

Gentran Integration Suite™

Installation Guide

Version 4.2

Sterling Commerce
An IBM Company

© Copyright 2007 Sterling Commerce, Inc. All rights reserved.
Additional copyright information is located on the Gentran Integration Suite Documentation Library:
<http://www.sterlingcommerce.com/Documentation/GIS42/homepage.htm>

Contents

Chapter 1 Installing in a UNIX or Linux Environment	6
Preinstallation Setup Checklist for a UNIX or Linux Environment	6
Key Terms	7
Checklist for UNIX or Linux Preinstallation	7
Checking System Requirements	12
Installing the Java 2 Software Development Kit	12
Downloading the JCE Distribution File	12
Determining Port Numbers	13
Creating a UNIX Account	13
Creating and Configuring the Database Server	13
Obtaining a License File	19
Silent Installation	21
Installing in a UNIX or Linux Environment	21
Running the Installation Program in UNIX or Linux	22
Installing a Cluster Configuration in UNIX or Linux	24
Installing the Current Maintenance Patch in UNIX or Linux	29
Installing Patches in a Perimeter Server Environment	31
Installing Patches in a Clustered Environment	32
Installing a Hot-Fix in UNIX or Linux	34
Encrypting Database Passwords	35
Setting Up Perimeter Servers with Gentran Integration Suite	35
Postinstallation in a UNIX or Linux Environment	37
Starting Gentran Integration Suite in UNIX or Linux	38
Accessing Gentran Integration Suite	38
Validating the Installation	40
Downloading Gentran Integration Suite Tools	40
Performing Initial Administrative Setups in Gentran Integration Suite	40
Stopping Gentran Integration Suite	40
Starting or Stopping the Cluster Environment	41
Cluster Environment Verification	41
Uninstalling Gentran Integration Suite from a UNIX or Linux Environment	42
Troubleshooting: UNIX or Linux Environment	43
Chapter 2 Installing in a Windows Environment	45
Preinstallation Setup Checklist for a Windows Environment	45

Key Terms	45
Checklist for Windows Preinstallation	46
Checking System Requirements	48
Installing the Java 2 Software Development Kit	48
Downloading the JCE Distribution File	48
Determining Port Numbers	49
Creating and Configuring the Database Server	49
Obtaining a License File	53
Installing in a Windows Environment	54
Running the Installation Program in Windows	55
Installing a Cluster Configuration in Windows	57
Installing the Current Maintenance Patch in Windows	62
Installing Patches in a Perimeter Server Environment	64
Installing Patches in a Clustered Environment	65
Installing a Hot-Fix in Windows	67
Encrypting Database Passwords in Windows	68
Setting Up Perimeter Servers with Gentran Integration Suite	68
Postinstallation in a Windows Environment	70
Starting Gentran Integration Suite in Windows	71
Accessing Gentran Integration Suite	71
Validating the Installation	73
Downloading Gentran Integration Suite Tools	73
Performing Initial Administrative Setups in Gentran Integration Suite	73
Stopping Gentran Integration Suite	73
Starting or Stopping the Cluster Environment	74
Cluster Environment Verification	74
Uninstalling Gentran Integration Suite from a Windows Environment	75
Troubleshooting: Windows Environment	77

Chapter 3 Installing in an iSeries Environment 79

Preinstallation Setup Checklist for an iSeries Environment	79
Key Terms	80
Checklist for iSeries Preinstallation	80
Checking System Requirements	82
Downloading the JCE Distribution File	82
Determining Port Numbers	83
Configuring the System to View Files	83
Mapping a Network Drive	84
Specifying the QCCSID	84
Creating a Gentran Integration Suite User Profile	84
Preparing the Database	84
Obtaining a License File	85
Installing in an iSeries Environment	86
Running the Installation Program in iSeries	86
Installing the Current Maintenance Patch	88
Postinstallation in an iSeries Environment	90
Starting Gentran Integration Suite	90
Accessing Gentran Integration Suite	91
Validating the Installation	92
Downloading Gentran Integration Suite Tools	93

Performing Initial Administrative Setups in Gentran Integration Suite	93
Stopping Gentran Integration Suite.	93
Uninstalling Gentran Integration Suite from an iSeries Environment	94
Troubleshooting: iSeries Environment.	95
Chapter 4 Installing and Configuring MESA Developer Studio	96
<hr/>	
Overview for Installing and Configuring MESA Developer Studio	96
Assumptions and Prerequisites.	97
Steps to Set Up MESA Developer Studio	97
Eclipse Terms	98
Configuring J2SE on Your PC.	98
Verifying that MESA Developer Studio Uses the Correct JRE	98
Starting the WebDAV Server.	99
Installing MESA Developer Studio Components	100
Changing Proxy Preferences	100
Installing New Features.	100
Setting Up a Gentran Integration Suite Instance.	101
Editing Connection Information.	102
Viewing Configuration Details	102
Refreshing the Instance	102
Installing Additional MESA Developer Studio Components and Updates	103
Installing Reporting Services Plug-Ins	103
Appendix A Configuring Gentran Integration Suite for a Non-English Environment	105
<hr/>	
Configuring Encodings for Gentran Integration Suite	105
Configuring Locales.	107
Appendix B Using Gentran Integration Suite with Gentran:Server for UNIX	108
<hr/>	
About Gentran:Server for UNIX and Gentran Integration Suite.	108
Installing and Configuring Attunity® Data Connect	109
Configuring Gentran Integration Suite to Run with Gentran:Server for UNIX	110
Index	113
<hr/>	

Installing in a UNIX or Linux Environment

This section includes the following topics:

- ◆ *Preinstallation Setup Checklist for a UNIX or Linux Environment* on page 6
- ◆ *Installing in a UNIX or Linux Environment* on page 21
- ◆ *Postinstallation in a UNIX or Linux Environment* on page 37
- ◆ *Uninstalling Gentran Integration Suite from a UNIX or Linux Environment* on page 42
- ◆ *Troubleshooting: UNIX or Linux Environment* on page 43

Preinstallation Setup Checklist for a UNIX or Linux Environment

The following topics will assist you with preinstallation tasks when planning to install Gentran Integration Suite in a UNIX or Linux environment:

- ◆ *Key Terms* on page 7
- ◆ *Checklist for UNIX or Linux Preinstallation* on page 7
- ◆ *Checking System Requirements* on page 12
- ◆ *Installing the Java 2 Software Development Kit* on page 12
- ◆ *Downloading the JCE Distribution File* on page 12
- ◆ *Determining Port Numbers* on page 13
- ◆ *Creating a UNIX Account* on page 13
- ◆ *Creating and Configuring the Database Server* on page 13
- ◆ *Obtaining a License File* on page 19
- ◆ *Silent Installation* on page 21

Key Terms

The following terms and definitions will assist you in understanding the concepts discussed in this document:

- ◆ Java 2 Software Development Kit (JDK) – Software development kit (SDK) for producing Java programs. Produced by Sun Microsystems, Inc., the JDK includes JavaBeans component architecture and support for JDBC.

Note: The Gentran Integration Suite *System Requirements* include information about upgrading your JDK for the changes enacted in 2007 for Daylight Savings Time.
- ◆ Gentran Integration Suite License File – Contains a license that is associated with your specific operating system and the IP address of your system. The license provides access, for a year, to the Gentran Integration Suite packages your company selected.
- ◆ 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.
- ◆ Unlimited Strength Policy File – another name for the Java Cryptography Extension (JCE).
- ◆ Rollback Segment – Enables you to undo (rollback) DML (data manipulation language) transactions that were made against a database. In Oracle version 9i or later, you can perform this task with Undo tablespaces.

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 Gentran Integration Suite.

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

- ◆ Use any valid alphanumeric characters and _ (underscore).
- ◆ Do not use spaces or apostrophes.

You may want to make a copy of the following checklist and use it to record the information you collect for installing Gentran Integration Suite:

Step	Description	Your Notes
1	Verify that your system meets the hardware and software requirements specified for this release. See <i>Checking System Requirements</i> on page 12.	
2	Verify that your system has the patches required by Java™ for the operating system that will run Gentran Integration Suite. See <i>Checking System Requirements</i> on page 12. Note: For HP, you must run the HP JConfig utility to obtain the required patches and kernel modifications.	

Step	Description	Your Notes
3	<p>For the AIX 5.2 and 5.3 operating systems, establish these settings:</p> <ul style="list-style-type: none">◆ Use the following command to change the ARG/ENV list size in 4K byte blocks kernel parameter to 12: Note: "chdev" is followed by a minus sign. <pre>chdev -l sys0 -a ncargs=12</pre>In some cases, <code>ncargs</code> may already be higher than 12. To find out the current value of <code>ncargs</code>, use this command: <pre>lsattr -El sys0 -a ncargs</pre>◆ Change the following default entries in the <code>/etc/security/limits</code> file: <pre>fsize = -1 core = 2097151 cpu = -1 data = 262144 rss = 65536 stack = 65536 nofiles = 4096 (recommended value is unlimited)</pre>	

Step	Description	Your Notes
4	<p data-bbox="285 264 870 321">For the RedHat Enterprise Linux operating system only, make the following system changes:</p> <ol style="list-style-type: none"><li data-bbox="285 331 870 659">1 If the base locale for the system is English, edit the <code>/etc/sysconfig/i18n</code> file by changing the following variables:<ul style="list-style-type: none"><li data-bbox="331 436 846 464">• Change LANG from <code>en_US.utf8</code> to <code>en_US</code>.<li data-bbox="331 485 862 575">• Change SUPPORTED from <code>en_US.utf8</code> to <code>en_US</code>. You can also allow multiple support using the following format: <code>en_US.utf8:en_US</code>Save and close the <code>/etc/sysconfig/i18n</code> file.<li data-bbox="285 674 870 1142">2 Edit the <code>/etc/security/limits.conf</code> file by adding the following lines:<pre data-bbox="321 737 764 1003">gisuser hard nofile 8196 gisuser soft nofile 4096 gisuser hard memlock 3000000 gisuser soft memlock 3000000 gisuser hard nproc 16000 gisuser soft nproc 16000 gisuser hard stack 512000 gisuser soft stack 512000</pre>This updates the system ulimits. Note: For <code>nofile</code>, the recommended value is unlimited. Save and close the <code>/etc/security/limits.conf</code> file.<li data-bbox="285 1157 526 1184">3 Reboot the system.	

Step	Description	Your Notes
5	<p>For the SUSE Linux operating system only, make the following system changes:</p> <ol style="list-style-type: none"> <li data-bbox="285 331 867 495"> 1 If the base locale for the system is English, edit the <code>/etc/sysconfig/language</code> file by changing the following variables: Change RC_LANG from <code>en_US.UTF8</code> to <code>en_US</code>. Save and close the <code>/etc/sysconfig/language</code> file. <li data-bbox="285 506 829 978"> 2 Edit the <code>/etc/security/limits.conf</code> file by adding the following lines: <pre data-bbox="321 573 764 835">gisuser hard nofile 8196 gisuser soft nofile 4096 gisuser hard memlock 3000000 gisuser soft memlock 3000000 gisuser hard nproc 16000 gisuser soft nproc 16000 gisuser hard stack 512000 gisuser soft stack 512000</pre> This updates the system ulimits. Note: For <code>nofile</code>, the recommended value is unlimited. Save and close the <code>/etc/security/limits.conf</code> file. <li data-bbox="285 989 526 1016">3 Reboot the system. 	
6	<p>For systems with multiple IP addresses, verify that the IP address on which Gentran Integration Suite resides is accessible by any client computer that is running a browser interface.</p> <p>For all Linux operating systems only, ensure that <code>/etc/hosts</code> has short-names first for all entries. For example, <code>127.0.0.1localhostlocalhost.localdomain</code></p> <p>Caution: If you do not verify the IP addresses, your system may not operate properly after installing Gentran Integration Suite.</p>	
7	<p>Verify that all client computers are using Microsoft Internet Explorer 5.x or later.</p>	
8	<p>If you are using a non-English environment, confirm that you are using the appropriate character set.</p>	
9	<p>Determine and record information about the JDK. See <i>Installing the Java 2 Software Development Kit</i> on page 12.</p> <ul style="list-style-type: none"> <li data-bbox="285 1644 521 1671">◆ Version of the JDK <li data-bbox="285 1692 773 1713">◆ Absolute path to the JDK files and patches 	

Step	Description	Your Notes
10	Obtain the JCE distribution file and record the absolute path to the zipped file. See <i>Downloading the JCE Distribution File</i> on page 12.	
11	Determine and record the initial port number to be used by Gentran Integration Suite. See <i>Determining Port Numbers</i> on page 13.	
12	Verify that a UNIX user account exists on the host server for each installation of Gentran Integration Suite. See <i>Creating a UNIX Account</i> on page 13.	
13	Set Umask to 002.	
14	<p>If you are using an Oracle, MS SQL, or DB2 database, determine and record information about your database server. Be aware that this information is case sensitive. See <i>Creating and Configuring the Database Server</i> on page 13.</p> <ul style="list-style-type: none"> ◆ Database vendor ◆ Database user name and associated password ◆ Database (catalog) name ◆ Database host name ◆ Database host port number ◆ Absolute path and file name for the JDBC driver ◆ Version of the JDBC driver 	
15	<p>Determine and record information to set up default system alerts from Gentran Integration Suite:</p> <ul style="list-style-type: none"> ◆ The Administrative e-mail address to which system alert messages are sent. ◆ The SMTP Server IP address used for sending alert messages. 	
16	<p>Determine and record the directory in which you plan to install Gentran Integration Suite.</p> <ul style="list-style-type: none"> ◆ The installation directory must not exist because the installation process creates it. ◆ The file system must have adequate free disk space. ◆ The name of the directory is case sensitive. 	
17	<p>Determine and record the passphrase you want to use for the Gentran Integration Suite system.</p> <p>During installation, you are prompted twice to type the passphrase, which is not displayed when you type it.</p>	

Step	Description	Your Notes
18	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. See <i>Obtaining a License File</i> on page 19.	

