 `core = 2097151`
	 `cpu = -1`
	 `data = 262144`
	 `rss = 65536`
	 `stack = 65536`
	 `nofiles = 4096`	

Note: The next two steps are only for Sterling Integrator systems that use the Linux operating system.

Step	Description	Your Notes

19	Set SELinux to disabled as shown next:
	 `/etc/sysconfig/selinux:`
	 `SELINUX=disabled`	

20	Make the following system change: 1 Verify that the language is set to English (`LANG=en_us`) in the /etc/sysconfig/i18n file. 2 Export LANG.	

Step	Description	Your Notes

Note: The next step is only for Sterling Integrator systems that use the RedHat Enterprise Linux operating system.

| 21 | For the RedHat Enterprise Linux operating system only, make the following system changes: | |

1 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.

2 Edit the /etc/security/limits.conf file by adding the following lines:

```
* hard    nofile  16384  (maximum value)
* soft    nofile  4096   (minimum value)
* hard    memlock 3000000
* soft    memlock 3000000
* hard    nproc   16000
* soft    nproc   16000
* hard    stack   512000
* soft    stack   512000
```

This updates the system ulimits.

Save and close the /etc/security/limits.conf file.

3 Reboot the system.

Note: The next step is only for Sterling Integrator systems that use the Solaris operating system.

| 22 | For the Solaris operating system only, set the following entries in the /etc/security/limits file: | |

`nofiles = 4096`

`set rlim_fd_max=4096` (limit is 65535) - hard limit

`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.

Step	Description	Your Notes
Note: The next two steps are only for Sterling Integrator systems that use the Oracle, Microsoft SQL Server 2005, or DB2 database.		
23	If you are using an Oracle, Microsoft SQL Server 2005, or DB2 database, determine and record information about your database server. Be aware that this information is case sensitive.	
	◆ Database user name and associated password	
	◆ Database (catalog) name	
	◆ Database host name	
	◆ Database host port number	
	◆ (Oracle and Microsoft SQL Server 2005 only) Absolute path and file name for one JDBC driver	
	◆ (DB2 only) Absolute paths and file names for two JDBC drivers	
	For more information about encrypting and decrypting passwords, refer to:	
	◆ *Encrypting Database Passwords (UNIX)* on page 16	
	◆ *Decrypting Database Passwords (UNIX)* on page 17	
	Note: If you are using an Oracle 10.2.x database, you must set it up for native compilation by allocating space and by setting the plsql_native_library_dir parameter.	
24	If you are using an Oracle, SQL Server 2005, or DB2 database, decide if you are going to manually or automatically apply database definition language (DDL) statements (schema) to the database.	
	For more information, refer to *Applying Database Definition Language (DDL) Statements* on page 28.	

Checking System Requirements

Before you begin, verify that your system meets the hardware and software requirements specified for this release of Sterling Integrator. 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. For current information, see the most recent *System Requirements* for Sterling Integrator.

The installation strictly enforces the following system requirements:

◆ Operating system version (must match requirement exactly)

   The minimum patch level for the operating system is enforced, but you can apply higher patch levels.

◆ JDK version (must match requirement exactly)

◆ Disk space

The disk space is a minimum for the installation. The system should be separately sized to handle whatever load is going to be put on the system.

◆ Database.

◆ JDBC driver version (supports exact matches and wildcard matches).

If any of the above requirements are not met, the installation will fail and print/log a report of all items that were non-compliant. You then need to upgrade to a supported version.

Installing the Java Software Development Kit

You must install the Java Software Development Kit (JDK) and the patches specific to your system. Refer to the *System Requirements* for:

◆ JDK version and patch numbers

◆ JDK download procedure

After you install the JDK, write down the absolute path to its location on your system. You will use this path information during the installation.

Security Certificates

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

◆ The default self-signed SSL (Secure Sockets Layer) certificate that is automatically generated by the installation.

◆ A Certificate Authority-related certificate that you generate before installing Sterling Integrator.

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

Downloading the JCE Distribution File

The Java Cryptography Extension (JCE) is a set of Java packages from Sun Microsystems, Inc. or IBM that provides a framework and implementations for encryption, key generation and key agreement, and Message Authentication Code (MAC) algorithms. By default, Sterling Integrator uses the limited strength JCE file that is included in the JDK that you use during the installation. Installing unlimited strength JCE file will overwrite the limited strength JCE file.

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

To obtain this file for the Sun JDK 1.5 (Solaris, Linux) and the HP-UX JDK 1.5 (HP-UX):

1. Open your browser and navigate to the following Web site based on your JDK version:

    ◆ For JDK 1.5: http://java.sun.com/javase/downloads/index_jdk5.jsp

    ◆ For JDK 1.6: http://java.sun.com/javase/downloads/index.jsp

2. Depending on the JDK version, perform one of the following tasks:

    ◆ For JDK 1.5: At the bottom of the page, under **Other Downloads**, locate the *Java Cryptography Extension (JCE) Unlimited Strength Jurisdiction Policy Files 5.0* item and click the **Download** button.

    ◆ For JDK 1.6: At the bottom of the page, under **Additional Resources** > **Other Downloads**, locate the *Java Cryptography Extension (JCE) Unlimited Strength Jurisdiction Policy Files 6* and click the **Download** button.

3. Based on your selection, download the jce_policy-1_5_0.zip (for JDK 1.5) file or jce_policy-6.zip (for JDK 1.6) file to your system.

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

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

1. Open your browser and navigate to https://www14.software.ibm.com/webapp/iwm/web/reg/pick.do?source=jcesdk.

2. Enter your IBM ID and password. If you do not have an IBM ID, follow the IBM registration instructions provided on the Sign In page.

3. Click **Submit**.

4. Select *Unrestricted JCE Policy files for SDK 1.4.2* and click **Continue**.

    Note: The Unrestricted JCE Policy files for the 1.4.2 SDK are also used for the 1.5.0 SDK.

5. Review your personal information and the license agreement.

    Select **I agree** check box and click **I confirm** to continue.

6. Download the unrestrict142.zip file to your system.

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

Determining Port Numbers

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

To specify an initial port number, follow these guidelines:

◆ The Sterling Integrator requires a range of 100 consecutive open ports between 1025 and 65535.

◆ The initial port number represents the beginning port number in the range.

◆ 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.

Creating a UNIX Account

In a UNIX or Linux environment, create one UNIX administrative account on the host server for all installations of the Sterling Integrator. 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.

Applying 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 enables you to apply DDL statements for database creation separately from the installation. If you do not choose to manually apply the DDL, the installation will apply both the DDL and the resources.

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

Obtaining a License File

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

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

The permanent license keyfile contains your specific operating system and the IP address of your system, and is valid for 20 years from the date of issue. To extend your temporary key, obtain the permanent key, or request changes to a permanent key you already have, go to the online Gentran Integration Suite/Sterling Integrator Key Request form (https://support.sterlingcommerce.com/forms/gis_key_request.aspx)and have your PSP number (a unique number that identifies a licensed software asset in your Sterling Integrator installation) available. The PSP Number is present in the temporary or previous version of the keyfile you received from Sterling Commerce. Upon submission of this form, your new keyfile will be generated and delivered to you as an attachment to an email.

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

(information technology and related departments) and include the license file updates in your computing environment change plans.

Installing the Temporary Key

To install the temporary key, do the following:

1. Rename the temporary key. Use a name (for example, **assetTracking.key**) that clearly identifies the key as the original installation license key.

2. Copy the temporary key to the *absolutePath*/conf directory.

3. Rename the temporary license key file to **license.key**.

Installing the Permanent Key

To install the permanent key from the command line, do the following:

1. When you receive the permanent license key file, make a copy of it, and keep the copy in a safe place.

2. Stop Sterling Integrator.

3. Copy your license file to the machine where Sterling Integrator is installed.

4. Navigate to the *install_dir*/bin directory and run the `./AddLicenseSet.sh <path>` command, where `<path> is` the path to the license keyfile, for example, `./AddLicenseSet.sh gis_license.xml`.

5. Start Sterling Integrator.

Note: You can also install or update your license file from the Licenses screen (**Operations** > **System** > **Licenses**) when Sterling Integrator is running.

Installing the JDBC Driver in SQL Server

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

Refer to *Installing the JDBC Driver in SQL Server 2005* on page 29.

Installing the JDBC Driver in SQL Server 2005

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

1. Download sqljdbc_*version_language*.tar.gz to a temporary directory.

2. To unpack the zipped tar file, navigate to the directory where you want the driver unpacked and type the following command:

    `gzip -d sqljdbc_version_language.tar.gz`

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

   ```
   tar –xf sqljdbc_version_language.tar
   ```

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

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

Installing in a UNIX or Linux Non-Cluster Environment

Installing the Sterling Integrator in a UNIX or Linux non-cluster environment includes the following sections:

◆ *Installing in a UNIX or Linux Non-Cluster Environment (GUI-Based)* on page 30

◆ *Installing in a UNIX or Linux Non-Cluster Environment (Text-Based)* on page 35

◆ *Installing in a UNIX or Linux Non-Cluster Environment (Manually Edited Silent Install File)* on page 40

Note: If you are upgrading, refer to the *Upgrade Guide*.

If you downloaded the Sterling Integrator or a Service Pack (SP) from the Electronic Software Distribution (ESD) Portal, unzip the downloaded file to an empty directory. The directory containing the unzipped files is an electronic image of an installation CD.

Installing in a UNIX or Linux Non-Cluster Environment (GUI-Based)

Use the following instructions to install in a UNIX or Linux non-cluster environment from a command line, using a graphical user interface (GUI).

Note: If you encounter problems or errors during installation, see *Troubleshooting: UNIX or Linux Non-Cluster Environment* on page 55.

To install Sterling Integrator, refer to your preinstallation checklist and follow the steps below:

1. From the Sterling Integrator installation CD (or from another location), copy SCIInstallWizard.jar and SI.jar to a UNIX/Linux directory.

   If you are using FTP to copy the files, verify that your session is set to binary mode.

2. Log in to your UNIX/Linux environment.

3. To ensure that the installation directory has the proper permissions set, type the following command. The *install_dir_parent* directory is the parent directory of the installation directory that you create during the installation.