Checking System Requirements

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

For current information, see the *System Requirements* posted on the Gentran Integration Suite Documentation Library.

Note: Version 4.2 of Gentran Integration Suite does not require an application server for installation or at run-time. However, Gentran Integration Suite supports integration with JBoss™ and WebLogic®. You can also integrate with WebSphere®, JBoss, or WebLogic after installing version 4.2 by using the Gentran Integration Suite EJB Adapter.

Installing the Java 2 Software Development Kit

You must install the Java 2 Software Development Kit (JDK) and the patches specific to your system. To determine which JDK version and patches you need, see the Gentran Integration Suite *System Requirements*. After you install the JDK, record the absolute path to its location on your system. You must supply the absolute path when you install Gentran Integration Suite.

Note: The *System Requirements* include information about upgrading your JDK for the changes enacted in 2007 for Daylight Savings Time.

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.

To obtain this file for the Sun JDK 1.4 (Solaris and HP-UX):

1. Open your browser and navigate to <http://java.sun.com/products/jce/index-14.html>.
2. At the bottom of the page, locate the section *Downloading the "Unlimited Strength" Jurisdiction Policy Files* and click **Download JCE Unlimited Strength Jurisdiction Policy Files**.
3. Download the zipped JCE 1.4.2 distribution file to your system. Once the file resides on your system, note the exact directory and file name for this zipped file.

To obtain this file for the IBM JDK 1.4 (RedHat, AIX, and SLES)

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**.
5. Review your personal information and the license agreement and click **I agree** 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 Gentran Integration Suite.

To specify an initial port number, follow these guidelines:

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

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

Creating a UNIX Account

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

Creating and Configuring the Database Server

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

Caution: If you are reinstalling Gentran Integration Suite, 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.

After creating and configuring your database, recycle the database. Then stop and restart Gentran Integration Suite to apply the changes.

In a UNIX/Linux environment, Gentran Integration Suite supports the following databases:

- ◆ MySQL™ (See *Using a MySQL Database Server* on page 14)
- ◆ Oracle® 9i or 10g (See *Using an Oracle Database Server* on page 14)
- ◆ DB2 (See *Using a DB2 Database Server* on page 17)
- ◆ MS SQL (See *Using a Microsoft SQL Server Database Server* on page 18)

See *System Requirements* for supported version information.

Using a MySQL Database Server

You can use a MySQL database server with Gentran Integration Suite. See *System Requirements* for version information. This database is bundled with Gentran Integration Suite. Choosing this database during the installation procedure creates and configures it for you. MySQL is installed locally on the same server as Gentran Integration Suite and cannot be installed on a separate server.

Using an Oracle Database Server

You can use an Oracle 9i or 10g database with Gentran Integration Suite. See *System Requirements* for supported version information. Gentran Integration Suite supports Oracle 10g in a single node database environment.

Note: Oracle 10g RAC is not supported in Gentran Integration Suite 4.2.

To use an Oracle 9i or 10g database, follow this process:

- ◆ Create the database. Refer to your vendor's documentation for information about creating the database, including creating a schema repository, login, and tablespace. Be sure to install the correct version and patches.
- ◆ Configure the database by completing the following tasks:
 - ◆ *Setting Database Parameters in Oracle* on page 14
 - ◆ *Rolling Back or Undoing Changes in Oracle* on page 15
 - ◆ *Granting Permissions in Oracle* on page 15
 - ◆ *Installing the JDBC Driver in Oracle* on page 16
 - ◆ *Enabling Failover in a Multiple Node Oracle RAC Database Cluster (UNIX/Linux)* on page 16

Setting Database Parameters in Oracle

Gentran Integration Suite requires the following parameter settings in your Oracle database:

Parameter	Value
Number of open cursors	greater than or equal to 2000

Parameter	Value
Database block buffers	greater than or equal to 19200 Note: Sterling Commerce recommends that this be set to 0 if SGA memory equals greater than 0.
System Global Area (SGA) memory (10g only)	greater than 0 Note: Sterling Commerce recommends that the database block buffers be set to 0 if SGA memory equals greater than 0.
Shared pool size	greater than or equal to 90000000
Large pool size	greater than or equal to 614400
Java pool size	greater than or equal to 20971520
Number of processes	greater than or equal to 500
Log buffer	greater than or equal to 163840
Database block size	greater than or equal to 8192
Sort area size	greater than or equal to 65536
Sort area retained size	greater than or equal to 65536
Max extends	Unlimited
Character set	AL32UTF8

Rolling Back or Undoing Changes in Oracle

You can roll back or undo changes in Oracle using one of the following methods:

- ◆ (Oracle versions earlier than 9i) Gentran Integration Suite recommends that you configure a rollback segment for every four concurrent users. Each rollback segment must be extendable to 25MB. The value of the initial segment and the next segment can vary between 256 KB (with 5MB for optimal) and 10 MB (with 20 optimal). Note that these ranges will vary based on the size of your Gentran Integration Suite database and the number of business rules it contains.
- ◆ (Oracle versions 9i or later) These versions support 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.

Granting Permissions in Oracle

Grant the following permissions to the Gentran Integration Suite user:

```
GRANT "CONNECT" TO <USER>
GRANT SELECT_CATALOG_ROLE TO <USER>
ALTER USER <USER> DEFAULT ROLE "CONNECT",
        SELECT_CATALOG_ROLE
GRANT CREATE PROCEDURE TO <USER>
GRANT CREATE TRIGGER TO <USER>
```

```
GRANT CREATE TYPE TO <USER>
GRANT EXECUTE ANY PROCEDURE TO <USER>
GRANT EXECUTE ANY TYPE TO <USER>
GRANT SELECT ANY TABLE TO <USER>
GRANT SELECT ANY DICTIONARY TO <USER>
```

For Oracle 10g 10.2.x, also grant the following permission:

```
GRANT "RESOURCE" TO <USER>;
ALTER USER <USER> DEFAULT ROLE "CONNECT", "RESOURCE", SELECT_CATALOG_ROLE;
```

Note: If you are using Oracle AQ for Oracle 9i or Oracle 10g, then grant the AQ_ADMINISTRATOR_ROLE permission.

Installing the JDBC Driver in Oracle

Gentran Integration Suite requires the appropriate JDBC driver for Oracle Database 10g and Oracle 9i databases. These drivers are thin client based pure Java JDBC drivers. See *System Requirements* for supported version information.

The supported versions of the JDBC driver will build the correct Gentran Integration Suite directory structure.

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

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 to modify *sandbox.cfg* file.
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=ON)
      (ADDRESS=(PROTOCOL=TCP)(HOST=myhost1)(PORT=1521))
      (ADDRESS=(PROTOCOL=TCP)(HOST=myhost2)(PORT=1521))
    )
    (CONNECT_DATA = (SERVER = DEDICATED)(SERVICE_NAME = myservicename))
  )
```

3. Run the *setupfiles.sh* command from the *install_dir/install/bin* directory.
4. Set the propagation delay on the RAC server to 0.

Using a DB2 Database Server

You can use a DB2 database with Gentran Integration Suite. See *System Requirements* for supported version information. To use a DB2 server, follow this process:

- ◆ Create the database. Refer to your vendor's documentation for information about creating the database, including creating a schema repository, login, and tablespace. Be sure to install the correct version and patch. Be sure to install the client components and compilers before you install the fixpack.
- ◆ Configure the database by completing the following tasks:
 - ◆ *Installing Client Components, Compilers, and Fix Pack* on page 17
 - ◆ *Setting Parameters for DB2* on page 17
 - ◆ *Granting Permissions for DB2* on page 17
 - ◆ *Installing JDBC Drivers for DB2* on page 17

Installing Client Components, Compilers, and Fix Pack

Gentran Integration Suite uses stored procedures for DB2. You must install or set up the following components:

1. Install the Administration client.
2. Install the Application Development clients.
3. Install the necessary fix pack after you install the client components and compilers. Otherwise, the clients will overwrite the fix pack binaries.
4. 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

Gentran Integration Suite requires the following parameter settings in your DB2 database:

Parameter	Value
APPLHEAPSZ	greater than or equal to 10000
APP_CTL_HEAP_SZ	greater than or equal to 512
MAXAPPLS	greater than or equal to 150
LOCKLIST	greater than or equal to 30000
MAXLOCKS	100
Database code page	UTF-8

Granting Permissions for DB2

Grant DBADM permissions to the Gentran Integration Suite user.

Installing JDBC Drivers for DB2

For DB2, Gentran Integration Suite requires 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 when you install Gentran Integration Suite.

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).
4. Bundle the files in the temporary working directory into one file using the jar utility (jar cvf(6|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 Server

You can use a Microsoft SQL Server database with Gentran Integration Suite. See *System Requirements* for supported version information. To use an MS SQL Server database, follow this process:

- ◆ Create the database. Refer to your vendor's documentation for information about creating the database, including creating a schema repository, login, and tablespace. Be sure to install the correct version and patch.
- ◆ Configure the database by completing the following tasks:
 - ◆ *Setting Database Parameters in SQL Server* on page 18
 - ◆ *Granting Permissions in SQL Server* on page 19
 - ◆ *Installing the JDBC Driver in SQL Server* on page 19

Setting Database Parameters in SQL Server

Gentran Integration Suite requires the following parameter settings 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
Parallelism	Use one processor (do not use all available processors)

Granting Permissions in SQL Server

In SQL Server, you must grant DBO (Database Owner) permission to the Gentran Integration Suite user.

Installing the JDBC Driver in SQL Server

Gentran Integration Suite requires the correct Microsoft SQL Server driver. See *System Requirements* for supported version information. Go to <http://www.microsoft.com/downloads> to download this driver which, as of Gentran Integration Suite 4.2, is contained in a tarball named `mssqlserver.tar`. This tarball includes the jar files `msbase.jar`, `mssqlserver.jar`, and `msutil.jar`. Also download any appropriate patches.

Uncompressing `mssqlserver.tar` yields several files, including `install.ksh`, which is a korn shell script that installs the JDBC drivers in a specified directory.

After running the `install.ksh` script, you need to combine the three jar files that make up the Microsoft SQL Server JDBC drivers (`msbase.jar`, `mssqlserver.jar`, and `msutil.jar`). These files will be placed in the `<JDBC Driver install dir>/lib` directory. To combine these jar files, use the following procedure:

1. Make a new directory in which you will work, and copy the separate jar files to this directory.
2. For each of the separate jar files, issue the following command:

```
jar -xvf <jar file name>
```
3. After all of the jars have been expanded, remove the META-INF directory that will be located in the working directory.
4. Create a new jar file by issuing the following command:

```
jar -cvf. <combinedJarName.jar> *
```

When the Gentran Integration Suite installation asks for the location of the JDBC drivers, specify the jar file you created with the above procedure. The JDBC driver version is the same as the version of the drivers downloaded from Microsoft.

Obtaining a License File

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

The license file contains a license that is associated with your specific operating system and the IP address of your system. The license provides access, for 20 years from the date of issue, to the Gentran Integration Suite packages your company selected and is independent of your maintenance fee. Because the license is independent of your maintenance fee, the schedule for renewing your license and license file may be different than the maintenance fee schedule.

You must download the license file before you can install Gentran Integration Suite. Follow these steps:

1. Point your Web browser to <http://www.productupdates.stercomm.com>.
2. Review the Welcome to Sterling Commerce Product Update page and click **Next**.
3. Review the Authenticate page and click **Next**.

4. Type the License File Key, which is case-sensitive, and click **Next**. If the system displays the Retrieve Registration dialog box and you are upgrading, you may retrieve your registration information by entering your previous License File Key. If you are not upgrading, then click **Next**.
5. Verify the registration information and click **Next**.
6. On the Server Details page, update the fields and click **Next**.
If the operating system, application server, or database server version is not listed in the respective lists, type the version in the respective **Description of Other**.
All IP addresses assigned to the server in which you are installing Gentran Integration Suite should be listed in the license file.
7. Verify the list of packages and the type of license selected for each package and click **Next**. If the list of packages selected or the type of license selected is *not* correct, then contact Customer Support to correct the information.
8. Scroll to the bottom of the Review and Download Package License File page and click **Finish and Download**.
9. Click **Save** in the **File Download** dialog box.
10. Accept the default location for the license file or navigate to the location where you will store the license file. Note the absolute path of the file location on the Preinstallation Checklist. You will need the absolute path to install Gentran Integration Suite.
11. Click **Save**.
12. Close your Web browser.

Silent Installation

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

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

Examples of silent installation text file entries:

```
APSERVER_PASS = (system passphrase)
INSTALL_DIR = (full path to the installation directory)
LICENSE_FILE_PATH = (full path to the license file)
PORT1 = (initial port)
JCE_DIST_FILE = (full path to the JCE distribution file)
SI_ADMIN_MAIL_ADDR = (email address for administrative contact)
SI_ADMIN_SMTP_HOST = (SMTP mail server host name)
DB_VENDOR = (database)
ACCEPT_LICENSE = (license agreement acceptance)
DB_USER = (database user ID)
DB_PASS = (database password)
DB_DATA = ('net service name' or 'database name')
DB_HOST = (database hostname or IP address)
DB_PORT = (database's listener port.)
DB_DRIVERS = (fully qualified path to the database driver)
DB_DRIVERS_VERSION = (version of database drivers)
```

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

Example (single node installation or node 1 of a clustered installation):

```
install_dir/JDK/bin/java -jar GISxx.jar -f silent_install_file
```

Example (nodes 2 and higher of a clustered installation):

```
install_dir/JDK/bin/java -jar GISxx.jar -f silent_install_file -nodbinit
```

Installing in a UNIX or Linux Environment

Installing Gentran Integration Suite in a UNIX or Linux environment includes the following sections:

- ◆ *Running the Installation Program in UNIX or Linux* on page 22
- ◆ *Installing a Cluster Configuration in UNIX or Linux* on page 24
- ◆ *Installing the Current Maintenance Patch in UNIX or Linux* on page 29
- ◆ *Installing Patches in a Perimeter Server Environment* on page 31
- ◆ *Installing Patches in a Clustered Environment* on page 32

- ◆ *Installing a Hot-Fix in UNIX or Linux* on page 34
- ◆ *Encrypting Database Passwords* on page 35
- ◆ *Setting Up Perimeter Servers with Gentran Integration Suite* on page 35

Caution: If you are upgrading, refer first to the *Upgrade Guide* for the release from which you are upgrading (3.0/3.1, 4.0 or 4.1/4.1.1). Upgrading from Gentran Integration Suite 3.0, 3.1 and 4.0 includes a full installation of Gentran Integration Suite 4.2, but you must follow additional steps in the *Upgrade Guide* to complete the upgrade. Upgrading from Gentran Integration Suite 4.1 and 4.1.1 does not include an installation of Gentran Integration Suite 4.2.

Running the Installation Program in UNIX or Linux

Note: The following instructions assume that you received an installation CD for Gentran Integration Suite. If you downloaded Gentran Integration Suite 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. Use this directory wherever there is a reference to the installation CD in the following instructions. Ignore any instructions to place the installation CD in a drive.

To install Gentran Integration Suite in a UNIX or Linux environment, refer to your preinstallation checklist and follow the steps below.

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.

1. Place the Gentran Integration Suite 4.2 installation CD in the appropriate drive.
2. From the installation CD, copy **si42.jar** to your home directory or base directory and change to that directory.

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

3. To begin the installation, type the absolute path to the JDK followed by one of the following commands:

- ◆ If you are installing a new Gentran Integration Suite system, enter:

```
/absolutePath/bin/java -jar si42.jar
```

The program verifies the version of your operating system, the JVM version, and the required operating system patch levels.

- ◆ If you are upgrading from Gentran Integration Suite version 4.0.3-5 or higher to Gentran Integration Suite version 4.2, enter:

```
/absolutePath/bin/java -jar si42.jar -nodbinit
```

If the Gentran Integration Suite system is running, stop the previous installation before proceeding.

- ◆ If you are upgrading from Gentran Integration Suite version 3.0 or 3.1 to Gentran Integration Suite version 4.2, and you are upgrading a single node installation or the first node of a cluster installation, enter:

```
/absolutePath/bin/java -jar si42.jar -upgrade
```

For more information about cluster installations, refer to *Installing a Cluster Configuration in UNIX or Linux* on page 24.

- ◆ If you are upgrading the second and higher nodes of a cluster installation from Gentran Integration Suite version 3.0 or 3.1 to Gentran Integration Suite version 4.2, enter:

```
/absolutePath/bin/java -jar /absolutePath/si42.jar -nodbinit
```

For more information about cluster installations, refer to *Installing a Cluster Configuration in UNIX or Linux* on page 24.

Note: The command to upgrade from Gentran Integration Suite version 3.0 or 3.1 to Gentran Integration Suite version 4.2 does not automatically install patches. After you complete the upgrade from Gentran Integration Suite version 3.0 or 3.1 to Gentran Integration Suite version 4.2, you need to manually apply patches to complete the Gentran Integration Suite version 4.2 installation.

If the Gentran Integration Suite system is running, stop the previous installation before proceeding.

- The program checks for the presence of the JCE unlimited strength policy files. If they are not installed, you are prompted for the path to the JCE distribution file. If prompted, type the absolute path name to the JCE distribution file and press **Enter**. The program verifies the path name.
- Type the absolute path for the license file and press **Enter**. The license file must reside on the local UNIX host. If you saved the license file to a Windows client, transfer the license file to the UNIX host.
- Enter the absolute path name for the installation directory and verify that the directory is correct. The program checks the amount of available disk space.
- Change to the installation directory and run the command **./installSi.sh**.
- Review and accept the license agreement.
- You are prompted whether to override the host IP address.
 - ◆ If Yes, enter the IP address you want to use.
 - ◆ If No, press **Enter** to accept the host IP address.
- Type the system passphrase that you want to use. Then type the passphrase again to confirm it.
- Depending on your operating system, you may be asked if you want to integrate with WebLogic or JBoss. If prompted and you want to integrate, type **yes** and enter the required information. Otherwise, type **no** to continue.
- Enter the initial port number for Gentran Integration Suite. The installation sets up subsequent ports based on the initial port number.

Note: The WebDAV port is set to the initial port number plus 46. For example, if the initial port is 10000, the WebDAV port is 10046. You will need to know this port number if you plan to set up WebDAV support.
- You are prompted whether to change the default port values.
 - ◆ To accept the default values, type **no**.

- ◆ To change the default values, type **yes**. You are prompted for each value. Press **Enter** to accept the displayed value, or type the new value and press **Enter**.
14. Type the administrative e-mail address to which you want system alert messages sent.
 15. Type the SMTP mail server host name that you want to use for system alert messages.
 16. You are prompted for the database you want to use.
 - ◆ If you are using MySQL, type **4**. The MySQL bundled with Gentran Integration Suite will be installed local to Gentran Integration Suite on the same server.
 - ◆ If you are using Oracle, DB2, or MS SQL, type **1**, **2**, or **3** as appropriate. Enter the following information when prompted:
 - Database user name
 - Database password
 - Database password again for confirmation
 - Database (catalog) name
 - Database host name
 - Database host port number (For DB2, use port 50000)
 - Absolute path and file name for the JDBC driver (For DB2, use the Type-4 JDBC driver)
 - Version of the JDBC drivers
- The installation program verifies the database connection. If a connection cannot be established, you receive an error and can re-enter the database information.
17. Verify the information you entered. Then press **Enter** to continue.
 18. The installation process continues automatically and installs the following components:
 - ◆ MySQL (if you selected MySQL)
 - ◆ Core files (services, adapters, and predefined business processes)
 - ◆ Package files
 - ◆ System certificates
 - ◆ License file
 19. When installation is finished, the system displays the following message:

Installation has completed successfully.

If you encounter problems or errors during installation, see *Troubleshooting: UNIX or Linux Environment* on page 43.

Installing a Cluster Configuration in UNIX or Linux

Installing Gentran Integration Suite nodes is similar to a standard Gentran Integration Suite installation, with the following restrictions on all nodes:

- ◆ All nodes must use the same database.

- ◆ All nodes must use the same passphrase.
- ◆ You must install and start the nodes sequentially, one at a time, starting with the first node.

To install Gentran Integration Suite in a cluster configuration, do the following:

1. Install the first node (node1) as you would a single Gentran Integration Suite system. For more information, see *Running the Installation Program in UNIX or Linux* on page 22.
2. Install each subsequent node, from node2 onwards, by running the command `java -jar si42.jar -nodbinit`, using the "-nodbinit" option, which prevents any database initialization and update. The installation passphrase must be the same across all nodes.

- When prompted, change to the installation directory and run the command `./installSi.sh`.

When the patch installation portion of the installation fails with the following message, go to the next step:

Note: The following failure error message applies only to Gentran Integration Suite 4.0. The failure error message does not appear for Gentran Integration Suite 3.x and 4.1. For those versions, go to the next step.

Controller loading lists...

Error '255' installing service files.

ERROR: Installation failed '255'

This error message writes the following information to the `security.log` file:

```
[YYYY-MM-DD HH:MM:SS.SSS] ERROR 000000000000 GLOBAL_SCOPE Product version
doesn't match feature set version.
[YYYY-MM-DD HH:MM:SS.SSS] ERROR 000000000000 GLOBAL_SCOPE LM.refresh caught
securityexception
java.lang.SecurityException: Product version 4.1 does not match feature map
version 4.2.0-42XX
    at com.company.security.lc.LM.loadMap(LM.java:2355)
    at com.company.security.lc.LM.refresh(LM.java:2908)
    at com.company.security.lc.LM.<clinit>(LM.java:3305)
    at
com.company.server.install.module_loader.ServiceInstall.install(ServiceInst
all.java:184)
    at
com.company.server.install.module_loader.ServiceInstallDriver.doIt(ServiceI
ninstallDriver.java:164)
    at
com.company.server.install.module_loader.ServiceInstallDriver.main(ServiceI
ninstallDriver.java:63)
    at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
    at
sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:3
9)
    at
sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImp
l.java:25)
    at java.lang.reflect.Method.invoke(Method.java:324)
    at
com.company.server.install.module_loader.ServiceInstallBootstrapper.doIt(Se
rviceInstallBootstrapper.java:94)
    at
com.company.server.install.module_loader.ServiceInstallBootstrapper.main(Se
rviceInstallBootstrapper.java:58)
[YYYY-MM-DD HH:MM:SS.SSS] ERROR 000000000000 GLOBAL_SCOPE
*****
```

```
[YYYY-MM-DD HH:MM:SS.SSS] ERROR 000000000000 GLOBAL_SCOPE License check
failed at 0
[YYYY-MM-DD HH:MM:SS.SSS] ERROR 000000000000 GLOBAL_SCOPE
*****
[YYYY-MM-DD HH:MM:SS.SSS] ERROR 000000000000 GLOBAL_SCOPE LM.refresh caught
securityexception exit SI
[YYYY-MM-DD HH:MM:SS.SSS] ERROR 000000000000 GLOBAL_SCOPE LM.refresh caught
securityexception at start up exit SI
java.lang.SecurityException: Product version 4.1 does not match feature map
version 4.2.0-42XX
    at com.company.security.lc.LM.loadMap(LM.java:2355)
    at com.company.security.lc.LM.refresh(LM.java:2908)
    at com.company.security.lc.LM.<clinit>(LM.java:3305)
    at
com.company.server.install.module_loader.ServiceInstall.install(ServiceInst
all.java:184)
    at
com.company.server.install.module_loader.ServiceInstallDriver.doIt(ServiceI
ninstallDriver.java:164)
    at
com.company.server.install.module_loader.ServiceInstallDriver.main(ServiceI
ninstallDriver.java:63)
    at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
    at
sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:3
9)
    at
sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImp
l.java:25)
    at java.lang.reflect.Method.invoke(Method.java:324)
    at
com.company.server.install.module_loader.ServiceInstallBootstrapper.doIt(Se
rviceInstallBootstrapper.java:94)
    at
com.company.server.install.module_loader.ServiceInstallBootstrapper.main(Se
rviceInstallBootstrapper.java:58)
```

4. On each node after node1, copy `install_dir/bin/FeatureSet.xml` from the primary node to `install_dir/bin` on the secondary node.
5. On each node after node1, change to the installation directory and run the command `./installSi.sh`.
6. On each node after node1, change the directory to `install_dir/bin` on the secondary node.
7. On each node after node1, install the patch on the secondary node using the following command:
`InstallService.sh absolutepath/si_engine_4204.jar (or higher)`

8. On each node, starting with node1, perform cluster configuration by running the command "startCluster.sh *nodeNumber*" from the Gentran Integration Suite install_dir/bin directory where *nodeNumber* is the sequential number assigned to each node starting with 1.

To make a dynamic addition of new nodes to the cluster, install new nodes to the cluster using the "-nodbinit" option as described above and configure the servers for the cluster.

Gentran Integration Suite supports the installation of multiple nodes on the same machine. Each node will be configured on a different port range. To install Gentran Integration Suite in a cluster configuration on the same machine, do the following:

1. Install the first node (node1) as you would a single Gentran Integration Suite system. For more information, see *Running the Installation Program in UNIX or Linux* on page 22.
2. Install each subsequent node, from node2 onwards, using the "--nodbinit" option, which prevents any database initialization and update. The installation passphrase must be the same across all nodes. Update the FeatureSet.xml file on each subsequent node. Install each node in the same machine on a different port range
3. Once the installation and cluster setup is complete, go to the properties directory of the installed nodes and change the multicastBasePort property in noapp.properties to point to node1's "multicastBasePort".

Custom Configurations

As part of a default cluster configuration, certain values in the database for service or adapter configurations, default document storage type, etc., are updated to get the cluster working. The default settings include no shared or mounted file system available with "line of sight" from all cluster nodes, etc. Certain service or adapter configurations are forcibly deployed on node1 and default document storage type is set up to "Database" for all business processes.

After you install the cluster and evaluate the customer configurations and requirements, the above conditions might change and custom configurations will be incorporated. To keep these custom configuration changes from being overwritten, the following cluster configuration script has an option to update the database:

```
startCluster.sh nodeNumber true/false
```

- ◆ *nodeNumber* is the cluster node number
- ◆ Type **true** to perform database update and **false** to prevent any database updates.

The first time you configure a Gentran Integration Suite cluster, run startCluster.sh with the database update option set to true to have all cluster-related configurations take effect.

```
startCluster.sh nodeNumber true
```

For cluster configurations after the first configuration, you can execute the startCluster.sh command with the database update option turned off. This prevents any configuration changes from affecting the system, especially after installing patches/hot-fixes.