   `chmod -R a-s install_dir_parent`

   These permissions are valid for your user login for this session and future sessions until you manually change them.

4. Change to your working directory. For example, *install_dir_parent* directory.

5. Type the following command:

   Note: On Linux, do not use any soft/symbolic links in the path to the SCIInstallWizard.jar file. Make sure that you specify the full path to the file.

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

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

   The installation dialog box appears.

6. Click **Next** to continue the installation program.

7. Review the license agreement, and click **Accept** to accept the terms.

8. Type the full path of your JDK directory, or search for it using the **Select Folder** button. Click **Next**.

9. Type the full path to your license file, or search for it using the **Select File** button. Click **Next**.

   If you have not installed a license file, you can minimize this window, obtain the license file, and then return to the installation process.

10. Type the full path to your JCE file or search for it using the **Select File** button. Click **Next**. For more information about JCE files, see *Downloading the JCE Distribution File* on page 26.

11. Enter the installation directory for Sterling Integrator by doing one of the following:

    ◆ Type the directory name. Click **Yes** at the prompt *The directory does not exist, create it?*.

    ◆ Click **Select Folder** and navigate to the folder you want to use as the installation directory.

    You should create a new directory or the installation will fail subsequently. This directory is referred to as *install_dir* in subsequent prompts. Click **Next.**

    Note: If you are using AIX with the DB2 database, the directory path cannot be longer than 108 bytes.

12. At the *Select Install jar* prompt, enter the path to the SI.jar file.

    Note: The directory path to SI.jar cannot include any spaces.

    Click **Next**.

13. At the **Installation Port** dialog box, take the following two actions:

    ◆ At the prompt *Enter explicit IP address or Hostname to override the default*, use the default value **localhost** or enter your own host IP address. If you use **localhost**, the system uses its next available external IP address.

       Note: If you are installing Sterling Integrator on VMware, you should provide the IP address of the virtual machine and not of the VMware host. For example, if 10.251.124.160 is the IP address of the VMware server and 10.251.124.156 is the IP address of the Windows 2003 server it is hosting, you should use 10.251.124.160 as the IP address to install Sterling Integrator.

       Caution: Before applying an IPv6 address, see *IPv6 Capabilities* section in Sterling Integrator *5.0 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**.

       Note: If you are installing Sterling Integrator 5.0 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.

       Caution: You must install using a host name, not an IPv6 address, otherwise the Lightweight JDBC adapter and Graphical Process Modeler (GPM) will not work.

    ◆ At the prompt *Initial port*, type the initial port number for the installation. The installation creates subsequent ports based on the initial port number. The initial port number must be the first number of a range of at least 100 port numbers.

       For all of the port assignments, see the *install_dir*/install/properties/sandbox.cfg file.

    After entering this information, click **Next**.

14. Type your system passphrase. Then type the passphrase again to confirm it. Click **Next**.

15. At the **E-mail Information** dialog box, take the following actions:

    ◆ Type the administrative e-mail address to which you want system alert messages sent.

    ◆ Type the SMTP mail server host name that you want to use for system alert messages and other administrative notices.

    After entering this information, click **Next**.

16. To enable FIPS (Federal Information Processing Standards) mode, select the check box. To disable FIPS, clear the check box.

    Click **Next**.

17. Select the radio button for the database that you want to use (Oracle, Microsoft SQL Server 2005, DB2, or the default MySQL).

    Click **Next**.

18. At the **Select all options that apply to this installation** dialog box, take the following actions:

    a. Do not select the upgrade-related check box. If you are using MySQL, click **Next**. The **Install Actions** screen appears.

    b. (Skip if using MySQL) Do not select the cluster-related check box.

    Do not click **Next**.

19. (Skip if using MySQL) At the *Apply database schema automatically?* check box, decide whether to automatically or manually apply database definition language (DDL) statements:

    Note: For more information about this option, refer to *Applying Database Definition Language (DDL) Statements* on page 28.

    ◆ To automatically apply DDL statements, select the check box (the default value).

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

    ◆ To manually apply DDL statements, clear the check box.

      If you manually create the database schema, you will have to run the installation command again after manually creating the schema. You will manually create the database schema using the sql files in the *install_dir*/install/repository/scripts directory. For more information, refer to the utilities configuration documentation.

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

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

    Do not click **Next**. You will click **Next** after the next step.

20. Select *Verbose install?* check box to generate an installation log for debugging information. The events that occur during the installation are recorded in InstallSI.log file. By default, *the Verbose install?* check box is not selected.

    Click **Next**.

21. (Skip if using MySQL) Configure your database using the following guidelines.

    Type the following information:

    ◆ Database user name

    ◆ Database password (and confirmation)

    ◆ Database catalog name

    ◆ Database host name

      Note: In Oracle, do not use an IPv6 address for the host name.

◆ Database port

◆ (Oracle and Microsoft SQL Server 2005 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, which converts JDBC calls into the network protocol used directly by DB2, allowing a direct call from Sterling Integrator to the DB2 server.

◆ (Oracle only) Select the check box to select the data type to use for caching. Select either the default BLOB (binary large object) columns data type or the Long Raw data type.

You can significantly improve performance by enabling the cache on the BLOB data object in Oracle. For more information, refer to the Sterling Integrator documentation for slow performance in Oracle.

After entering this information, click **Next**.

22. (Skip if using MySQL) The **Confirm Database Information** screen appears. It includes all of the database details and the complete path to the installation jar file.

Click **Next** after reviewing this information.

23. The **Install Actions** screen appears, listing actions that are performed during the installation. The checkboxes are automatically selected for the actions *Verify Operating System is supported*, *Verify the selected JDK is supported*, *Install Components*, *Save install files*, and *Clean Up Files*. You cannot clear them.

Select the appropriate JDK. By default, the 64-bit JDK is selected.

If you want to create a desktop icon for launching Sterling Integrator, select the appropriate check box on the **Install Actions** screen. By default, the check box is not selected.

Click **Next**.

The **Installation Progress** screen appears. You can click the **Show Details** button to confirm your installation information before starting the installation.

24. Click **Install** to start the installation.

The **Installation Progress** screen shows the general progress of the installation through different stages (as shown earlier on the **Install Actions** screen). For more information about these stages, click the **Show Details** button.

For more detailed information about the installation, refer to the *install_dir*/PreInstallSI.log file. If the installation stops, check the PreInstallSI.log file for details. For more information, refer to *Troubleshooting: UNIX or Linux Non-Cluster Environment* on page 55.

25. Click **Install** to start the installation.

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

For more detailed information about the installation, refer to the *install_dir*/PreInstallSI.log file. If the installation stops, check the PreInstallSI.log file for details. For more information, refer to *Troubleshooting: UNIX or Linux Non-Cluster Environment* on page 55.

26. 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*. Click **OK** to close this message.

    Also, when you click the **Show Details** button, the message *BUILD SUCCESSFUL* appears in the **Output** box. Click the **Exit** button to close the installation dialog box.

    Installation information is in the following files:

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

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

27. Start Sterling Integrator using the following procedure:

    a. Go to the *install_dir*/install/bin directory.

    b. Run the following command:

       `./run.sh`

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

    If the Sterling Integrator does not start or if you receive a message about an invalid or corrupt license file, go to *Troubleshooting: UNIX or Linux Non-Cluster Environment* on page 55.

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

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

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

Installing in a UNIX or Linux Non-Cluster Environment (Text-Based)

Use the following instructions to install in a UNIX or Linux non-cluster environment from a command line, using a text-based (non-GUI) interface.

Note: 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.

Note: Run `stty kill ^U` command before starting installation. If your .profile or .<shell> rc file includes the `stty kill` command by default, ignore this.

Note: If you encounter problems or errors during installation, see *Troubleshooting: UNIX or Linux Non-Cluster Environment* on page 55.

To install Sterling Integrator, refer to your preinstallation checklist and follow the steps below:

1. From the Sterling Integrator installation CD (or from another location), copy SCIInstallWizard.jar and SI.jar to a UNIX/Linux directory.

   If you are using FTP to copy the files, verify that your session is set to binary mode.

2. Change to your working directory. For example, `install_dir_parent` directory.

3. To ensure that the installation directory has the proper permissions set, type the following command. The *install_dir_parent* directory is the parent directory of the installation directory that you create during the installation.

   ```
   chmod -R a-s /install_dir_parent
   ```

   These permissions are valid for your user login for this session and future sessions until you manually change them.

4. To begin the installation, type the following command:

   Note: On Linux, do not use any soft/symbolic links in the path to the jar file. Make sure that you specify the full path to the jar file.

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

5. At the *Welcome to the* Sterling Integrator *5.0 installer* prompt, press **Enter**.

6. Review the license agreement. You can page through the agreement by typing **n** and pressing **Enter** at each page. To go directly to the end of the agreement, press **Enter** until you reach the *Do you accept the license?* prompt.

   Accept the license agreement by pressing **Enter** (to accept the default value of **y**).

   Note: If you do not accept the agreement, the installation will stop.

7. Type the full path of your JDK directory and press **Enter**. Use the */absolutePath* part of the */absolutePath*/bin/java section of your installation command.

8. Type the full path to the license file and press **Enter**. The license file must reside on the local UNIX/Linux host. If you saved the license file to a Windows client, transfer the license file to the UNIX/Linux host.

9. Type the full path to unlimited strength JCE policy file and press **Enter**. For more information about JCE files, see *Downloading the JCE Distribution File* on page 26.

10. Type the full path name for a new installation directory. Make sure that the directory path does not include any spaces. This must be a newly created directory, or the installation will later fail. Press **Enter**.

    Note: If you are using AIX with the DB2 database, the directory path cannot be longer than 108 bytes.

11. At the *The Directory does not exist, create it?* prompt, type **y** to create the new directory. Press **Enter**.

12. At the *Select Install jar* prompt, type the path to SI.jar and press **Enter**:

    ```
    /absolutePath/SI.jar
    ```

13. You are prompted whether to override the default host IP address.

    ◆ To override the host IP address, enter an explicit IP address or host name and press **Enter**.