```
startCluster.sh nodeNumber false
```

Multicast Configurations

All Gentran Integration Suite cluster nodes communicate with each other through multicast on a specific IP address and port. The multicast ports are configured based on the Gentran Integration Suite installation base port. All Gentran Integration Suite clusters that are on the same subnet configured on the same Gentran Integration Suite base port will end multicasting messages on the same multicast IP address and port.

To avoid this, each Gentran Integration Suite cluster on the same subnet needs to be configured on different base ports. Install your clusters on different port ranges or on different network segments with multicast forwarding restricted, so that they will not interfere with each other. The default multicast address used in Gentran Integration Suite release 4.2 is "239.255.166.17". This address is configurable, with a port range of 10 ports, starting with the multicast base port for the instance.

All nodes participating in the same cluster must be installed on the same multicast base port (the `multicastBasePort` property in the `noapp.properties` file). This is usually computed from the system base (non-multicast) port, but can be configured separately in the `noapp.properties` file, to allow different nodes in a cluster to be installed at different (non-multicast) port ranges. Also, all the nodes in the cluster should be installed in the same subnet.

Configuring Shared File System as Document Storage

In a Gentran Integration Suite cluster, the default document storage is database, so that all of the nodes in the cluster have line of sight to the documents to access and process the documents. However, using the database for document storage has performance implications over using the file system for document storage.

To use the file system as document storage in cluster, the file system needs to be a shared/mounted/clustered file system with all nodes having line of sight to the file system.

For each Gentran Integration Suite node, follow this procedure to configure a shared file system in a Gentran Integration Suite cluster:

1. Go to `install/properties` dir.
2. Change the `document_dir` property in `jdbc.properties` to point to the shared file system directory configured to store the documents.
3. Restart Gentran Integration Suite (all nodes).

This configures a shared file system directory as document storage.

Installing the Current Maintenance Patch in UNIX or Linux

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

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

`si_engine_<build number>.jar`

For example, a file named `si_engine_1976.jar` is the patch for build 1976 for Gentran Integration Suite 4.1, which is labeled Gentran Integration Suite 4.2 in the user interface.

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

si_engine_<build number>_patch_info.txt

For example, a file named `si_engine_1976_patch_info.txt` contains information about build 1976 for Gentran Integration Suite 4.1, which is labeled Gentran Integration Suite 4.2 in the user interface.

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

To install the latest patch for Gentran Integration Suite 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 Gentran Integration Suite and record the absolute path to the downloaded file. If you use FTP, use Binary mode. Do not rename the file.
3. If you are using a database other than MySQL, verify that the database server is up and ready to accept connections.
4. Stop Gentran Integration Suite.
5. Perform a full backup of the Gentran Integration Suite 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.
7. Is the database password encrypted? If Yes, decrypt the password. See *Decrypting a Password (UNIX)*.
8. Change to the directory where Gentran Integration Suite 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>_sp_0_patch_<number>_<app_server>.jar
```

 where:
 - `<path>` = Fully qualified path to maintenance patch file
 - `<version>` = Gentran Integration Suite Version

<number> = Patch number
 <app_server> = Application Server

Example: `InstallService.sh /opt/patch/si_22_sp_0_patch_1_jboss.jar`

Information about the patch installation is automatically logged to `install_dir/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 will provide the error message code from the database and the SQL command that failed. The failure information is also logged to the `system.log` file and to the `patch.log` file. If you cannot determine whether the failure can be safely ignored, contact Sterling Commerce Customer Support for assistance. Choose one of the following options when prompted:

- ◆ Continue – If you determine that the failure can be safely ignored, continue with the patch installation.
 - ◆ Stop – Stop the patch installation. You should always contact Sterling Commerce Customer Support for assistance before choosing this option.
 - ◆ Retry – Choose this option to retry the failed command.
9. If you decrypted the database password, re-encrypt the password. For information, see *Encrypting Database Passwords* on page 35.
 10. Restart Gentran Integration Suite.

If you are using a perimeter server in a DMZ, see *Installing Patches in a Perimeter Server Environment* on page 31.

Installing Patches in a Perimeter Server Environment

Perimeter servers in a DMZ 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. You can determine the proper answers to most of the questions asked during the perimeter server installation by reading a script in your previous installation directory. The name of the script is `startupPs.sh`.

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

1. Locate the `ps42service_pack-patch.jar` file in the `install_dir/packages` directory. For maintenance patches, obtain the file from the Sterling Commerce Support on Demand Web site, at <https://support.sterlingcommerce.com/user/login.aspx>. These patch files will have a longer name that identifies the associated maintenance patch. For example, `ps42-1976.jar`.
2. Copy the file to the home directory or base directory on the DMZ server.
3. Stop the perimeter server using the `stopPs.sh` command.
4. To begin the installation, type `/absolutepath/bin/java -jar filename.jar`.
absolutepath is the directory name where the Java version is installed.
 The program verifies the operating system and required patch level and the location and version of the JDK.
5. Type the full path to the installation directory.
6. The program verifies the amount of available disk space.

7. Type the TCP/IP address or DNS name for the internal interface, or press **Enter** to use a wildcard address.
8. Verify the TCP/IP address or DNS name for the internal interface.
9. Type the TCP/IP address or DNS name for the external interface, or press **Enter** to use a wildcard address.
10. Verify the TCP/IP address or DNS name for the external interface.
11. Type the port that the perimeter server will listen on for the connection from the integration server. The port number must be higher than 1024.
12. Verify that the port you entered in the previous step is correct.
13. Type the maximum amount of heap space the JVM should allocate in MB. The default value is 512MB, and valid values range from 64 to 2048MB.
14. Verify the maximum amount of heap space the JVM should allocate.
15. The message, *Installation of Perimeter Service is finished*, displays when the perimeter server is installed.
16. Change to the installation directory.
17. Type **startupPs.sh** to start the perimeter server.

Installing Patches in a Clustered Environment

All nodes in a cluster must be patched to the same level. You should stop all nodes in the cluster before installing a patch and then install the patch on each node.

It is possible, in some cases, to apply patches to nodes while others are still processing. However, a patch containing any of the following requires the entire cluster to be down:

- ◆ Critical cluster functionality
- ◆ Engine-related changes
- ◆ Changes to the database

Attempting to apply patches while part of the cluster is running should only be done with the advice of Sterling Commerce Customer Support.

Updating the Database (dbupdate) with the startCluster Command

The **startCluster.sh nodeNumber** command on node 1 will automatically update the database, unless you use the command **startCluster.sh 1 false**. The **startCluster.sh nodeNumber** command on all other nodes will not update the database.

When you configure the Gentran Integration Suite cluster for the first time, you should run the **startCluster.sh** command with the database update value set to true (**startCluster.sh 1 true**), or just **startCluster.sh 1**, since on node 1, dbupdate defaults to true. This makes all cluster-related configurations take effect. The database update will synchronize the scheduled jobs between the nodes by assigning them all to node 1.

The **startCluster.sh** command with the database update value turned off (**startCluster.sh 1 false**) prevents any configuration changes from affecting the system, especially after you install patches or hot-fixes.

For current database updates, the following services are tied to node 1:

- ◆ Schedule
- ◆ FileSystem
- ◆ CmdLine
- ◆ CDServerAdapter
- ◆ CDAdapter
- ◆ CDRequesterAdapter
- ◆ CEUServerAdapter
- ◆ HttpServerAdapter
- ◆ B2B_HTTP_COMMUNICATIONS_ADAPTER
- ◆ HTTP_COMMUNICATIONS_ADAPTER
- ◆ HTTPClientAdapter
- ◆ FTPClientAdapter
- ◆ FtpServerAdapter
- ◆ SFTPClientAdapter

The following services have storage set to the database:

- ◆ HttpServerAdapter
- ◆ CEUServerExtractServiceType
- ◆ CDSERVER_ADAPTER

The default storage of all workflows is set to the database.

Applying a Patch in a Clustered Environment Stopping the Whole Cluster

For a critical patch where the whole cluster needs to be down, use the following process:

1. Stop the whole cluster.
2. Install the patch on each node by running the following command from the *install_dir/bin* directory:
`./InstallService.sh <si_engine_####.jar>`

Apply the patch to node1 first, and then to the subsequent nodes: node2, node3, etc. For node1, REINIT_DB=true in sandbox.cfg. For subsequent nodes, REINIT_DB=false, which prevents database updates from repeating on each node's patch installation. This is automatically set during the patch installation for all nodes except node1 if the installation is done using the nodbinit option.

3. Start each node by running **`startCluster.sh nodeNumber`**.

Applying a Patch in a Clustered Environment Stopping One Node at a Time

For a patch where you can stop the cluster one node at a time, use the following process:

Note: Apply the patch to node1 first, and then to the subsequent nodes: node2, node3, etc.

1. Shut down the node using the **`install_dir/bin/hardstop.sh`** command.
 Wait until the perimeter server of the node is completely down before installing the patch.

2. Install the patch by running the following command from the *install_dir/bin* directory:

```
./InstallService.sh <si_version number_sp_sp number_patch_patch number_application server.jar>
```

For node1, REINIT_DB=true in sandbox.cfg. For subsequent nodes, REINIT_DB=false, which prevents database updates from repeating on each node's patch installation. This is automatically set during the patch installation for all nodes except node1 if the installation is done using the nodbinit option.

3. Start the node. Run **./startCluster.sh nodeNumber**.
4. Open *install_dir/properties/sandbox.cfg* in a text editor. Perform the following steps:
 - a. If REINIT_DB=true, back up the sandbox.cfg file and change REINIT to false.
 - b. Save and close the sandbox.cfg file.

This prevents database updates from being repeated for each node.
5. Repeat steps 1 through 4 for each subsequent node.

Installing a Hot-Fix in UNIX or Linux

After you install Gentran Integration Suite, you may need to install a hot-fix. A *hot-fix* is one or more fixes applied to a specific existing patch.

Before Installing a Hot-Fix

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

- ◆ Received the file name of the *caseid.jar* to install from Sterling Commerce Customer Support
- ◆ Created a full backup of Gentran Integration Suite
- ◆ Created a full backup of your database

Installing a Hot-Fix

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

1. Log in to the computer that you are installing the hot-fix on.
2. Is the database password encrypted? If Yes, decrypt the password. See *Decrypting a Password (UNIX)*.

Apply the hot-fix to node 1 first, and then to the subsequent nodes: node 2, node 3, etc. For node 1, REINIT_DB is true in *install_dir/install/properties/sandbox.cfg*. For subsequent nodes, REINIT_DB is false, which prevents database updates from repeating on each node's hot-fix installation.

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.

- At the FTP prompt, type **get ccaseid.jar**, where *ccaseid* is the ID number you received from Customer Support.

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

- Shut down Gentran Integration Suite.
- Change to the *install_dir/bin* directory.
- Type **./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.
- If you decrypted the database password in step 2, re-encrypt the password. For information, see *Encrypting Database Passwords* on page 35.
- Restart Gentran Integration Suite. For more information, see *Starting Gentran Integration Suite in UNIX or Linux* on page 38.
- In the *install_dir/bin* directory, run `dump_info.sh` to verify that the hot-fix was successfully installed.

Encrypting Database Passwords

Gentran Integration Suite uses a password to connect to the database being used. Currently, Gentran Integration Suite stores the password 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 Gentran Integration Suite. Encrypting these passwords is optional.

To encrypt the database password used by Gentran Integration Suite in UNIX, follow these steps:

- Stop Gentran Integration Suite.
- Run `/install_dir/bin/enccfgs.sh`.
- Run `/install_dir/bin/setupfiles.sh`.
- Run `/install_dir/bin/deployer.sh`.
- Run **run.sh** to start Gentran Integration Suite.
- Enter your passphrase.

Setting Up Perimeter Servers with Gentran Integration Suite

Using a perimeter server with Gentran Integration Suite is optional.

A *perimeter server* is a software tool for communications management that is installed in a DMZ. The perimeter server manages the communications flow between outer layers of your network and Gentran Integration Suite's 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.

The Gentran Integration Suite 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 DMZ solution. However, if you require high-volume, secure connections, you must install a perimeter server in a DMZ.

When you install a perimeter server, use these guidelines:

- ◆ Licensing for a perimeter server is determined by the licensing restrictions on the corresponding transport adapters in Gentran Integration Suite: FTP Server, FTP Client, HTTP Server, HTTP Client, SFTP Server, SFTP Client, Connect:Direct Server, and Connect:Direct Requester.
- ◆ 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 Gentran Integration Suite. *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 may have multiple perimeter servers installed on the same computer interacting with one instance of Gentran Integration Suite. 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 UNIX or Linux Environment

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

1. Insert the Gentran Integration Suite installation CD in the appropriate drive.
2. Copy the `ps42service_pack-patch.jar` installation files from the installation CD to your home directory or base directory. If you are using FTP to copy the file, make sure your session is set to binary mode.
3. To begin the installation, type the absolute path to the following jar file:

```
/absolutepath/bin/java -jar ps42service_pack-patch.jar
```

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

4. Enter the name of the installation directory.

The program verifies the amount of available disk space.
5. At the prompt *Is this server in a less secure network than the integration server?*, do one of the following:
 - ◆ If you are installing the perimeter server in a less secure location than the integration server (for example, in a DMZ when Gentran Integration Suite is installed in the secure network zone), type **y** and press **Enter**.
 - ◆ If you are installing the perimeter server in a more secure location than the integration server (for example, in a secure network zone when Gentran Integration Suite is installed in a second tier DMZ), type **n** and press **Enter**.