       Note: If you are installing Sterling Integrator on VMware, you should provide the IP address of the virtual machine and not of the VMware host. For example, if 10.251.124.160 is the IP address of the VMware server and 10.251.124.156 is the IP address of the Windows 2003 server it is hosting, you should use 10.251.124.160 as the IP address to install Sterling Integrator.

       Caution: Before applying an IPv6 address, see *IPv6 Capabilities* section in Sterling Integrator *5.0 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**.

       Note: If you are installing Sterling Integrator 5.0 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.

       Caution: You must install using a host name, not an IPv6 address, otherwise the Lightweight JDBC adapter and Graphical Process Modeler (GPM) will not work.

    ◆ To accept the default host IP address (**localhost**), press **Enter**. The installation will use the first external IP address on your machine.

14. The installation uses an initial port number to set up port assignments for adapters and other items. These port assignments are written to the *install_dir*/install/properties/sandbox.cfg file. The initial port number must be the first number of a range of at least 100 port numbers.

    ◆ To use your own initial port number, type the number and press **Enter**.

    ◆ To use the default initial port number (**8080**), press **Enter**.

    The installation program validates the initial port number and confirms that you have enough disk space for the installation.

15. Type your system passphrase and press **Enter**. Then type the passphrase again to confirm it. Press **Enter**.

16. Type the administrative e-mail address to which you want system alert messages sent and press **Enter**.

17. Type the SMTP mail server host name that you want to use for system alert messages and other administrative notices. Press **Enter**.

18. At the *Check box to enable FIPS mode* prompt, take one of the following actions:

    ◆ To use FIPS (Federal Information Processing Standards) mode, type **true** and press **Enter**.

    ◆ To not use FIPS mode, press **Enter** (to accept the default value of **false**).

19. You are prompted for the database that you want to use (Oracle, Microsoft SQL Server 2005, DB2, or the default MySQL). Type the number of the database and press **Enter**.

20. At the *This installation is an upgrade from a prior version* prompt, press **Enter** (to accept the default value of **false**) for a new installation.

21. (Skip if using MySQL) At the *This installation is for a cluster node 2 or higher* prompt, press **Enter** (to accept the default value of **false**) for a single node installation.

22. (Skip if using MySQL) At the *Apply database schema automatically?* prompt, decide whether to automatically or manually apply database definition language (DDL) statements:

    Note: For more information about this option, refer to *Applying Database Definition Language (DDL) Statements* on page 28.

    ◆ To automatically apply database definition language (DDL) statements, press **Enter** (to use the default value **true**).

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

    ◆ To manually apply DDL statements, type **false**.

      If you manually create the database schema, you will have to run the installation command again after manually creating the schema. You will manually create the database schema using the sql files in the *install_dir*/install/repository/scripts directory. For more information, refer to the utilities configuration documentation.

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

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

23. At the *Verbose Install?* prompt, press **Enter** (to accept the default value of **false**) if you do not want to generate a log to record events that occur during installation. If you want to generate a log to record the events that occur during installation, type **true** and press **Enter**. The events are recorded in InstallSI.log file.

24. (Skip if using MySQL) In the **Database Connection Information** section, configure your database by typing the following information:

    ◆ Database user name

    ◆ Database password (and confirmation)

      Note: 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

      Note: In Oracle, do not use an IP v6 address for the host name.

    ◆ Database host port number

    ◆ (Oracle and Microsoft SQL Server 2005 only) Absolute path and file name for one JDBC driver

◆ (DB2 only) Absolute paths and file names for two JDBC drivers

Use the Type-4 JDBC driver, which converts JDBC calls into the network protocol used directly by DB2, allowing a direct call from Sterling Integrator to the DB2 server.

◆ (Oracle only) At the *What Datatype would you like to use?* prompt, 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.

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

To use the Long Raw data type, type **2** and press **Enter**.

25. (Skip if using MySQL) The **Confirm Database Information** section appears.

Press **Enter** at each prompt to confirm the database information, and the name and location of SI.jar. If you are changing any information, enter the new information and press **Enter**.

After you confirm the information, the system validates the database and JDBC driver.

26. The **Install Actions** section appears, listing actions that are performed during the installation.

At the *Is this a 32 or 64-bit JDK?* prompt, do one of the following:

◆ If you are using a 32-bit JDK, type **1** and press **Enter**.

◆ If you are using a 64-bit JDK (the default value), press **Enter**, or type **2** and press **Enter**.

If the type of JDK that you select is not supported, the message *Not a valid selection* appears. Change to the other type of JDK.

27. To create a desktop icon for accessing Sterling Integrator, type **true** and press **Enter** at the *Create Desktop Icons (Windows & Linux)* prompt. To not create a desktop icon, press **Enter** for the default value of **false**.

The rest of the installation automatically continues.

The screen displays the basic progress of your installation (as shown earlier in the **Install Actions** section). 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 file for details. For more information, refer to *Troubleshooting: UNIX or Linux Non-Cluster Environment* on page 55.

28. When the installation 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. Start Sterling Integrator by doing the following:

   a.   Change to the /*install_dir*/install/bin directory.

   b.   Run the `./run.sh` command.

   When prompted, enter the passphrase that you entered earlier.

   If you enter the wrong passphrase, Sterling Integrator exits with the message *Error '1' starting SI*. To resume the installation, run the `./run.sh` command again.

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

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

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

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

   The system returns you to a UNIX/Linux prompt.

Installing in a UNIX or Linux Non-Cluster Environment (Manually Edited Silent Install File)

Use the following instructions to install in a UNIX or Linux non-cluster environment from a command line, using a manually edited silent installation file. Make sure that you have set up your silent installation file as described in *Creating the Silent Installation File* on page 40.

To install Sterling Integrator using your manually edited silent installation file, refer to *Installing with a Manually Edited Silent Installation File* on page 44.

Creating the Silent Installation File

An installation of Sterling Integrator uses a silent installation file that automatically enters variable values. This automates part of the installation process and limits your manual interaction with the installation program.

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

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

Entry	Description
The following entries correlate to prompts in the installation procedure described in *Installing in a UNIX or Linux Non-Cluster Environment (Text-Based)* on page 35. Read through that procedure when creating your silent installation text file.	
ACCEPT_LICENSE	(Required) Indicates if the user accepts the license agreement. Default: YES
JVM_LOC	(Required) Full path to JDK directory.

Entry	Description
LICENSE_FILE_PATH	(Required) Full path to a valid license file. Example: */absolutePath*/Full_License.xml
SI_LICENSE_AVAILABLE	Indicates if a license is being passed in and is required for the installation. Default: YES
JCE_DIST_FILE	(Required) Full path to unlimited strength JCE policy file. If present, this file will overwrite the JCE file in the JDK. Example: */absolutePath*/unrestrict123.zip
INSTALL_DIR **Note:** The INSTALL_DIR property cannot point to a pre-existing directory, or the installation will fail.	(Required) Directory that includes the bin subdirectory (where many commands are stored) and the properties subdirectory (where many properties are stored). It can 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. For example, an instruction to stop Sterling Integrator reads: 1 Navigate to the *install_dir*/install directory. 2 Run the `./hardstop.sh` command.
INSTALL_IP	(Required) Host name or IP address. Valid values: ◆ localhost (default) ◆ (your IP address or host name) **Note:** If you are installing Sterling Integrator on VMware, you should provide the IP address of the virtual machine and not of the VMware host. For example, if 10.251.124.160 is the IP address of the VMware server and 10.251.124.156 is the IP address of the Windows 2003 server it is hosting, you should use 10.251.124.160 as the IP address to install Sterling Integrator. **Caution:** Before applying an IPv6 address, see *IPv6 Capabilities* section in Sterling Integrator *5.0 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**. **Note:** If you are installing Sterling Integrator 5.0 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. **Caution:** You must install using a host name, not an IPv6 address, otherwise the Lightweight JDBC adapter and Graphical Process Modeler (GPM) will not work.

Entry	Description
PORT1	(Required) Initial port from which ports are assigned for adapters and other items. Ports are assigned consecutively from this port (for example, JNDI_PORT = initial port + 1, MYSQL_PORT = initial port + 3). Example: 12345 Default: 8080
APSERVER_PASS	(Required) Passphrase used to secure all encrypted data in database.
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
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.
DB_VENDOR	(Required) Database vendor. Valid values: ◆ Oracle ◆ MSSQL2005 ◆ DB2 ◆ MySQL (default)
DB_CREATE_SCHEMA	(Required if DB_VENDOR=Oracle, MSSQL2005, or DB2) Indicates if you want the database schema automatically created. Valid values: ◆ true (default) - Automatically create the schema. ◆ false - Manually create the schema. **Note:** 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.

Entry	Description
DB_USER	(Required if DB_VENDOR=Oracle, MSSQL2005, or DB2) Database user name. Example: abcd_123_1
DB_PASS	(Required if DB_VENDOR=Oracle, MSSQL2005, or DB2) Database password. Example: xyz
DB_DATA	(Required if DB_VENDOR=Oracle, MSSQL2005, or DB2) Database catalog name. Example: abcd
DB_HOST	(Required if DB_VENDOR=Oracle, MSSQL2005, or DB2) Database host name. Example: abcd Default: localhost
DB_PORT	(Required if DB_VENDOR=Oracle, MSSQL2005, or DB2) Database port. Example: 1234
DB_DRIVERS	(Required if DB_VENDOR=Oracle, MSSQL2005, or DB2) Full path to JDBC driver file(s). If DB_VENDOR is: ◆ Oracle or MSSQL2005, 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*/db2jdbc.jar ◆ *JDBC_driver_dir*/db2_1_jdbc.jar:*JDBC_driver_dir*/db2_2_jdbc.jar
ORACLE_USE_BLOB	(Required if DB_VENDOR=Oracle) Indicates the data type to use for caching. ◆ true (default) - BLOB (binary large object) ◆ false - Long Raw
MSSQL2005	◆ (Microsoft SQL Server 2005) Set this attribute to the default value of **true**. ◆ (All other servers) Do not include this attribute. **Note:** This attribute is case-sensitive.
JDK64BIT	Indicates if a 32-bit or 64-bit JDK is being used. **Note:** Refer to the *System Requirements* to determine the type of JDK for your operating system. Valid values: ◆ true (default) - 64-bit ◆ false - 32-bit

Entry	Description
Icons	(Required) Indicates whether to create a desktop icon for accessing Sterling Integrator. Valid values: ◆ true - Create a desktop icon. ◆ false (default) - Do not create a desktop icon.
The following entries do not directly correlate to prompts in the installation procedure described in *Installing in a UNIX or Linux Non-Cluster Environment (Text-Based)* on page 35. Use these entries to customize or document your installation.	
DB_DRIVERS_VERSION	(Not used with MySQL) Free form version string for JDBC driver. This is informational only. Example: 8_1_5
LOAD_FACTORY_SETUP	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. **Note:** 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	Indicates whether integration with Gentran Server should be configured. Default: No
NO_DBVERIFY	Valid values are true/false. When set to true during installation and installservice, dbverify will not be run. This means that the Sterling Integrator will not generate DDL to make the database like the XML entity repository.