6. Enter the TCP/IP address or DNS name for the internal interface, or press **Enter** to use a wildcard address.
7. Verify the TCP/IP address or DNS name for the internal interface.
8. Enter the TCP/IP address or DNS name for the external interface, or press **Enter** to use a wildcard address.
9. Verify the TCP/IP address or DNS name for the external interface.
10. Take one of the following actions, based on the entry at Step 5:
 - ◆ If you typed **y** at Step 5, enter the port that the perimeter server will use to listen for the connection from Gentran Integration Suite. The port number cannot be lower than 1024.
 - ◆ If you typed **n** at Step 5, enter and verify both the IP address (or host name) of the Gentran Integration Suite instance to which this perimeter server will connect, and the network port that this Gentran Integration Suite instance will be listening on.
11. Verify that the port you entered in the previous step is correct.
12. Enter the maximum amount of heap space, in MB, the JVM should allocate or press **Enter** to use the default size of 512MB. Valid values range from 64 to 2048MB.
13. Verify the heap size.

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

Installation of Perimeter Service is finished
14. Change to the installation directory.
15. Enter **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*/**bin**.
2. Enter **startupPs.sh**.

To stop a perimeter server in UNIX or Linux:

1. Change the directory to *install_dir*/**bin**.
2. Enter **stopPs.sh**.

Postinstallation in a UNIX or Linux Environment

After installing Gentran Integration Suite, you should complete the following tasks:

- ◆ *Starting Gentran Integration Suite in UNIX or Linux* on page 38
- ◆ *Accessing Gentran Integration Suite* on page 38
- ◆ *Validating the Installation* on page 40
- ◆ *Downloading Gentran Integration Suite Tools* on page 40

- ◆ *Performing Initial Administrative Setups in Gentran Integration Suite* on page 40
- ◆ *Stopping Gentran Integration Suite* on page 40
- ◆ *Starting or Stopping the Cluster Environment* on page 41
- ◆ *Cluster Environment Verification* on page 41

Starting Gentran Integration Suite in UNIX or Linux

To start Gentran Integration Suite in a UNIX or Linux environment, follow these steps:

1. Change the directory to *install_dir/bin*.
2. Enter **run.sh**.
3. 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 Environment* on page 43.

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

*Open your Web browser to <http://host:port/dashboard>, where *host:port* is the IP address and port number where Gentran Integration Suite resides on your system.*

Make a note of the URL address so you can access Gentran Integration Suite later.

The system returns you to a UNIX prompt.

Accessing Gentran Integration Suite

To log in to Gentran Integration Suite the first time, follow these steps:

1. Be sure that Gentran Integration Suite is started and running.
2. Open a browser window and type the address displayed at the end of startup.
3. The login page for Gentran Integration Suite displays.
4. Type the default user ID and 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.

System	Default login
Gentran Integration Suite	User ID: admin Password: password
AS2 Edition	User ID: as2_user Password: password
UCCnet Edition	User ID: uccnet_user Password: password

Technical Note: Changes to Network Interface Bindings

To increase the security of the Administrator Console user interface, Gentran Integration Suite Version 4.2 binds only to specific network interfaces. By default, previous versions had been bound to all network interfaces. After installing, if the URL for Gentran Integration Suite returns *Page cannot be displayed*, you can adjust property settings to correct the problem.

1. On the server where Gentran Integration Suite resides, edit the `noapp.properties.in` file.

- a. Locate the **admin_host** parameter. The default settings are as follows:

hostname1 is the name of primary network interface, the one given highest priority by Gentran Integration Suite.

localhost is the name of the network interface on the server where Gentran Integration Suite resides.

Default entries

```
admin_host.1    = hostname1
admin_host.2    = localhost
```

- b. Correct the parameters as necessary.

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

If an additional network interface needs to access Gentran Integration Suite, add an additional *admin_host* entry, as shown below.

Edited entries

```
admin_host.1    = hostname1
admin_host.2    = localhost
admin_host.3    = hostname2
```

2. Stop Gentran Integration Suite.
3. Run the `setupfiles.sh` utility located in the `install_dir/bin` directory.
4. Restart Gentran Integration Suite.

For the Dashboard user interface, Gentran Integration Suite Version 4.2 provides unrestricted binding to network interfaces through the perimeter server. To restrict access to the Dashboard user interface, you can adjust property settings so that only one network interface accesses Gentran Integration Suite.

1. On the server where Gentran Integration Suite resides, edit the `perimeter.properties.in` file.

- a. Locate the **localmode.interface** parameter. The default setting is unrestricted, as shown below.

Unrestricted Setting (Default)

```
localmode.interface=*
```

- b. To restrict access to the Dashboard, type the network interface that you want Gentran Integration Suite to support.

Restricted Setting

```
localmode.interface=hostname1
```

2. Stop Gentran Integration Suite.
3. Run the `setupfiles.sh` utility located in the `install_dir/bin` directory.

4. Restart Gentran Integration Suite.

Validating the Installation

After you install, start, and log in to Gentran Integration Suite the first time, you can validate the installation by testing a sample business process. Follow these steps:

1. Open a browser window and type the address for Gentran Integration Suite. This address was displayed at the end of startup.
2. Enter your user login and password.
3. From the **Administration** menu, select **Business Processes > Manager**.
4. In the Process Name field, type **Validation_Sample_BPML** and click **Go!**
5. Click **execution manager**.
6. Click **execute**.
7. Click **Go!** The *Status: Success* message displays in the upper left side of the page.

Downloading Gentran Integration Suite Tools

Gentran Integration Suite includes four tools that run on a desktop or personal computer. After you install, start, and access Gentran Integration Suite, you can install the following tools by downloading them from within Gentran Integration Suite:

- ◆ Map Editor and associated EDI and CII standards
- ◆ Graphical Process Modeler
- ◆ Web Template Designer
- ◆ Service Developer's Kit

Conflicting IP addresses can cause problems when you download a desktop tool. See *Troubleshooting: UNIX or Linux Environment* on page 43.

Performing Initial Administrative Setups in Gentran Integration Suite

If you are installing Gentran Integration Suite for the first time, you need to perform some initial administrative setups before users can use the application. For example, the system administrator for Gentran Integration Suite must register users, grant permissions, and run several performance reports so that benchmarks are established for tuning the system in the future.

Stopping Gentran Integration Suite

To stop Gentran Integration Suite in a UNIX or Linux environment, you can either run a softstop or a hardstop script.

A softstop halts Gentran Integration Suite after all the business processes finish running. To run a softstop, choose one of the following procedures:

- ◆ Open your browser and access Gentran Integration Suite. From the **Administration** menu, select **Operations > System > Troubleshooter**. Click **Stop the System**.
- ◆ From the UNIX command line, change directory to *install_dir/bin*. Enter **./softstop.sh**. Then type your passphrase.

Caution: Running `softstop.sh` command in a multiple node (clustered) environment will suspend all scheduled business processes. It is recommended to run the `hardstop.sh` command when stopping individual nodes of a cluster.

A hard stop halts Gentran Integration Suite without waiting for business processes to finish. To run a hard stop, use the following procedure:

1. From the UNIX command line, change directory to *install_dir/bin*.
2. Enter **hardstop.sh**.

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

Starting or Stopping the Cluster Environment

Note: To run Gentran Integration Suite cluster, you need to get a valid Gentran Integration Suite license for multiple IP address of all the nodes where Gentran Integration Suite will be installed and configured as a cluster.

You can start the Gentran Integration Suite cluster environment by running the following command on each node, starting with node1 (It is recommended to start node1 first.):

```
$ run.sh
```

If you are restarting the entire cluster, please use `run.sh` with an additional parameter "restart" on node1.

You can stop a Gentran Integration Suite cluster by using one of the following options:

- ◆ `hardstop.sh` or `hardstop.cmd` from each node. This does a kill -9
- ◆ `softstop.sh` or `softstop.cmd` from each node. This does a regular cleanup and shutdown of all components.

Caution: Running `softstop.sh` command in a multiple node (clustered) environment will suspend all scheduled business processes. It is recommended to run the `hardstop.sh` command when stopping individual nodes of a cluster.

- ◆ Shut down the whole cluster by selecting **Operations > System > Troubleshooter**, and then clicking the **Stop the System** link.
- ◆ Shut down specific nodes by selecting **Operations > System > Troubleshooter**, and then clicking the **shutdown** link.

Cluster Environment Verification

This section explains the verification process for the Gentran Integration Suite cluster environment.

- ◆ Verify the following properties:
 - ◆ The property `CLUSTER=true` is included in `sandbox.cfg`

- ◆ The cluster property in centralops.properties and noapp.properties is true and the clustered_env property in ui.properties is set to true
- ◆ Using the System Troubleshooter, you can verify the cluster environment by viewing the following information for each node:
 - a. Queue information
 - b. JNDI Tree for each node
 - c. Host, state, status, adapters, and memory usage information
 - d. Perimeter Server
 - e. Shows adapter status for each node with a dropdown box listing all nodes in cluster
- ◆ Operations/Troubleshooter Admin UI page displays all the cluster nodes, ops URL, node URL, the status of the node and which node holds the token.
- ◆ The Operations/System/Logs UI information is useful for tracking the errors and exceptions in the system. In a clustered environment, the logs are provided for each node. A dropdown lists all the nodes and by selecting the node the logs corresponding to the nodes is displayed. You can see each log item in this page for each node after all nodes start.
- ◆ The Activity Monitor UI provides the status of running business process and scheduled services. Using this feature, you can monitor all service activities including the node on which each activity is executing.
- ◆ The Operations/System/ Troubleshooter Admin UI, by selecting the Threads for a node, the pop-up window displays current threads that running on specific node.

Uninstalling Gentran Integration Suite from a UNIX or Linux Environment

When you uninstall Gentran Integration Suite, the following components are affected:

- ◆ The Gentran Integration Suite application is automatically removed from the server.
- ◆ The MySQL database is automatically removed from the server (if you are using MYSQL).

Additionally, you may perform the following tasks:

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

To uninstall Gentran Integration Suite from a UNIX or Linux environment, follow these steps:

1. Stop Gentran Integration Suite and wait for shutdown to complete. If you begin removing files before all business processes and Gentran Integration Suite are stopped, you may be unable to remove Gentran Integration Suite successfully.
2. Back up the file system and database. This step is optional; however, by backing up the file system and database, you are ensured that Gentran Integration Suite is completely recoverable.

3. Enter the following command:

```
rm -rf install_dir
```

This step deletes MySQL, if you are using this bundled component.

4. If you use an Oracle, MS SQL, or DB2 database, these remain intact even after you remove Gentran Integration Suite 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 Gentran Integration Suite used to reside.
5. Manually remove Attunity Data Connect at the server level and on PCs. For more information, refer to product information provided with Attunity Data Connect software.
6. Manually remove the JDK from PCs:
 - a. Select **Start > Settings > Control Panel**.
 - b. Select **Add/Remove Programs**.
 - c. Select **Java 2 Runtime Environment Standard Edition v<version number>** and click **Remove**.
 - d. Select **Java 2 SDK Standard Edition v<version number>** and click **Remove**.
 - e. Close **Add/Remove Programs**.
 - f. Close the **Control Panel**.
7. After you remove Gentran Integration Suite from the server, you can remove Java WebStart and any tools that were downloaded to the desktop:
 - ◆ Map Editor and associated EDI and CII standards
 - ◆ Graphical Process Modeler
 - ◆ Web Template Designer
 - ◆ Service Developer's Kit

Troubleshooting: UNIX or Linux Environment

Situation	Message or Symptom	Explanation/Resolution
Installing	You encounter errors or problems during installation.	<p>Explanation Installation creates a log file.</p> <p>Resolution Examine the log file generated during installation:</p> <ul style="list-style-type: none"> ◆ <i>install_dir/InstallSI.log</i>

Situation	Message or Symptom	Explanation/Resolution
Installing	When you entered an absolute path during installation, a message indicated that the command was not found.	<p>Explanation</p> <p>You entered an incorrect path. Check your typing or check the information.</p> <p>Resolution</p> <p>Enter the correct path.</p>
Installing	During installation, you entered the absolute path to the license file. However, a message indicates that the license file cannot be found.	<p>Explanation</p> <p>You either did not obtain the license file, the license file is corrupt, or you downloaded the license file to a PC but have not moved it to the server.</p> <p>Resolution</p> <p>If you need to obtain the license file, see <i>Obtaining a License File</i> on page 19. If the license file resides on a PC, save the license file to the server.</p>
Installing a desktop tool or resource	<p>Cannot download any of the following:</p> <ul style="list-style-type: none"> ◆ Map Editor ◆ Graphical Process Modeler ◆ Web Template Designer ◆ Service Developer's Kit 	<p>Explanation</p> <p>When you install Gentran Integration Suite, system files are created that contain an internal IP address. If you install Gentran Integration Suite behind a firewall, and your firewall is configured to accept an external IP address from a client computer, you may not be able to download the desktop tools and resources. The firewall will reject the internal IP address from a client residing outside of the firewall.</p> <p>Resolution</p> <p>Modify the system files that contain the invalid IP address. Follow these steps:</p> <ol style="list-style-type: none"> 1 Navigate to the <i>install_dir/bin</i> directory. 2 Enter the following command followed by the external IP address: <code>./patchJNLP.sh external_IP address</code> 3 Stop Gentran Integration Suite. 4 Restart Gentran Integration Suite.
Accessing	Attempts to access the URL for Gentran Integration Suite display the message: <i>Page cannot be displayed</i>	See <i>Accessing Gentran Integration Suite</i> on page 38.

Installing in a Windows Environment

This section includes the following sections:

- ◆ *Preinstallation Setup Checklist for a Windows Environment* on page 45
- ◆ *Installing in a Windows Environment* on page 54
- ◆ *Postinstallation in a Windows Environment* on page 70
- ◆ *Uninstalling Gentran Integration Suite from a Windows Environment* on page 75
- ◆ *Troubleshooting: Windows Environment* on page 77

Preinstallation Setup Checklist for a Windows Environment

The following topics will assist you with preinstallation tasks when planning to install Gentran Integration Suite in a Windows environment:

- ◆ *Key Terms* on page 45
- ◆ *Checklist for Windows Preinstallation* on page 46
- ◆ *Checking System Requirements* on page 48
- ◆ *Installing the Java 2 Software Development Kit* on page 48
- ◆ *Downloading the JCE Distribution File* on page 48
- ◆ *Determining Port Numbers* on page 49
- ◆ *Creating and Configuring the Database Server* on page 49
- ◆ *Obtaining a License File* on page 53

Key Terms

The following terms and definitions will assist you in understanding the concepts of installing Gentran Integration Suite in a Windows environment discussed in this document:

- ◆ Java 2 Software Development Kit (JDK) – Software development kit (SDK) for producing Java programs. Produced by Sun Microsystems, Inc., the JDK includes JavaBeans component architecture and support for JDBC.

Note: The Gentran Integration Suite *System Requirements* include information about upgrading your JDK for the changes enacted in 2007 for Daylight Savings Time.

- ◆ Gentran Integration Suite License File – Contains a license that is associated with your specific operating system and the IP address of your system. The license provides access, for a year, to the Gentran Integration Suite packages your company selected.
- ◆ The Java Cryptography Extension (JCE) is a set of Java packages from Sun Microsystems, Inc. that provides a framework and implementations for encryption, key generation and key agreement, and Message Authentication Code (MAC) algorithms.
- ◆ Rollback Segment – Enables you to undo (rollback) DML (data manipulation language) transactions that were made against a database. In Oracle version 9i or later, you also can perform this task with Undo tablespaces.

Checklist for Windows Preinstallation

The preinstallation checklist for the Windows environment identifies the prerequisite tasks you must complete before installing Gentran Integration Suite.

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

- ◆ Use any valid alphanumeric characters and -, :, \$, &, or _.
- ◆ Do not use spaces or apostrophes.

You may want to make a copy of the following checklist and use it to record the information you collect for installing Gentran Integration Suite:

Step	Description	Your Notes
1	Verify that your system meets the hardware and software requirements specified for this release. See <i>Checking System Requirements</i> on page 48.	
2	Verify that your system has the patches required by Java™ for the Windows environment. See the vendor's Java Web site for more information.	
3	For systems with multiple IP addresses, verify that the IP address on which Gentran Integration Suite resides is accessible by any client computer that is running a browser interface. Caution: If you do not verify the IP addresses, your system may not operate properly after installing Gentran Integration Suite.	
4	Verify that all client computers are using Microsoft Internet Explorer 5.x or later.	

Step	Description	Your Notes
5	If you are using a non-English environment, confirm that you are using the appropriate character set.	
6	<p>Determine and record information about the JDK. See <i>Installing the Java 2 Software Development Kit</i> on page 48.</p> <ul style="list-style-type: none"> ◆ Version of the JDK ◆ Absolute path to the JDK files and patches. The path name can not include spaces. 	
7	Obtain the JCE distribution file and record the absolute path to the zipped file. See <i>Downloading the JCE Distribution File</i> on page 48.	
8	Determine and record the initial port number to be used by Gentran Integration Suite. See <i>Determining Port Numbers</i> on page 49.	
9	<p>If you are using a SQL Server database or an Oracle database, determine and record information about your database server. Be aware that this information is case sensitive. See <i>Creating and Configuring the Database Server</i> on page 49.</p> <ul style="list-style-type: none"> ◆ Database vendor ◆ Database user name and associated password ◆ Database (catalog) name ◆ Database host name ◆ Database host port number ◆ Absolute path and file name for the JDBC driver ◆ Version of the JDBC driver 	
10	<p>Determine and record information to set up default system alerts from Gentran Integration Suite:</p> <ul style="list-style-type: none"> ◆ The Administrative e-mail address to which system alert messages are sent. ◆ The SMTP Server IP address used for sending alert messages. 	
11	<p>Determine and record the directory in which you plan to install Gentran Integration Suite.</p> <ul style="list-style-type: none"> ◆ The installation directory must not exist because the installation process creates it. ◆ The installation directory must have adequate free disk space. ◆ The name of the directory can not include spaces and must be less than 30 characters long. 	

Step	Description	Your Notes
12	Determine and record the passphrase you want to use for the Gentran Integration Suite system. During installation, you must enter the passphrase twice.	
13	Obtain the license file and record the absolute path and file name to the license file. Be sure that the path name and the file name do not contain any spaces. See <i>Obtaining a License File</i> on page 53.	

Checking System Requirements

Before you begin, verify that your system meets the hardware and software requirements specified for this release. The hardware requirements listed are the minimum required to run Gentran Integration Suite. Your system requirements will exceed these if you are running other applications on the same machine as Gentran Integration Suite. For current information, see the *System Requirements* posted on the Gentran Integration Suite Documentation Library:

<http://www.sterlingcommerce.com/Documentation/GIS42/homepage.htm>

Note: Version 4.2 of Gentran Integration Suite does not require an application server for installation or at run-time. However, Gentran Integration Suite supports integration with JBoss™ and WebLogic®. You can also integrate with WebSphere®, JBoss, or WebLogic after installing version 4.2 by using the Gentran Integration Suite EJB Adapter.

Installing the Java 2 Software Development Kit

You must install the Java 2 Software Development Kit (JDK) and the patches specific to your system. To determine which JDK version and patches you need, see the Gentran Integration Suite *System Requirements*. After you install the JDK, record the absolute path to its location on your system. You must supply the absolute path when you install Gentran Integration Suite.

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

Note: The *System Requirements* include information about upgrading your JDK for the changes enacted in 2007 for Daylight Savings Time.

Downloading the JCE Distribution File

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

To obtain this file:

1. Open your browser and navigate to <http://java.sun.com/products/jce/index-14.html>.
2. At the bottom of the page, locate the section *Downloading the "Unlimited Strength" Jurisdiction Policy Files* and click **Download JCE Unlimited Strength Jurisdiction Policy Files**.

3. Download the zipped JCE 1.4.2 distribution file to your system. Once the file resides on your system, note the exact directory and file name for this zipped file.

Determining Port Numbers

During installation, you are prompted to specify the initial port number for Gentran Integration Suite. For other ports, you can accept the default port number suggested by the installation program, or you can specify a different port number. To specify a port number, follow these guidelines:

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

Creating and Configuring the Database Server

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

Caution: If you are reinstalling Gentran Integration Suite, 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.

After creating and configuring your database, recycle the database. Then stop and restart Gentran Integration Suite to apply the changes.

In a Windows environment, Gentran Integration Suite supports the following databases.

- ◆ MySQL™ (See *Using a MySQL Database Server* on page 49)
- ◆ Microsoft SQL Server™ Enterprise (See *Using a Microsoft SQL Server Database Server* on page 50)
- ◆ Oracle® 9i or 10g (See *Using an Oracle Database Server* on page 51)

See *System Requirements* for supported version information.

Using a MySQL Database Server

You can use a MySQL database server with Gentran Integration Suite. See *System Requirements* for version information. This database is bundled with Gentran Integration Suite. Choosing this database during the installation procedure creates and configures it for you. MySQL is installed locally on the same server as Gentran Integration Suite and cannot be installed on a separate server.

If you have a pre-3.1 version of Gentran Integration Suite installed, only one instance of Gentran Integration Suite that uses MySQL as the bundled database can be installed on a particular server. For example, you cannot install Gentran Integration Suite 4.2 and Gentran Integration Suite 3.0 on the same server.

Using a Microsoft SQL Server Database Server

You can use a Microsoft SQL Server database with Gentran Integration Suite. See *System Requirements* for supported version information. To use an MS SQL Server database, follow this process:

- ◆ Create the database. Refer to your vendor's documentation for information about creating the database, including creating a schema repository, login, and tablespace. Be sure to install the correct version and patch.
- ◆ Configure the database by completing the following tasks:
 - ◆ *Setting Database Parameters in SQL Server* on page 50
 - ◆ *Granting Permissions in SQL Server* on page 50
 - ◆ *Installing the JDBC Driver in SQL Server* on page 50

Setting Database Parameters in SQL Server

Gentran Integration Suite requires the following parameter settings 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
Parallelism	Use one processor (do not use all available processors)

Granting Permissions in SQL Server

In SQL Server, you must grant DBO (Database Owner) permission to the Gentran Integration Suite user.

Installing the JDBC Driver in SQL Server

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

Go to <http://www.microsoft.com/downloads> to download this driver, any appropriate patches, and the following jar files. Be sure to place all the jar files in the same directory.

- ◆ msbase.jar
- ◆ mssqlserver.jar
- ◆ msutil.jar files

After you obtain the JDBC driver file and jar files, record the absolute path to their location on your system. You must supply this absolute path when you install Gentran Integration Suite.

Using an Oracle Database Server

You can use an Oracle 9i or 10g database with Gentran Integration Suite. See *System Requirements* for supported version information. Gentran Integration Suite supports Oracle 10g in a single node database environment.

Note: Oracle 10g RAC is not supported by Gentran Integration Suite 4.2.

To use an Oracle 9i or 10g database, follow this process:

- ◆ Create the database. Refer to your vendor's documentation for information about creating the database, including creating a schema repository, login, and tablespace. Be sure to install the correct version and patches.
- ◆ Configure the database by completing the following tasks:
 - ◆ *Setting Database Parameters in Oracle* on page 51
 - ◆ *Rolling Back or Undoing Changes in Oracle* on page 52
 - ◆ *Granting Permissions in Oracle* on page 52
 - ◆ *Installing the JDBC Driver in Oracle* on page 52
 - ◆ *Enabling Failover in a Multiple Node Oracle RAC Database Cluster (Windows)* on page 53

Setting Database Parameters in Oracle

Gentran Integration Suite requires the following parameter settings in your Oracle database:

Parameter	Value
Number of open cursors	greater than or equal to 2000
Database block buffers	greater than or equal to 19200 Note: Sterling Commerce recommends that this be set to 0 if SGA memory equals greater than 0.
System Global Area (SGA) memory (10g only)	greater than 0 Note: Sterling Commerce recommends that the database block buffers be set to 0 if SGA memory equals greater than 0.
Shared pool size	greater than or equal to 90000000
Large pool size	greater than or equal to 614400
Java pool size	greater than or equal to 20971520
Number of processes	greater than or equal to 500
Log buffer	greater than or equal to 163840
Database block size	greater than or equal to 8192
Sort area size	greater than or equal to 65536
Sort area retained size	greater than or equal to 65536

Parameter	Value
Max extends	Unlimited
Character set	AL32UTF8

Rolling Back or Undoing Changes in Oracle

You can roll back or undo changes in Oracle using one of the following methods:

- ◆ (Oracle versions earlier than 9i) Gentran Integration Suite recommends that you configure a rollback segment for every four concurrent users. Each rollback segment must be extendable to 25MB. The value of the initial segment and the next segment can vary between 256 KB (with 5MB for optimal) and 10 MB (with 20 optimal). Note that these ranges will vary based on the size of your Gentran Integration Suite database and the number of business rules it contains.
- ◆ (Oracle versions 9i or later) These versions support 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 figure out the UNDO_RETENTION setting. Make sure that the file system which has the UNDOTBS1 tablespace has enough space to AUTOGROW.

Granting Permissions in Oracle

Grant the following permissions to the Gentran Integration Suite user:

```
GRANT "CONNECT" TO <USER>
GRANT SELECT_CATALOG_ROLE TO <USER>
ALTER USER <USER>DEFAULT ROLE "CONNECT" ,
        SELECT_CATALOG_ROLE
GRANT CREATE PROCEDURE TO <USER>
GRANT CREATE TRIGGER TO <USER>
GRANT CREATE TYPE TO <USER>
GRANT EXECUTE ANY PROCEDURE TO <USER>
GRANT EXECUTE ANY TYPE TO <USER>
GRANT SELECT ANY TABLE TO <USER>
GRANT SELECT ANY DICTIONARY TO <USER>
```

For Oracle 10g 10.2.x, also grant the following permission:

```
GRANT "RESOURCE" TO <USER>;
ALTER USER <USER> DEFAULT ROLE "CONNECT" ,"RESOURCE" ,SELECT_CATALOG_ROLE;
```

Note: If you are using Oracle AQ for Oracle 9i or Oracle 10g, then grant the AQ_ADMINISTRATOR_ROLE permission.

Installing the JDBC Driver in Oracle

Gentran Integration Suite requires the appropriate JDBC driver for Oracle Database 10g and Oracle 9i databases. These drivers are thin client based pure Java JDBC drivers. See *System Requirements* for supported version information.

The supported versions of the JDBC driver will build the correct Gentran Integration Suite directory structure.