Installing with a Manually Edited Silent Installation File

Note: During the installation, various messages are displayed, including some warning messages. These warning messages require no action on your part and are included so that helpful data is recorded in the log file.

Note: If you encounter problems or errors during installation, see *Troubleshooting: UNIX or Linux Non-Cluster Environment* on page 55.

To install Sterling Integrator, refer to your preinstallation checklist and follow the steps below:

1. From the Sterling Integrator installation CD (or from another location), copy SI.jar to a UNIX/Linux directory.

    If you are using FTP to copy the files, verify that your session is set to binary mode.

2. Set up your silent installation file, using the guidelines in *Creating the Silent Installation File* on page 40. Record the location of your silent installation file.

3. Change to your working directory.

4. To ensure that the installation directory has the proper permissions set, type the following command. The *install_dir_parent* directory is the parent directory of the installation directory that you create during the installation.

   `chmod -R a-s install_dir_parent`

   These permissions are valid for your user login for this session and future sessions until you manually change them.

5. Type the following command, which includes paths to the JDK, the Sterling Integrator jar file, and the silent installation file:

   Note: The directory path to SI.jar cannot include any spaces. On Linux, do not use any soft/symbolic links in the path to the jar file; make sure that you specify the full path to the jar file.

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

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

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

   Installation has completed successfully.

6. Start Sterling Integrator by doing the following:

   a. Change to the *install_dir*/install/bin directory.

   b. Run the `./run.sh` command.

   When prompted, enter the passphrase that you entered earlier.

   If you enter the wrong passphrase, Sterling Integrator exits with the error *Error '1' starting SI*. To resume the installation, run the `./run.sh` command again.

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

   Open your Web browser to [URL]

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

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

   The system returns you to a UNIX/Linux prompt.

Patches and Hot-Fixes (Non-Cluster)

The following sections explain how to update Sterling Integrator, using the following methods:

◆ *Installing the Current Maintenance Patch in UNIX or Linux* on page 46

   Patches contain cumulative fixes for a specific version of Sterling Integrator. Because each patch contains the fixes from previous patches, you only need to install the most recent patch.

◆ *Installing a Hot-Fix (UNIX/Linux)* on page 47

   A hot-fix is one or more fixes applied to a specific existing patch.

Installing the Current Maintenance Patch in UNIX or Linux

Patches contain cumulative fixes for a specific version of Sterling Integrator. Because each patch contains the fixes from previous patches, you only need to install the most recent patch.

Note: During patch installation, the dbVerify utility compares the list of standard indexes with those present in the database and drops the custom indexes. You should recreate the custom indexes after the patch installation is complete.

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

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

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

si_<*release number*>_build_info.pdf

Note: Before performing this task, refer to *Preserving Custom Changes During Updates* on page 50.

Both the jar and the PDF files are available on the Sterling Commerce Support on Demand web site. To access this information, do the following:

1. Log in to the Support On Demand web site at https://support.sterlingcommerce.com/user/login.aspx.

2. Click on the **Product Support** menu.

3. Navigate through the menu items to the **Service Packs and Patches** section to download the jar and the PDF files for Sterling Integrator.

You should periodically check the web site to verify that you have the most recent patch.

Note: The patch installation may use one or more patch property override files. These files will be named *propertyFile_patch*.properties. Do not alter these files.

Additionally, property changes made directly in *.properties or *.properties.in files may be overwritten during the patch installation. Properties overridden using the customer_overrides.properties file are not affected.

Note: 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.

To install the latest patch for Sterling Integrator in a UNIX or Linux environment, follow the steps below:

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. If you use FTP, use Binary mode. Do not rename the file.

3. Verify that the database server is up and ready to accept connections.

4. Stop Sterling Integrator.

5. Perform a full backup of the Sterling Integrator installation directory, including all subdirectories. Also back up your database.

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

   Note: 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.

7. Is the database password encrypted? If Yes, decrypt the password.

   For more information, refer to *Decrypting Database Passwords (UNIX)* on page 17.

8. Change to the directory where Sterling Integrator is installed and install the patch using the following commands:

   a. `cd` *install_dir*`/bin` and press **Enter**.

   b. Run the following command to install the patch:

      `./InstallService.sh <`*path*`>/si_<`*version*`>_build_<`*number*`>.jar`

      where:
      <*path*> is fully qualified path to maintenance patch file
      <*version*> is Sterling Integrator version
      <*number*> is patch number

   Example: `./InstallService.sh /`*installdir*`/si_50_build_5002.jar`

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

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

   c. Enter the passphrase when prompted.

9. If you decrypted the database password, re-encrypt the password.

   For more information, refer to *Encrypting Database Passwords (UNIX)* on page 16.

10. Restart Sterling Integrator.

Installing a Hot-Fix (UNIX/Linux)

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.

Note: Before performing this task, refer to *Preserving Custom Changes During Updates* on page 50.

Before Installing a Hot-Fix (UNIX/Linux)

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

Hot-Fix Installation (UNIX/Linux)

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

1. Log in to the computer that you are installing the hot-fix on.

2. If the database password was encrypted, decrypt the password.

    For more information, refer to *Decrypting Database Passwords (UNIX)* on page 17.

3. At the command line, type **ftp theworld.stercomm.com**.

4. Type your user name and password. If you do not know your user name and password, contact Sterling Commerce Customer Support.

5. Type **bin** and press **Enter** to select Binary as your transfer mode.

6. At the FTP prompt, type the command `get ccaseid.jar`, where `ccaseid` includes the ID number you received from Customer Support.

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

7. Shut down the Sterling Integrator.

8. Change to the *install_dir*/install/bin directory.

9. Type the command `./InstallService.sh /absolutePath/ccaseid.jar` to install the hot-fix.

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

10. If you decrypted the database password in step 2, re-encrypt the password.

    For more information, refer to *Encrypting Database Passwords (UNIX)* on page 16.

11. Restart the Sterling Integrator.

12. In the *install_dir*/install/bin directory, run the `./dump_info.sh` command to verify that the hot-fix was successfully installed.

Hot-Fix Package Delivery Method

The hot-fix package delivery method has changed effective Sterling Integrator, Release 5.0 Build 5006 onwards. The hot-fix package will be delivered as a jar file that contains only the files that were modified. However, the installation procedure for a hot-fix remains the same. Refer to *Hot-Fix Installation (UNIX/Linux)* on page 48 for hot-fix installation procedure.

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

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

◆   Hot-fix version is maintained in the hotfix.properties file. It does not update the SI_VERSION table.

    Run `dumpinfo.sh` command to display the hot-fix version. You can also verify the hot-fix version in Sterling Integrator Support user interface page.

◆   Size of the hot-fix package is small.

◆   Hot-fix must be installed on the same build version that was used to build it. For example, if a test system is on Sterling Integrator, Release 5.0 Build 5006 and the hot-fix is built for 5006, it can be

installed on that test system. However, if the production system is on Sterling Integrator, Release 5.0 Build 5005, you must apply Sterling Integrator, Release 5.0 Build 5006 prior to applying the hot-fix.

◆ You can locate the hot-fix read me file in the Sterling Integrator root *(install_dir)* directory. For example, *install_dir*/hotfix_readme.txt.

◆ If you have Sterling File Gateway installed in your environment, the hot-fix for Sterling File Gateway is installed automatically.

Performing Checksum using DB Checksum Tool

A checksum is a simple redundancy check used to detect errors in data. In Sterling Integrator 4.3, 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.

To run DB Checksum tool, do the following:

1. Navigate to the `<install_dir>`/bin directory.

2. Run the following command from the `<install_dir>`/bin directory:

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

   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.

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

Preserving Custom Changes During Updates

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

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

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

A report shows what has changed in the system that customer-specific changes did not permit to get set as defaults. This report is used in conjunction with the user interface to verify that customer overrides are not getting overwritten by the patch.

The report includes the following resource types:

◆ Workflow definitions

◆ Maps

◆ Schema

◆ Template

Postinstallation in a UNIX or Linux Non-Cluster Environment

After installing the Sterling Integrator, you should complete the following tasks:

◆ *Configuring Property Files* on page 50

◆ *Performing Initial Administrative Setups in the Sterling Integrator (UNIX/Linux)* on page 51

◆ *Installing Services (UNIX/Linux)* on page 51

◆ *Starting Sterling Integrator in UNIX or Linux* on page 52

◆ *Downloading the Sterling Integrator Tools (UNIX/Linux)* on page 52

◆ *Stopping the Sterling Integrator (UNIX/Linux)* on page 53

Configuring Property Files

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

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

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

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

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

◆ LDAP user authentication

◆ Prevention of cross-site script vulnerabilities

◆ Logging configuration

◆ Process-specific property file settings

◆ Securing the Interop Servlet

Note: If you are upgrading from a prior release, see the Sterling Integrator *Upgrade Guide* that applies to your implementation *before* continuing with the setup of the Sterling Integrator. Changes may have been made to the properties files since the previous release, so you must read the *Upgrade Guide* for information about how these changes impact your system.