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

Enabling Failover in a Multiple Node Oracle RAC Database Cluster (Windows)

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

1. Navigate to the *install_dir/install/properties* directory to modify *sandbox.cfg* file.
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=ON)
      (ADDRESS=(PROTOCOL=TCP)(HOST=myhost1)(PORT=1521))
      (ADDRESS=(PROTOCOL=TCP)(HOST=myhost2)(PORT=1521))
    )
    (CONNECT_DATA = (SERVER = DEDICATED)(SERVICE_NAME = myservicename))
  )
```

3. Run the `setupfiles.sh` command from the *install_dir/install/bin* directory.
4. Set the propagation delay on the RAC server to 0.

Obtaining a License File

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

The license file contains a license that is associated with your specific operating system and the IP address of your system. The license provides access, for 20 years from the date of issue, to the Gentran Integration Suite packages your company selected and is independent of your maintenance fee. Because the license is independent of your maintenance fee, the schedule for renewing your license and license file may be different than the maintenance fee schedule.

You must download the license file before you can install Gentran Integration Suite. Follow these steps:

1. Point your Web browser to <http://www.productupdates.stercomm.com>.
2. Review the Welcome to Sterling Commerce Product Update page and click **Next**.
3. Review the Authenticate page and click **Next**.

4. Type the License File Key, which is case-sensitive, and click **Next**. If the system displays the Retrieve Registration dialog box and you are upgrading, you may retrieve your registration information by entering your previous License File Key. If you are not upgrading, then click **Next**.
5. Verify the registration information and click **Next**.
6. On the Server Details page, update the fields and click **Next**.
If the operating system, application server, or database server version is not listed in the respective lists, type the version in the respective **Description of Other**.
All IP addresses assigned to the server in which you are installing Gentran Integration Suite should be listed in the license file.
7. Verify the list of packages and the type of license selected for each package and click **Next**. If the list of packages selected or the type of license selected is *not* correct, then contact Customer Support to correct the information.
8. Scroll to the bottom of the Review and Download Package License File page and click **Finish and Download**.
9. Click **Save** in the **File Download** dialog box.
10. Accept the default location for the license file or navigate to the location where you will store the license file. Note the absolute path of the file location on the Preinstallation Checklist. You will need the absolute path to install Gentran Integration Suite.
11. Click **Save**.
12. Close your Web browser.

Installing in a Windows Environment

Installing Gentran Integration Suite in a Windows environment includes the following sections:

- ◆ *Running the Installation Program in Windows* on page 55
- ◆ *Installing a Cluster Configuration in Windows* on page 57
- ◆ *Installing the Current Maintenance Patch in Windows* on page 62
- ◆ *Installing Patches in a Perimeter Server Environment* on page 64
- ◆ *Installing Patches in a Clustered Environment* on page 65
- ◆ *Installing a Hot-Fix in Windows* on page 67
- ◆ *Encrypting Database Passwords in Windows* on page 68
- ◆ *Setting Up Perimeter Servers with Gentran Integration Suite* on page 68

Caution: If you are upgrading, refer first to the *Upgrade Guide* for the release from which you are upgrading (3.0/3.1, 4.0 or 4.1/4.1.1). Upgrading from Gentran Integration Suite 3.0, 3.1 and 4.0 includes a full installation of Gentran Integration Suite 4.2, but you must follow additional steps in the *Upgrade Guide* to complete the upgrade. Upgrading from Gentran Integration Suite 4.1 and 4.1.1 does not include an installation of Gentran Integration Suite 4.2.

Running the Installation Program in Windows

Note: The following instructions assume that you received an installation CD for Gentran Integration Suite. If you downloaded Gentran Integration Suite or a Service Pack (SP) from the Electronic Software Distribution (ESD) Portal, unzip the downloaded file to an empty directory. Do *not* change the directory structure of the newly unzipped files. The directory containing the unzipped files is an electronic image of an installation CD. Use this directory wherever there is a reference to the installation CD in the following instructions. Ignore any instructions to place the installation CD in a drive.

To install Gentran Integration Suite in a Windows environment, refer to your preinstallation checklist and follow the steps below.

Note: To install more than one instance of Gentran Integration Suite on the same Windows server, you must install the second instance in a different directory and use a different initial port number.

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.

1. If you are upgrading from Gentran Integration Suite 4.0 to Gentran Integration Suite 4.2, uninstall the Windows services for the previous installation using the following procedure:
 - a. Stop Gentran Integration Suite.
 - b. Change to the *install_dir*/bin directory for the Gentran Integration Suite 4.0 installation.
 - c. Double-click **stopWindowsService.cmd** and wait for all Gentran Integration Suite Windows services to stop.
 - d. Double-click **uninstallWindowsService.cmd** and log off. This cleanly removes the old Windows services from the Windows cache and verifies that there are no scheduled jobs running in the background.
2. Close all open Windows programs and any command prompt windows.
3. Insert the Gentran Integration Suite installation CD in the appropriate drive.
4. On the installation CD, navigate to the **windows\install** folder.
5. Double-click **setup.exe**. Then click **Next** to start the installation program.
6. Review the license agreement, and click **Yes** to accept the terms.
7. You are prompted to select the type of JVM to use. Choose **JDK** and click **Next**.
8. You are prompted to choose an installation directory for Gentran Integration Suite. Click **Browse** and navigate to the folder you want to use as the installation directory. For the Windows 2000/NT server, the path to this directory must be 8 characters or less. For the Windows 2000/NT server, this directory is referred to as *install_dir* in subsequent prompts.
9. You are prompted to browse to the location of the license file. Select the license file, and 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. See *Obtaining a License File* on page 53.
10. You are prompted to browse to the location of the JCE distribution file. Select the JCE distribution file, and click **Next**. The program verifies the path name.

11. You are prompted about whether this installation is to upgrade an existing pre-4.0 Gentran Integration Suite installation. Answer **No**.
12. The system displays a command window. Leave the command window open. You can minimize the command window, but do not close it or the installation program cannot prompt you for information or display status messages.
13. The system displays a message window listing information you will need in subsequent steps. Click **OK** to continue.
14. You are prompted about overriding the host IP address for this installation.
 - ◆ To accept the default host IP address, click **Next**.
 - ◆ To specify another host IP address, enter the IP address you want to use. Click **Next**.
15. Type the administrative e-mail address to which you want system alert messages to be sent. Click **Next**.
16. Type the SMTP mail server host name that you want to use for alert messages. Click **Next**.
17. Type the system passphrase that you want to use in both the Passphrase box and the Confirm box. Click **Next**.

If you are upgrading from Gentran Integration Suite 4.0, use the same passphrase that you used for your Gentran Integration Suite 4.0 installation.

18. Type the initial port number for the application server and click **Next**.

If you are upgrading from Gentran Integration Suite 4.0, use the same initial port number that you used for your Gentran Integration Suite 4.0 installation.

The installation creates subsequent ports based on the initial port number.

Note: The WebDAV port is set to the initial port number plus 46. For example, if the initial port is 10000, the WebDAV port is 10046. You will need to know this port number if you plan to set up WebDAV support.

19. You are prompted about whether this install is to upgrade version 4.0.3-5 or higher. Select **Yes**.
20. Select the database you want to use and click **Next**.
 - ◆ If you select the default MySQL database, the installation continues automatically. The MySQL bundled with Gentran Integration Suite will be installed local to Gentran Integration Suite on the same server.

If you answered **Yes** in step 18, enter the location of the previous MySQL database when prompted.
 - ◆ If you select Microsoft SQL Server, enter the following information and click **Next**:
 - Database host name
 - Database host port number
 - Database name
 - User ID
 - Password
 - Password confirmation

- ◆ If you select Oracle, you are asked whether the Oracle instance is being used for an upgrade.
 - If your answer is **Yes**, refer to the Gentran Integration Suite *Upgrade Guide* before you answer subsequent prompts, including a prompt about whether you are using BLOB data in your Oracle database.
 - If you are not upgrading, answer **No**.

Enter the following information and click **Next**:

- Database host name
- Database host port number
- Database name
- User ID
- Password
- Password confirmation

21. If you selected Oracle or Microsoft SQL Server as your database, verify that you have the required JDBC drivers installed.

- ◆ If you are using an Oracle database, verify that you have the required Oracle JDBC driver file copied to a local folder on your computer. Then answer the following prompts:
 - Browse to the location of the JDBC driver file. Select the file and click **Open**.
 - In the **Version Number** field, type **1_2** and click **Next**.
- ◆ If you are using a SQL Server database, verify that you have the required MSSQL JDBC driver files copied to a local folder on your computer. Then answer the following prompts:
 - Browse to the location of the MSSQLServer.jar file. Select the file, and click **Open**.
 - In the **Version Number** field, type **4_0** and click **Next**.

22. Click **Yes** to proceed with the installation.

23. The installation completes automatically. When the installation is finished, the system places an icon on your Windows desktop and displays a message that Gentran Integration Suite was successfully installed. Click **OK**. Click **Next**. Click **Finish**.

If you encounter problems or errors during installation, see *Troubleshooting: Windows Environment* on page 77.

Installing a Cluster Configuration in Windows

Installing Gentran Integration Suite nodes is similar to a standard Gentran Integration Suite installation, with the following restrictions on all nodes:

- ◆ All nodes must use the same database.
- ◆ All nodes must use the same passphrase.
- ◆ You must install and start the nodes sequentially, one at a time, starting with the first node.
- ◆ When upgrading, all cluster nodes must use the regular upgrade procedure. All nodes must be upgraded to the same level before setting up and starting the cluster.

To install Gentran Integration Suite in a cluster configuration, do the following:

1. Install the first node (node1) as you would for a regular Gentran Integration Suite installation.
2. Starting from node2, start the installation as normally done for all Gentran Integration Suite installations.
3. When prompted "Is this installation going to be used to upgrade an existing pre-4.0 GIS installation?", press "No".

4. When prompted "Is this install to upgrade version 4.0.3-5 or higher?", press "Yes".

For each node after node1, also perform these steps:

Note: The failure error message in the next step applies only to Gentran Integration Suite 4.0. The failure error message does not appear for Gentran Integration Suite 3.x and 4.1. For those versions, go to the next step.

- a. When the patch installation portion of the installation fails with the following message, go to the next step:

Controller loading lists...

Error '255' installing service files.

ERROR: Installation failed '255'

This error message writes the following information to the security.log file:

```
[YYYY-MM-DD HH:MM:SS.SSS] ERROR 000000000000 GLOBAL_SCOPE Product
version doesn't match feature set version.
[YYYY-MM-DD HH:MM:SS.SSS] ERROR 000000000000 GLOBAL_SCOPE LM.refresh
caught securityexception
java.lang.SecurityException: Product version 4.1 does not match feature
map version 4.2.0-42XX
    at com.company.security.lc.LM.loadMap(LM.java:2355)
    at com.company.security.lc.LM.refresh(LM.java:2908)
    at com.company.security.lc.LM.<clinit>(LM.java:3305)
    at
com.company.server.install.module_loader.ServiceInstall.install(ServiceI
ninstall.java:184)
    at
com.company.server.install.module_loader.ServiceInstallDriver.doIt(Servi
ceInstallDriver.java:164)
    at
com.company.server.install.module_loader.ServiceInstallDriver.main(Servi
ceInstallDriver.java:63)
    at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
    at
sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.jav
a:39)
    at
sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessor
Impl.java:25)
    at java.lang.reflect.Method.invoke(Method.java:324)
    at
com.company.server.install.module_loader.ServiceInstallBootstrapper.doIt
(ServiceInstallBootstrapper.java:94)
    at
com.company.server.install.module_loader.ServiceInstallBootstrapper.main
(ServiceInstallBootstrapper.java:58)
```

```

[YYYY-MM-DD HH:MM:SS.SSS] ERROR 00000000000 GLOBAL_SCOPE
*****

[YYYY-MM-DD HH:MM:SS.SSS] ERROR 00000000000 GLOBAL_SCOPE License check
failed at 0

[YYYY-MM-DD HH:MM:SS.SSS] ERROR 00000000000 GLOBAL_SCOPE
*****

[YYYY-MM-DD HH:MM:SS.SSS] ERROR 00000000000 GLOBAL_SCOPE LM.refresh
caught securityexception exit SI

[YYYY-MM-DD HH:MM:SS.SSS] ERROR 00000000000 GLOBAL_SCOPE LM.refresh
caught securityexception at start up exit SI

java.lang.SecurityException: Product version 4.1 does not match feature
map version 4.2.0-42XX

    at com.company.security.lc.LM.loadMap(LM.java:2355)
    at com.company.security.lc.LM.refresh(LM.java:2908)
    at com.company.security.lc.LM.<clinit>(LM.java:3305)
    at
com.company.server.install.module_loader.ServiceInstall.install(ServiceI
ninstall.java:184)
    at
com.company.server.install.module_loader.ServiceInstallDriver.doIt(Servi
ceInstallDriver.java:164)
    at
com.company.server.install.module_loader.ServiceInstallDriver.main(Servi
ceInstallDriver.java:63)
    at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
    at
sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.jav
a:39)
    at
sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessor
Impl.java:25)
    at java.lang.reflect.Method.invoke(Method.java:324)
    at
com.company.server.install.module_loader.ServiceInstallBootstrapper.doIt
(ServiceInstallBootstrapper.java:94)
    at
com.company.server.install.module_loader.ServiceInstallBootstrapper.main
(ServiceInstallBootstrapper.java:58)

```

- b. Copy `install_dir/bin/FeatureSet.xml` from the primary node to `install_dir/bin` on the secondary node.
- c. Install the patch on the secondary node using the following command:

```
InstallService.cmd absolutepath\si_engine_4204.jar (or higher)
```

5. Complete the rest of the installation process as normally done for a Windows Gentran Integration Suite installation.

6. On each node, starting with "node1", perform cluster configuration by running the command "startCluster.cmd nodeNumber" from the Gentran Integration Suite install bin directory where the nodeNumber is the sequential number assigned to each node starting with 1.

To dynamically add new nodes to the cluster, install the new node in the same way that you installed node2 in a new cluster installation. Run the startCluster.cmd command with the new node number.

Multiple Nodes

Gentran Integration Suite supports the installation of multiple nodes on the same machine. Each node will be configured on a different port range. Install other nodes in the same machine on a different port range following the installation instructions discussed in the previous section. Once installation is complete and cluster setup is complete go to properties directory of the node installed and change "multicastBasePort" in noapp.properties to point to node1's "multicastBasePort".

Custom Configurations

As part of a default cluster configuration, certain values in the database for service or adapter configurations, default document storage type, etc., are updated to get the cluster working. The default settings include no shared or mounted file system available with "line of sight" from all cluster nodes, etc. Certain service or adapter configurations are forcibly deployed on node1 and default document storage type is set up to "Database" for all business processes.

After you install the cluster and evaluate the customer configurations and requirements, the above conditions might change and custom configurations will be incorporated. To keep these custom configuration changes from being overwritten, the following cluster configuration script has an option to update the database:

```
startCluster.cmd nodeNumber true\false
```

- ◆ *nodeNumber* is the cluster node number
- ◆ Type **true** to perform database update and **false** to prevent any database updates.

The first time you configure a Gentran Integration Suite cluster, run startCluster.cmd with the database update option set to true to have all cluster-related configurations take effect.