Performing Initial Administrative Setups in the Sterling Integrator (UNIX/Linux)

At this point, your installation is complete, and you can run Sterling Integrator. If you are installing the Sterling Integrator for the first time, you need to perform some initial administrative setups before users can use the Sterling Integrator. For example, the system administrator for the Sterling Integrator must register users and grant permissions.

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

Also, it is recommended that you run several performance reports so that benchmarks are established for tuning the system in the future. For more information about preparing your Sterling Integrator system for effective performance tuning, refer to the performance tuning methodology documentation.

Installing Services (UNIX/Linux)

To install services in a UNIX or Linux environment, follow these steps:

1. Change the directory to *install_dir*/install/bin.

2. Run the following command:

   ```
   ./InstallService.sh service.jar
   ```

Starting Sterling Integrator in UNIX or Linux

To start Sterling Integrator in a UNIX or Linux environment, follow these steps:

1. Change the directory to *install_dir*/install/bin, and enter the following command:

   `./run.sh.`

2. Enter the passphrase that you supplied during installation. If you receive a message about an invalid or corrupt license file, see *Troubleshooting: UNIX or Linux Non-Cluster Environment* on page 55.

   If you enter the wrong passphrase, Sterling Integrator exits with the error *Error '1' starting SI*. To resume the installation, run the `./run.sh` command again.

   When startup is complete, the following messages appear:

   Open your Web browser to [URL]

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

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

4. Type 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.

   The system returns you to a UNIX/Linux prompt.

Downloading the Sterling Integrator Tools (UNIX/Linux)

The Sterling Integrator includes tools that run on a desktop or personal computer. After you install, start, and access the Sterling Integrator, you can install the following tools by downloading them from within the Sterling Integrator. For more information about a tool, refer to the documentation for that tool.

Note: MESA Developer Studio and Reporting Services are optional features that are purchased separately from Sterling Integrator. These optional features each require a separate license in addition to your license for Sterling Integrator.

◆ Map Editor and associated standards

◆ Graphical Process Modeler

◆ Web Template Designer

◆ (If licensed) MESA Developer Studio plug-ins, including:

  ◆ MESA Developer Studio Software Development Kit (SDK)

  ◆ MESA Developer Studio Skin Editor

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

Conflicting IP addresses can cause problems when you download a desktop tool. See *Troubleshooting: UNIX or Linux Non-Cluster Environment* on page 55.

Stopping the Sterling Integrator (UNIX/Linux)

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

◆ A soft stop halts Sterling Integrator after all the business processes finish running.

◆ A hard stop halts Sterling Integrator without waiting for business processes to finish.

To run a soft stop, choose one of the following procedures:

◆ Open your browser and access Sterling Integrator. From the **Operations** menu, select **System > Troubleshooter**. Click **Stop the System**.

◆ From the UNIX command line, do the following:

    a. Change the directory to *install_dir*/install/bin.

    b. Type `./softstop.sh`.

    c. When prompted, type your passphrase.

To run a hard stop, use the following procedure:

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

1. From the UNIX command line, change the directory to *install_dir*/install/bin.

2. Enter `./hardstop.sh`.

Uninstalling the Sterling Integrator from a UNIX or Linux Non-Cluster Environment

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, follow these steps:

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.

    To stop the Sterling Integrator, navigate to *install_dir*/install/bin and run the following command:

    `./hardstop.sh`

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. Type `./uninstall.sh` to run the uninstaller.

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.

Troubleshooting: UNIX or 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: 1 ant.install.log (in the *install_dir* directory) 2 *install_dir*/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** If you need to obtain the license file, see *Obtaining a License File* on page 28. If the license file resides on a PC, save the license file to the server.
Installing	Memory and ulimit errors	**Explanation** The installation fails with memory and ulimit errors. **Resolution** ◆ Refer Viewing or Editing Performance Configuration Settings in *Performance Management* documentation and modify your memory settings accordingly. ◆ Refer *Checklist for UNIX or Linux Preinstallation* on page 19 and tune `ulimit` settings.

Situation	Message or Symptom	Explanation/Resolution
Installing a desktop tool or resource	Cannot download any of the following: ◆ Map Editor and associated standards ◆ Graphical Process Modeler ◆ Web Template Designer ◆ (If licensed) MESA Developer Studio plug-ins, including: ◆ MESA Developer Studio Software Development Kit (SDK) ◆ MESA Developer Studio Skin Editor ◆ (If licensed) Reporting Services, which requires MESA Developer Studio if you want to use the plug-ins to create fact models and custom reports.	**Explanation** When you install the Sterling Integrator, system files are created that contain an internal IP address. If you install the Sterling Integrator behind a firewall, and your firewall is configured to accept an external IP address from a client computer, you may 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. **Resolution** Modify the system files that contain the invalid IP address. Follow these steps: 1 Navigate to the *install_dir*/install/bin directory. 2 Enter the following command followed by the external IP address: `./patchJNLP.sh external_IP_address` 3 Stop the Sterling Integrator. 4 Restart the Sterling Integrator.

Installing a Perimeter Server in UNIX or Linux (Non-Cluster)

A perimeter server is an optional software tool for communications management that can be installed in a demilitarized zone (DMZ), which is a computer host or small network inserted as a neutral zone between a company's private network and the outside public network.

The perimeter server manages the communications flow between outer layers of your network and the TCP-based transport adapters. A perimeter server can solve problems with network congestion, security, and scalability, especially in high-volume, Internet-gateway environments. A perimeter server requires a corresponding perimeter client.

Installing a Sterling Integrator perimeter server in a UNIX or Linux non-cluster environment includes the following sections:

Setting Up Perimeter Servers with Sterling Integrator

The Sterling Integrator installation program installs a perimeter client and a local mode server. The local mode server is useful for testing purposes or in environments that do not require a secure solution. However, if you require high-volume, secure connections, you must install a perimeter server in a remote zone, either a more secure or less secure network than your integration server.

When you install a perimeter server, use these guidelines:

◆ Licensing for a perimeter server is determined by the licensing restrictions on the corresponding B2B adapters.

◆ Each perimeter server is limited to two TCP/IP addresses – internal interface and external interface. *Internal interface* is the TCP/IP address that the perimeter server uses to communicate with Sterling Integrator. *External interface* is the TCP/IP address that the perimeter server uses to communicate with trading partners.

  To use additional TCP/IP addresses, install additional perimeter servers.

◆ You can have multiple perimeter servers installed on the same computer interacting with one instance of Sterling Integrator. To install a perimeter server on a computer with an existing instance, install the new perimeter server in a different installation directory.

◆ The combination of internal TCP/IP address and port must be unique for all perimeter servers installed on one computer.

   ◆ If a perimeter server is installed using the wildcard address, then all ports must be unique.

   ◆ If a perimeter server is installed using the wildcard address, then its port is not available for use by adapters that use the server or any other perimeter server on that computer.

   ◆ The internal and external interface may use the same TCP/IP address. However, the port used by the perimeter server is not available to the adapters that use the server.

Installing a Perimeter Server in a More Secure Network in a UNIX or Linux Environment

To install a perimeter server in a UNIX or Linux environment:

1. Copy the ps_4400.jar installation files from the installation CD (or from another location) to a UNIX/Linux directory. If you are using FTP to copy the file, make sure your session is set to binary mode.

2. To begin the installation, type the absolute path to the following jar file:

   /absolutePath/bin/java -jar */install_dir*/install/packages/ps_4400.jar
   –interactive

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

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

3. Enter the full path name of the installation directory.

4. If there is an existing installation in the directory you specify, you can update it using the same settings. Answer the question:

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

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

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

5. Confirm that the installation directory is correct.

    The program verifies the amount of available disk space.

6. Answer the question:

    Is this server in a less secure network than the integration server?

    No

7. Answer the question:

    Will this server need to operate on specific network interfaces?

    If **yes**, the program returns a list of the network interfaces available on your host. Select the interfaces for the server to use.

8. Enter the TCP/IP address or DNS name that the integration server (Sterling Integrator) will listen on for the connection from this server.

9. Verify the TCP/IP address or DNS name.

10. Enter the port that the integration server (Sterling Integrator) will listen on for the connection from this server. The port number must be higher than 1024.

11. Enter the local port that the perimeter server will use for the connection to the integration server (Sterling Integrator). The port number must be higher than 1024, except specify a port of zero if you want the operating system to select any unused port.

12. Verify the port.

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

    Installation of Perimeter Service is finished

13. Change to the installation directory.

14. Enter `./startupPs.sh` to start the perimeter server.

Installing a Perimeter Server in a Less Secure Network in a UNIX or Linux Environment

To install a perimeter server in a UNIX or Linux environment:

1. Copy the ps_4400.jar installation files from the installation CD (or from another location) to a UNIX/Linux directory. If you are using FTP to copy the file, make sure your session is set to binary mode.

2. To begin the installation, type the absolute path to the following .jar file:

   ```
   /absolutePath/bin/java -jar /install_dir/install/packages/ps_4400.jar
   –interactive
   ```

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

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

3. Enter the full path name of the installation directory.

4. If there is an existing installation in the directory you specify, you can update it using the same settings. Answer the question:

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

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

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

5. Confirm that the installation directory is correct.

   The program verifies the amount of available disk space.

6. Answer the question:

   Is this server in a less secure network than the integration server?

   Yes

7. Answer the question:

   Will this server need to operate on specific network interfaces?

   If **yes**, the program returns a list of the network interfaces available on your host. Select the interfaces for the server to use.

8. Enter the TCP/IP address or DNS name for the internal interface to use to communicate with the integration server (Sterling Integrator.). Press Enter to use a wildcard for this address.

9. Verify the TCP/IP address or DNS name for the internal interface.

10. Enter the TCP/IP address or DNS name for the external interface to use to communicate with trading partners. Press Enter to use a wildcard for this address.

11. Verify the TCP/IP address or DNS name for the external interface.

12. Enter the port that the perimeter server will listen on for the connection from integration server (Sterling Integrator). The port number must be higher than 1024.

13. Verify the port.

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

    Installation of Perimeter Service is finished

14. Change to the installation directory.

15. Enter `./startupPs.sh` to start the perimeter server.

Installing an External Perimeter Server in Silent Mode

Use the following instructions to install an external perimeter server in silent mode from a command line, using a manually edited silent installation file. Make sure you have set up your silent installation file, as described in *Creating the Silent Installation File* on page 61.

The perimeter server can be installed on the same machine where you have installed Sterling Integrator or on a separate machine. It is recommended to install a perimeter server on a separate machine.

To install an external perimeter server using your manually edited silent installation file, refer to *Installing a Perimeter Server with a Silent Installation File* on page 62.

Creating the Silent Installation File

A manually edited silent installation file must contain the entries marked as required in the following table. When you are finished editing the file, record its name and location. You will use this information during the installation.

Entry	Description
INSTALL_DIR	(Required) The installation directory that stores perimeter server files and related directories. This directory must exist prior to running silent installation. For example, */install_dir*/perimeterserver.
REVERSE_CONNECT	(Optional) Determines if the perimeter server is to be installed in a more secure network zone. Valid values: ◆ Y - Install in a more secure network zone. ◆ N - Install in a less secure network zone.
PS_PORT	(Required) Determines the perimeter server port to interact with Sterling Integrator.
PS_SECURE_IF	(Required) Determines the TCP/IP address or DNS name for the internal interface to communicate with the integration server (Sterling Integrator). You can use a wildcard (*) for this address.

Entry	Description
PS_EXTERNAL_IF	(Required) Determines the TCP/IP address or DNS name for the external interface to communicate with the trading partners. You can use a wildcard (*) for this address.
REMOTE_ADDR	(Optional) Determines the remote perimeter server address. (Not required if REVERSE_CONNECT=N)
REMOTE_PORT	(Optional) Determines the remote perimeter server port. (Not required if REVERSE_CONNECT=N)
MAX_JVM_HEAP	(Required) Determines the maximum Java heap size allocated to the JVM.

Following is an example of the perimeter server silent installation file contents:

```
INSTALL_DIR=/install_dir/perimeterserver
REVERSE_CONNECT=N
PS_PORT=48000
PS_SECURE_IF=*
PS_EXTERNAL_IF=*
MAX_JVM_HEAP=512
```

Installing a Perimeter Server with a Silent Installation File

To install an external perimeter server in silent mode:

1. Copy the ps_4400.jar installation files from the installation CD (or from another location) to a UNIX/Linux directory. If you are using FTP to copy the file, make sure your session is set to binary mode.

2. Setup your silent installation file, using the guidelines in *Creating the Silent Installation File* on page 61. Record the location of the silent installation file.

3. To begin the installation, type the following command, which includes path to the JDK, the perimeter server .jar file, and the silent installation file (note the -f parameter):

   /absolutePath/bin/java -jar */install_dir*/install/packages/ps_4400.jar -f silent.txt

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

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

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

   Installation of Perimeter Service is finished

4. Change to the installation directory.

5. Enter startupPs.sh to start the perimeter server.

Installing Patches in a Perimeter Server UNIX or Linux Environment

Remote perimeter servers are not automatically updated by a service pack or patch. You must reinstall the perimeter server using the new perimeter server installation file supplied with the service pack or patch.

To Update a Remote Perimeter Server in a UNIX or Linux environment:

1. Update your installation of Sterling Integrator with the latest maintenance patch. Obtain the maintenance patch file from the Sterling Commerce Support on Demand web site, at https://support.sterlingcommerce.com. These patches have a name that identifies a build number. For example, si_43_build_4307.jar. For more information, refer to the maintenance patch documentation.

2. Locate your perimeter server patch file in the *install_dir*/install/packages directory of your installation of Sterling Integrator. For maintenance patches, obtain the file from the Sterling Commerce Support on Demand Web site, at https://support.sterlingcommerce.com. These patch files have a name that identifies a version number. For example, ps_2006.jar.

3. Copy the file to a directory on the remote server.

4. Stop the perimeter server using the `./stopPs.sh` command.

5. To begin the installation, type the following command:

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

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

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

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

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

7. Answer the question:

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

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

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

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

    Installation of Perimeter Service is finished

8. Change to the installation directory.

9. Type `./startupPs.sh` to start the perimeter server.

Starting and Stopping Perimeter Servers in UNIX or Linux

To start a perimeter server in UNIX or Linux:

1. Change the directory to *install_dir*.

2. Enter `./startupPs.sh`.

To stop a perimeter server in UNIX or Linux:

1. Change the directory to *install_dir*.

2. Enter `./stopPs.sh`.

Reducing Perimeter Server Security Vulnerabilities

When Sterling Integrator is deployed with a remote perimeter server in a more secure network zone, there is a security vulnerability. An intruder may compromise the host where the proxy resides, and take over the persistent connection to the perimeter server residing in the more secure zone. If this happens, the perimeter server will relay all the intruder's network requests past the firewall into this internal zone.

To prevent an intrusion, limit the activities the remote perimeter server can perform on behalf of the proxy to specifically those activities that the proxy needs to do for its operation.

Control these limitations by using a configuration residing in the secure network zone with the remote perimeter server, inaccessible by the proxy that could become compromised.

Granting Permissions for Specific Activities By a Perimeter Server

1. Install a remote perimeter server, choosing the option for a more secure network zone. Refer to the full perimeter server installation instructions, as described in *Installing a Perimeter Server in a More Secure Network in a UNIX or Linux Environment* on page 58.

2. At the installation prompt *Is this server in a less secure network than the integration server?*, select **No**, which is the option for a more secure network zone.

3. In the perimeter server installation directory there will be a text file named restricted.policy that must be customized. Its initial contents are:

```
// Standard extensions get all permissions by default grant codeBase
"file:${{java.ext.dirs}}/*" {permission java.security. AllPermission;};

 grant {
    // Grant all permissions needed for basic operation.

    permission java.util.PropertyPermission "*", "read";
```

```
    permission java.security.SecurityPermission "putProviderProperty.*";

    permission java.io.FilePermission "-", "read,write";
    permission java.io.FilePermission ".", "read";

    // Needed to allow lookup of network interfaces.
    permission java.net.SocketPermission "*", "resolve";
 };

 grant {
    // Adjust for your local network requirements.

    // Needed to connect out for the persistent connection.  Do not remove this.
    permission java.net.SocketPermission "localhost:12002", "connect";

    // For each target FTP Server that a FTP Client Adapter will connect to in passive
mode.
    //
    // permission java.net.SocketPermission "ftphost:21", "connect"; // Control
connection.
    // permission java.net.SocketPermission "ftphost:lowPort-highPort", "connect"; //
Passive data connections.

    // For each target FTP Server that a FTP Client Adapter will connect to in active
mode.
    //
    // permission java.net.SocketPermission "ftphost:21", "connect"; // Control
connection.
    // permission java.net.SocketPermission "localhost:lowPort-highPort", "listen";
// Active data port range.
    // permission java.net.SocketPermission "ftphost", "accept"; // Active data
connections.

    // For each target HTTP Server that an HTTP Client Adapter will connect to.
    //
    // permission java.net.SocketPermission "htttphost:443", "connect";

    // For each target C:D snode that the C:D Server Adapter will connect to.
    //
    // permission java.net.SocketPermission "snode:1364", "connect";
};
```

4. Edit this file to add permission lines for each back-end server that you intend to allow the proxy to access. There are commented out examples for each type of server.

The first two grant sections are required for correct perimeter server operation. Do not modify these sections.

Example

The following example grants permission to a target FTP Server:

Note: In the example, servers are configured to listen on the following ports: 33001 (for FTP), 33002 (for HTTP), and 1364 (for C:D). These port numbers can be edited.

```
// To restrict or permit the required Host/Server to communicate with the  PS, update
the "ftphost/ htttphost/snode" with
```

```
      that of the Server IP and provide the appropriate PORT number where the Server
will listen. //

   // For each target FTP Server
   // permission java.net.SocketPermission "10.117.15.87:33001", "connect"; //
Control connection.
   // permission java.net.SocketPermission "10.117.15.87:lowPort-highPort",
"connect"; // Passive data connections.
   // 10.117.15.87 indicates IP of the FTP Server for which the permission is granted
by PS for communicating with client //

   // For each target HTTP Server
   //
   // permission java.net.SocketPermission "10.117.15.87:33002", "connect";
   // 10.117.15.87 indicates IP of the HTTP Server for which the permission is granted
by PS for communicating with client //


   // For each target C:D snode
   //
   // permission java.net.SocketPermission "snode:1364", "connect";
   //  10.117.15.87 indicates IP of the Connect Direct Node for which the permission
is granted by PS for communication //
```

5. Turn on restrictions. In the install directory is the perimeter server settings file:

    remote_perimeter.properties.

    Edit it to change the "restricted" setting to a value of true.

6. In the future, any attempt by the perimeter server to access disallowed network resources will be rejected and logged in the perimeter server log written to the perimeter server installation directory.

Performing DNS Lookup on Remote Perimeter Server

By default, a perimeter server performs DNS lookup in the main server JVM. If you have limited DNS in your secure area, you can configure the remote perimeter server to look up trading partner addresses in the DMZ.

To enable DNS lookup to occur at the remote perimeter server, edit the perimeter.properties file to change the following parameter:

Note: Do not edit the properties files. Make all the changes in the customer_overrides.properties file.

Property Name	Description
<psname>.forceRemote DNS	Enables remote DNS resolution for the perimeter server, where *<psname>* is the name of the perimeter server. Valid values: ◆ true - enable remote DNS resolution ◆ false - disable remote DNS resolution

Chapter 5

Configuring Utilities

The Sterling Integrator supplies sample script files that you must customize using the directions provided in this chapter.

This chapter describes all the utilities supplied by the Sterling Integrator, organized by the order in which you are likely to use them. It describes generic customizations that apply to most or all utilities. Further details specific to each utility are provided throughout the rest of this guide.

Note: During the FTP process for hot fix releases, unnecessary carriage return characters (^M) may be introduced in some scripts. You must remove these characters before running the scripts. You can use any standard script editing tool to remove these unnecessary carriage return characters (^M).

Note: During the standard product release process, Sterling Commerce ensures that the unnecessary carriage return characters are not present in scripts provided by the Sterling Integrator.

Installation Utilities

Installation utilities enable you to install the Sterling Integrator. These utilities are present in the *install_dir*/install/bin directory. Some of the utilities used for installing the various configurations of the Sterling Integrator are the following:

◆ dbverify.sh

  This utility validates a database's structure by ensuring that the correct tables, columns, and rows are present in the database.

  During the installation process, the dbverify.sh utility is used to generate SQL scripts to create the database schema or tables and indexes. These SQL statements are then run against the database, unless you choose to manually create database schemas after installation. For more information about manually creating the database schemas after installation, see *Installing Third-Party JAR Files* on page 70. For detailed information about setting up and running dbverify, see *Verifying the Database Schema* on page 68.

◆ install3rdparty.sh

  This utility copies supplied resources into the Sterling Integrator directory structure, and can append added jar files to the global classpath or agent classpath.

◆ InstallService.sh

This utility installs programs for specific tasks, like a regression test jar file or a patch jar file.

◆ setupfiles.sh

This utility checks the various initial product settings files (*.in) for variables and updates the corresponding files with the values defined in the sandbox.cfg file to create the final files that are used by the product during runtime.

Creating and Verifying Database Schemas

By default, the database schemas are created automatically loaded during installation. However, you can tell the installation process to skip these tasks, then perform the tasks manually after installation. To have the installation process skip creating the database schemas, follow the relevant instructions in your installation instructions.

For more information about the database schema, refer to *Verifying the Database Schema* on page 68.

Verifying the Database Schema

To use the dbverify utility to verify the database schema:

1. From the command line, run the `./dbverify.sh` script from the *install_dir*/install/bin folder.

2. If you have enabled the text search feature, edit the dbverify.sh script.

   For SQL Server and DB2 databases only, add the -DBNAME <database_name> parameter as mentioned below. For example,

   JAVA_HOME/bin/java com.yantra.tools.dbverify.DbVerifyCommandLine -b %<INSTALL_DIR>% -DBNAME %<database_name>% -u %USERNAME% -p %PASSWD% -d `%DRIVER% -url %URL% -g Y -DT %<INSTALL_DIR>%/repository/datatypes/datatypes.xml`

   Where <database_name> refers to the name of the database for which text search feature is enabled. The "-DBNAME" parameter is required only for MS SQL and DB2 databases.

   For Oracle databases only, add the "-TSIT" parameter as mentioned below. For example:

   ```
   %JAVA_HOME%/bin/java com.yantra.tools.dbverify.DbVerifyCommandLine -b
   %<INSTALL_DIR>% -u %USERNAME% -p %PASSWD% -d %DRIVER% -url %URL% -g Y -DT
   %<INSTALL_DIR>%/repository/datatypes/datatypes.xml -TSIT <tsindex_type>
   ```

   Where <tsindex_type> refers to the type of text search indexes you have created such as ctxcat or context. The "-TSIT" parameter is required only for Oracle database.

3. If you want to ignore the third-party tables when verifying the database, modify the dbverify.sh script.

   Add the `-DIgnore3rdPartyTables=Y` parameter as specified in the below example. The third-party tables are not defined in the Sterling Integrator entity XML or extension XML file. For example,

   ```
   %JAVA_HOME%/bin/java -DIgnore3rdPartyTables=Y
   com.yantra.tools.dbverify.DbVerifyCommandLine -b %INSTALL% -u %USERNAME% -p
   ```

```
%PASSWD% -d %DRIVER% -url %URL% -g Y -DT
install_dir/repository/datatypes/DataTypes.xml
```

Note: If you have custom or third-party tables in your database and you receive an exception while running the dbverify.sh script, use this parameter to ignore the custom or third-party tables.

4. The differences between the entity XMLs and the database are generated in the form of SQL scripts, which can be run against the database to rectify the differences.

   For example, if there is a mismatch in the size of a datatype for a column [varchar2(20) to varchar2(40)] that has an associated index, dbverify generates SQL statements for:

   ◆ Dropping the Index

   ◆ Changing the size of the datatype for the column

   ◆ Creating the new Index

   The three SQL statements for these tasks appear in different *.sql files. The appropriate *.sql files must be run in the proper order as follows:

   a. Run the install_dir/install/repository/scripts/EFrame_IndexDrops.sql script for dropping the index.

   b. Run the install_dir/install/repository/scripts/EFrame_TableChanges.sql script for altering the size of the datatype for a column.

   c. Run the install_dir/install/bin/EFrame_IndexAdds.sql script for creating a new index.

   If the SQL statements are not run in the sequence as mentioned above, it results in script failure.

   The following scripts are generated:

Note: All scripts listed below can be found in the *install_dir*/install/repository/scripts directory.

Script Name	Description of the script
EFrame_Sequence.sql	Contains all the additional sequences that need to be created.
	Note: If you are using an MS SQL Server 2005 database, the EFrame_Sequence.sql script is not created when you run the dbverify command.
EFrame_TableChanges.sql	Contains all the table column differences that need to be applied on the database schema. Modify this file to reference your tablespaces.
EFrame_Drops.lst	This list is provided as an example of tables that can be removed.
	Note: The Sterling Integrator does not provide a .sql file for removing tables from the database.
EFrame_IndexAdds.sql	Adds all of the indexes that need to be created in the database. Modify this file to reference your tablespaces.
EFrame_IndexDrops.sql	Removes any extra indexes in the database.
EFrame_TextIndexUpdates.sql	When executed, updates the content of the text indexes.

Script Name	Description of the script
EFrame_UpdateQueries.sql	For upgrades, updates the table column values in order to apply other changes made to the columns. For example, if a table column is changed from nullable to not nullable in the installation of a previous release, the column values must be updated before the column can be made not null in the current release because the column default values for the current release may contain null values.

Note: The *install_dir*/install/bin/EFrame_Drops.lst indicates extra objects in the database. These extra objects could be custom objects or objects that are dropped as the result of a schema change or an upgrade. Please look through this script carefully.

Note: This script may also contain reduced columns. These are columns that were changed to have a smaller size in the newer version. These changes are suppressed because:

- ◆ Not all databases will allow you to apply the changes.

- ◆ Databases that do allow you to apply the changes can behave unpredictably if the table already contains values that are longer than the new length.

5. Run the scripts specified for your database type, as shown in the following lists.

Oracle

For Oracle, individually run the following scripts in the *install_dir*/install/database/oracle/scripts/CustomDBViews directory:

- ◆ Interop_Views.sql

- ◆ ImportExport_View.sql

SQL Server 2005

For SQL Server 2005, individually run the following scripts in the *install_dir*/install/database/sqlserver/scripts/CustomDBViews directory:

- ◆ Interop_Views.sql

- ◆ ImportExport_View.sql

DB2

For DB2, individually run the following scripts in the *install_dir*/install/database/db2/scripts/CustomDBViews directory:

- ◆ Interop_Views.sql

- ◆ ImportExport_View.sql

Installing Third-Party JAR Files

You can use the install3rdParty utility to add third-party custom jars to the classpath of various utilities.

Keep the following in mind when using the install3rdParty utility to update a classpath:

- ◆ The order of lines in the dynamic classpath files determine the order of the classpath for the agent.

◆ Whatever is in the beginning of the file is analogous to the jar being in the beginning of the classpath.

For help in using install3rdParty, enter the command, including the `-help` option, on the command line. The install3rdParty utility prints a usage message.

Configuring the Sterling Integrator for a Non-English Environment

You can install the Sterling Integrator in an English or a non-English environment.

By modifying a few system settings, you can then configure the Sterling Integrator for your locale.

This chapter also explains how to install, load the factory defaults, and check the import mode of the Sterling Integrator language packs.

Installing the Language Pack

To install Sterling Integrator language pack on UNIX/LINUX, insert the language CDs that you received into your CD-ROM drive and open the directory that is appropriate for your operating system as follows:

Note: Before installing the language pack be sure that you have successfully installed Sterling Integrator.

Run the `setup.bin` command from your operating system's directory:

◆ If you are using AIX, open the AIX directory.

◆ If you are using HP-UX, open the HP directory.

◆ If you are using Solaris, open the Sun directory.

◆ If you are using Red Hat Linux, open the Linux directory.

◆ If you are using SUSE Linux, open the Linux directory.

Loading the Sterling Integrator Language Pack Factory Defaults

To load the language-specific factory defaults run the `./loadDefaults.sh` script available in the *install_dir*/install/bin directory and pass the locale-specific installer file. For example:

```
./loadDefaults.sh install_dir/install/database/FactorySetup/install/
<language>_<country>_locale_installer.xml
```

The default locale that is shipped with the CD is `ja_JP`.

Loading the Sterling Integrator Language Pack Translations

Prior to loading the Sterling Integrator Language Pack factory defaults, be sure that you have successfully completed all instructions in the database tier software chapter.

To load the language pack translation with custom localization literals, run the `LocalizedStringReconciler` tool in the IMPORT mode from the *install_dir*/install/bin directory as follows:

```
./ant.sh -f localizedstringreconciler.xml  import
-Dsrc=install_dir/database/FactorySetup/XMLS
```

This tool first inserts the value specified in the `<from_language>_<from_country>_ycplocalizedstrings_<to_language>_<to_country>.properties` file present in the *install_dir*/database/FactorySetup/XMLS/<language>_<country> directory into the database.

The basefilename refers to the file present in the /database/FactorySetup/XMLS directory, for which the translations are to be imported into the database.

Note: Verify that your locale settings such as currency, time format, date, and so forth, are correct.

Switching the Sterling Integrator Base Language

The base language for the Application Configurator can be switched only once.

Configuring Encodings for the Sterling Integrator

Language settings for Java applications involve both character sets and encoding:

◆ A *character set* is a set of characters (letters, numbers, and symbols such as #, $, and &) that are recognized by computer hardware and software.

◆ An *encoding* is a representation of data in a particular character set. An *encoding set* is a group of encodings.

For information about basic and extended encoding sets, see java.sun.com/j2se/1.5.0/docs/guide/intl/encoding.doc.html.

The default encoding for the Sterling Integrator is 8-bit Unicode Transformation Format (UTF-8).

The Sterling Integrator provides two property files that contain supported encoding sets. These properties files reside in the *install_dir*/install/properties directory.

◆ encodings.properties – Contains the default encoding set used in the Sterling Integrator interface.

◆ encodings_large.properties – Contains all supported encoding sets.

The default encoding set in the Sterling Integrator includes the following encodings:

◆ UTF-8

◆ IS0-8859-1

◆ ISO-8859-5

◆ US-ASCII

◆ ISO_8859-1

◆ EUC-JP

◆ UTF-16

◆ ISO-2022-JP

You are not limited to the encodings in the encoding.properties file. The Sterling Integrator enables you to configure the encodings properties files to expand the number of encodings you can use.

To configure your encoding set:

1. Stop the Sterling Integrator and wait for shutdown to complete.

2. Change to the *install_dir*/install/properties directory.

3. Open the encodings_large.properties file. Select the encodings you want to add to the encodings.properties file.

4. Open the encodings.properties.in file.

5. At the end of the encodings.properties.in file, add the encodings you selected from the encodings_large.properties file. When adding encodings from one file to the other, first copy the encodings as they appear in the encodings_large.properties file. After adding the new encodings, ensure that the index numbers are consecutive. If the index numbers are not consecutive, change the index number or numbers as needed. For example, `encoding54` cannot follow `encoding6`. In this example, change `encoding54` to `encoding7`.

The first name in the definition (before the comma) is the name that will appear in the Sterling Integrator user interface. You can change this name to make it more descriptive. For example:

```
encoding4 = 819,ISO8859_1
```

may be changed to

```
encoding4 = WesternEurope,ISO8859_1
```

ISO8859_1 is the Java canonical name and should not be changed.

6. Update the first line in the encodings.properties.in file (*numberof*). Change *numberof* to the number of encodings added to the file. For example, if the current value is *numberof = 6* and you add 5 new encodings, the new value is *numberof = 11*.

   numberof indicates the total number of encodings located in the file. You must update *numberof* to ensure that the encodings you added will be visible in the user interface.

7. Change to the *install_dir*/install/bin directory.

8. Run the ./setupfiles.sh script.

9. Start the Sterling Integrator.

Configuring Locales

The Sterling Integrator runs in any locale that Java supports. If you want to run the Sterling Integrator in a non-default locale, then configure your environment to the specific locale you want to use.

To configure your operating system as a non-English environment, consult your operating system's documentation. To determine and set the locale in a UNIX or Linux environment:

1. Enter locale -a. A list of locales is displayed.

2. Set your locale by entering:

 ◆ **export LANG *<locale>***

 ◆ **export LC_ALL *<locale>***

   Example to set the locale to Japanese (on Solaris):

   ◆ export LANG ja_JP

   ◆ export LC_ALL ja_JP

Note: Some UNIX shells require the setenv command instead of the export command.

Using Sterling Integrator with Gentran:Server for UNIX

You can configure Sterling Integrator to run with Gentran:Server for UNIX.

This section includes the following topics:

About Gentran:Server for UNIX and Sterling Integrator

Sterling Integrator has the ability to access information located in Gentran:Server for UNIX version 5.3 or 6.0. The following restrictions apply:

*   You must be using Sterling Integrator in one of the following environments:

    *   UNIX

    *   Linux

*   You must be using one of the following Gentran:Server for UNIX product levels:

    *   Gentran:Server for UNIX with Process Control Manager (PCM)

    *   Gentran:Server for UNIX with EC Workbench (ECW)

    *   Gentran:Server for UNIX with Advanced Data Distribution (ADD)

By configuring Sterling Integrator to run with Gentran:Server for UNIX, you can:

*   View data from your Gentran trading partners.

*   Start or stop Gentran:Server data managers and view which data managers are running.

*   View, search, and track Gentran:Server for UNIX Life Cycle event records.

You can configure Sterling Integrator with Gentran:Server for UNIX either immediately following installation or at a later date. When you configure Sterling Integrator with Gentran:Server for UNIX, you only need to configure the features relevant to what you want to use:

◆ In Gentran:Server for UNIX, configure trading partners and the Gentran Life Cycle.

◆ In Sterling Integrator, configure tracking and operations.

Installing and Configuring Attunity® Data Connect

If you want Sterling Integrator to use the trading partner information in your Gentran:Server for UNIX system, you must install and configure Attunity Data Connect. However, if you plan to convert your trading partner data from Gentran:Server for UNIX format to Sterling Integrator format, skip this section.

Attunity Data Connect is third-party software that enables you to view your Gentran trading partners' data. The Attunity Data Connect software provides JDBC access to the Gentran DISAM database fields where the trading partner information is stored.

To configure Attunity Data Connect:

1. Install Attunity Data Connect 3.3 or later using the installation procedures provided with the Attunity Data Connect software.

2. Ensure that Attunity Data Connect runs as expected.

3. Create a new DISAM data source and refresh the Attunity Data Connect server. For more information, see the Attunity Data Connect documentation.

4. Locate the following metadata description files in the *install_dir*/tp_import/gentran/disam_mapping directory.

   ◆ TP_MAST.XML

   ◆ TRADACOM.XML

   ◆ ORGANIZATION.XML

   ◆ TP_MISC.XML

5. In each file listed in Step 4, replace the string **$YOUR_DATASOURCE** with the name of the data source for your Gentran:Server for UNIX system.

6. In each file listed in Step 4, replace the string **YOUR_GENTRAN** with the path to the root directory of Gentran:Server for UNIX.

7. Run the Attunity Data Connect Dictionary (ADD) Editor.

8. Select the DISAM data source you created in step 3.

9. Import the metadata description files you updated in steps 5 and 6.

   For information about importing XML metadata description files, see your *Attunity Data Connect* documentation.

10. Verify that the imported metadata description files are included in the list of tables.

11. Save your changes.

12. Exit the Attunity Data Connect Data Dictionary (ADD) Editor.

Configuring Sterling Integrator to Run with Gentran:Server for UNIX

To configure Sterling Integrator to run with Gentran:Server for UNIX:

1. Set the Umask to **002** in Sterling Integrator.

2. Is Sterling Integrator installed on a different computer than Gentran:Server for UNIX?

    ◆ If Yes, then NFS mount the $EDI_ROOT of Gentran:Server for UNIX onto the Sterling Integrator host.

    ◆ If No, then continue with Step 3.

3. Verify that the remote shell (rsh or remsh) is working.

    If you are unable to use the rsh/remsh shell and can only use the ssh shell, change the GS_RSHELL variable, located in the sandbox.cfg file, when you configure Sterling Integrator to run with Gentran:Server for UNIX.

4. Change directory in Sterling Integrator to *install_dir*/bin.

5. Run ./softstop.sh to stop Sterling Integrator.

6. Run ./configGSUnix.sh to begin configuring Sterling Integrator to run with Gentran:Server for UNIX.

7. Press **Enter** to continue configuring Sterling Integrator to run with Gentran:Server for UNIX.

8. Do you want to configure Tracking and Ops using the Sterling Integrator interface?

    ◆ If Yes, go to step 9.

    ◆ If No, go to step 15.

9. Are you currently using Gentran Life Cycle?

    ◆ If Yes, select the appropriate database you are using with Gentran:Server for UNIX and enter the following database information:

    • Database vendor

    • Absolute path of the JDBC drivers

    • Database user name

    • Database password

    • Database (catalog) name

    • Database host name using either the IP address or name of the computer where the database is installed

    • Database port number

    ◆ If No, go to step 10.

10. Is Gentran:Server for UNIX installed on the same computer as Sterling Integrator?

    ◆ If Yes**,** enter EDI_ROOT for the local computer, and go to step 14.

    ◆ If No, go to step 11.

11. Enter the host name of the computer where Gentran:Server for UNIX is installed.

12. Enter the EDI root where Gentran:Server for UNIX is locally mounted.

13. Verify the EDI root for the computer where Gentran:Server for UNIX is installed.

14. Indicate which version of Gentran:Server for UNIX is currently installed.

    ◆ For version 5.3, enter **1**.

    ◆ For version 6.0, enter **2**.

    If you press **Enter** without making a selection, version 6.0 is selected as the default.

15. Do you want to configure Sterling Integrator so that you can view Trading Partner Administration?

    ◆ If Yes**,** enter the following Gentran:Server for UNIX database information:

       • Absolute path for the JDBC drivers (*/attunity_install_dir*/java)

       • Database user name

       • Database password

       • Host name where Attunity Data Connect is installed

       • Database name

       • Attunity database port

    ◆ If No, go to step 16.

16. Do you want to continue with the installation?

    ◆ If Yes, enter **yes** to start configuring Gentran:Server for UNIX with Sterling Integrator:

    ◆ If No, enter **no** to cancel the installation.

    After the installation completes, the following message displays, *Deployment to the application server successful*.

17. Enter `./run.sh`.

Migrating from Gentran:Server for UNIX to Sterling Integrator

When you are migrating maps and setting up processes in Sterling Integrator from Gentran:Server for UNIX, Gentran:Server for UNIX now displays translation errors, if any, in the envelope segments and does not process the erroneous envelope segments.

Gentran:Server for UNIX 6.0 and 6.1 allowed EDI envelope segments (ISA, GS, ST, SE, GE, IEA, UNB, UNH, UNT, and UNZ) with errors to be processed successfully. This has been corrected and Gentran:Server for UNIX now issues translation errors when using X12 or EDIFACT deenvelope processes. The functional acknowledgements display the errors in the envelope segments.

Note: Ensure that the EDI data is corrected before starting the process.

The following examples illustrate scenarios wherein Gentran:Server for UNIX allowed successful processing of EDI segments with errors:

◆ Gentran:Server for UNIX did not display an error when the segment count in the UNT or SE segments did not reflect the correct count of segments in a transaction.

◆ Gentran:Server for UNIX did not display an error when the use of segment delimiters in the Map Input properties did not match the data. The user could not specify a delimiter in a map with multiple data files that used different delimiters. The user had to use the Syntax Record and specify the positions of the delimiters.

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