```
startCluster.cmd nodeNumber true
```

For cluster configurations after the first configuration, you can execute the startCluster.cmd command with the database update option turned off. This prevents any configuration changes from affecting the system, especially after installing patches/hot-fixes.

```
startCluster.cmd nodeNumber false
```

Multicast Configurations

All Gentran Integration Suite cluster nodes communicate with each other through multicast on a specific IP address and port. The multicast ports are configured based on the Gentran Integration Suite installation base port. All Gentran Integration Suite clusters that are on the same subnet configured on the same Gentran Integration Suite base port will end multicasting messages on the same multicast IP address and port.

To avoid this, each Gentran Integration Suite cluster on the same subnet needs to be configured on different base ports. Install your clusters on different port ranges or on different network segments with multicast

forwarding restricted, so that they will not interfere with each other. The default multicast address used in Gentran Integration Suite release 4.2 is "239.255.166.17". This address is configurable, with a port range of 10 ports, starting with the multicast base port for the instance.

All nodes participating in the same cluster must be installed on the same multicast base port (the `multicastBasePort` property in the `noapp.properties` file). This is usually computed from the system base (non-multicast) port, but can be configured separately in the `noapp.properties` file, to allow different nodes in a cluster to be installed at different (non-multicast) port ranges. Also, all the nodes in the cluster should be installed in the same subnet.

Configuring Shared File System as Document Storage

In a Gentran Integration Suite cluster, the default document storage is database, so that all of the nodes in the cluster have line of sight to the documents to access and process the documents. However, using the database for document storage has performance implications over using the file system for document storage.

To use the file system as document storage in cluster, the file system needs to be a shared/mounted/clustered file system with all nodes having line of sight to the file system.

For each Gentran Integration Suite node, follow this procedure to configure a shared file system in a Gentran Integration Suite cluster:

1. Go to `install/properties` dir.
2. Change the `document_dir` property in `jdbc.properties` to point to the shared file system directory configured to store the documents.
3. Restart Gentran Integration Suite (all nodes).

This configures a shared file system directory as document storage.

Installing the Current Maintenance Patch in Windows

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

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

`si_engine_<build_number>.jar`

For example, a file named `si_engine_1976.jar` is the patch for build 1976 for Gentran Integration Suite 4.1, which is labeled Gentran Integration Suite 4.2 in the user interface.

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

`si_engine_<build_number>_patch_info.txt`

For example, a file named `si_engine_1976_patch_info.txt` contains information about build 1976 for Gentran Integration Suite 4.1, which is labeled Gentran Integration Suite 4.2 in the user interface.

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

To install the latest patch for Gentran Integration Suite in a Windows 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 Gentran Integration Suite and record the absolute path to the downloaded file. If you use FTP, use Binary mode. Do not rename the file. Make sure that you download the file to your local machine (for example, to your installation bin directory), and not to a network drive. Use the full path to your local machine when you install the patch.
3. If you are using a database other than MySQL, verify that the database server is up and ready to accept connections.
4. Stop Gentran Integration Suite.
5. Perform a full backup of the Gentran Integration Suite installation directory, including all subdirectories. Also back up your database.
6. Is the password encrypted? If Yes, decrypt the password. See *Decrypting a Password (Windows)* in the *Security Guide*.
7. If you edited any property files, ensure that the associated *.properties.in* files have the most current changes. Property files will be overridden with the contents of the associated *.properties.in* files during the patch installation.
8. Close all command prompt windows.
9. Install the patch using the following commands:
 - a. Open a command prompt window.
 - b. Change to the directory where Gentran Integration Suite is installed and run the following command:

```
<install_dir>\bin
```

- c. Run the following command to install the patch:

```
InstallService.cmd
```

```
<path>\si_<version>_sp_0_patch_<number>_<app_server>.jar
```

where:

<path> = Fully qualified path to maintenance patch file

<version> = Gentran Integration Suite Version

<number> = Patch number

<app_server> = Application Server

Example: `InstallService.cmd c:\patch\si_22_sp_0_patch_1_jboss.jar`

Information about the patch installation is automatically logged to *install_dir\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 will provide the error message code from the database

and the SQL command that failed. The failure information is also logged to the system.log file and to the patch.log file. If you cannot determine whether the failure can be safely ignored, contact Sterling Commerce Customer Support for assistance. Choose one of the following options when prompted:

- ◆ Continue – If you determine that the failure can be safely ignored, continue with the patch installation.
- ◆ Stop – Stop the patch installation. You should always contact Sterling Commerce Customer Support for assistance before choosing this option.
- ◆ Retry – Choose this option to retry the failed command.

10. If you decrypted the password, re-encrypt the password.

11. Restart Gentran Integration Suite.

If you are using a perimeter server in a DMZ, see *Installing Patches in a Perimeter Server Environment* on page 64.

Installing Patches in a Perimeter Server Environment

Perimeter servers in a DMZ 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. You can determine the proper answers to most of the questions asked during the perimeter server installation by reading a script in your previous installation directory. The name of the script is *installPS.cmd*.

To Update a DMZ Perimeter Server in a Windows Environment

Caution: Do not use spaces in the name of the perimeter server installation directory.

1. Locate the *ps42service_pack-patch.jar* file in the *install_dir\packages* directory. For maintenance patches, obtain the file from the Sterling Commerce Support on Demand Web site, at <https://support.sterlingcommerce.com/user/login.aspx>. These patch files will have a longer name that identifies the associated maintenance patch. For example, *ps42-1976.jar*.
2. Copy the file to the home directory or base directory on the DMZ server.
3. Stop the perimeter server using the *stopPs.cmd* command.
4. Close all open Windows applications.
5. To begin the installation, enter *absolutepath\bin\java -jar ps42service_pack-patch.jar*
If you are using FTP to copy the file, use Binary mode.
The program verifies the operating system and required patch level and the location and version of the JDK.
6. Type the full path for the installation directory.
7. The program verifies the amount of available disk space.
8. Type the TCP/IP address or DNS name for the internal interface, or press **Enter** to use a wildcard address.
9. Verify the TCP/IP address or DNS name for the internal interface.

10. Type the TCP/IP address or DNS name for the external interface, or press **Enter** to use a wildcard address.
11. Verify the TCP/IP address or DNS name for the external interface.
12. Type the port that the perimeter server will use to listen for the connection from Gentran Integration Suite. The port number must be a valid number between 1 and 65535.
13. Verify the port number.
14. Type the maximum amount of heap space the JVM should allocate in MB, or press **Enter** to use the default value of 512MB. Valid values range from 64 to 2048MB.
15. Verify the maximum amount of heap space the JVM should allocate.
16. The message, Installation of Perimeter Service is finished, displays when the perimeter server is installed.
17. Change to the installation directory.
18. Type `installPS.cmd` to begin the installation.
19. Type `startPSService.cmd` to start the perimeter server.

Installing Patches in a Clustered Environment

All nodes in a cluster must be patched to the same level. You should stop all nodes in the cluster before installing a patch and then install the patch on each node.

It is possible, in some cases, to apply patches to nodes while others are still processing. However, a patch containing any of the following requires the entire cluster to be down:

- ◆ Critical cluster functionality
- ◆ Engine-related changes
- ◆ Changes to the database

Attempting to apply patches while part of the cluster is running should only be done with the advice of Sterling Commerce Customer Support.

Updating the Database (dbupdate) with the startCluster Command

The `startCluster.cmd nodeNumber` command on node 1 will automatically update the database, unless you use the command `startCluster.cmd 1 false`. The `startCluster.cmd nodeNumber` command on all other nodes will not update the database.

When you configure the Gentran Integration Suite cluster for the first time, you should run the `startCluster.cmd` command with the database update value set to true (`startCluster.cmd 1 true`), or just `startCluster.cmd 1`, since on node 1, dbupdate defaults to true. This makes all cluster-related configurations take effect. The database update will synchronize the scheduled jobs between the nodes by assigning them all to node 1.

The `startCluster.cmd` command with the database update value turned off (`startCluster.cmd 1 false`) prevents any configuration changes from affecting the system, especially after you install patches or hot-fixes.

For current database updates, the following services are tied to node1:

- ◆ Schedule
- ◆ FileSystem
- ◆ CmdLine
- ◆ CDServerAdapter
- ◆ CDAdapter
- ◆ CDRequesterAdapter
- ◆ CEUServerAdapter
- ◆ HttpServerAdapter
- ◆ B2B_HTTP_COMMUNICATIONS_ADAPTER
- ◆ HTTP_COMMUNICATIONS_ADAPTER
- ◆ HTTPClientAdapter
- ◆ FTPClientAdapter
- ◆ FtpServerAdapter
- ◆ SFTPClientAdapter

The default storage of the following services is set to the database:

- ◆ HttpServerAdapter
- ◆ CEUServerExtractServiceType
- ◆ CDSERVER_ADAPTER

The default storage of all business processes is set to the database.

Applying a Patch in a Clustered Environment Stopping the Whole Cluster

For a critical patch where the whole cluster needs to be down, use the following process.

1. Stop the whole cluster.
2. Install the patch on each node by running the following command from the *install_dir*\bin directory:
InstallService.cmd <si_engine_####.jar>

Apply the patch to node1 first, and then to the subsequent nodes: node2, node3, etc. For node1, REINIT_DB=true in sandbox.cfg. For subsequent nodes, REINIT_DB=false, which prevents database updates from repeating on each node's patch installation. This is automatically set during the patch installation for all nodes except node1 if the installation is done using the nodbinit option.

3. Set up the cluster for each node by running **startCluster.cmd nodeNumber**.

Applying a Patch in a Clustered Environment Stopping One Node at a Time

For a patch where you can stop the cluster one node at a time, use the following process.

Note: Apply the patch to node1 first, and then to the subsequent nodes: node2, node3, etc.

1. Shut down the node using the **hardstop.cmd** command.
 Wait until the perimeter server of the node is completely down before installing the patch.

2. Install the patch by running the following command from the *install_dir/bin* directory:

InstallService.cmd patch_file_name

For node1, REINIT_DB=true in sandbox.cfg. For subsequent nodes, REINIT_DB=false, which prevents database updates from repeating on each node's patch installation. This is automatically set during the patch installation for all nodes except node1 if the installation is done using the nodbinit option.

3. Set up the cluster. Run **startCluster.cmd nodeNumber** (Windows).
4. Open *install_dir\properties\sandbox.cfg* in a text editor. Perform the following steps:
 - a. If REINIT_DB=true, back up the sandbox.cfg file and change REINIT to false.
 - b. Save and close the sandbox.cfg file.

This prevents database updates from being repeated for each node.

5. Repeat steps 1 through 4 for each subsequent node.

Installing a Hot-Fix in Windows

After you install Gentran Integration Suite, you may need to install a hot-fix. A *hot-fix* is one or more fixes applied to a specific existing patch.

Before Installing a Hot-Fix

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

- ◆ Received the file name of the *caseid.jar* to install from Sterling Commerce Customer Support
- ◆ Created a full backup of Gentran Integration Suite
- ◆ Created a full backup of your database

Installing a Hot-Fix

To install a hot-fix on the Windows host system:

1. Is the password encrypted? If Yes, decrypt the password. See *Decrypting a Password (Windows)* in the Role-Based Security manual.
Apply the hot-fix to node 1 first, and then to the subsequent nodes: node 2, node 3, etc. For node 1, REINIT_DB is true in *install_dir\install\properties\sandbox.cfg*. For subsequent nodes, REINIT_DB is false, which prevents database updates from repeating on each node's hot-fix installation.
2. Open a command line session. Click the Windows **Start** menu and select **Programs > Accessories > Command Prompt**.
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 **get ccaseid.jar**, where caseid is the ID you received from Customer Support.

7. Shut down Gentran Integration Suite. For more information, see *Stopping Gentran Integration Suite* on page 73.
8. Open a command prompt and change the directory to *install_dir\bin*.
9. Type **InstallService** *<path to ccaseid.jar>\ccaseid.jar* to install the hot-fix.
10. If you decrypted the password in step 1, re-encrypt the password.
11. In the command prompt, change the directory to *install_dir\bin*.
12. Type **uninstallWindowsService.cmd** and log off. This removes previous Gentran Integration Suite Windows services from the Windows cache.
13. At the command prompt, type your user name and password.
14. Change the directory to *install_dir\bin*.
15. Type **installWindowsService.cmd** to install the Gentran Integration Suite Windows services.
16. Restart Gentran Integration Suite. For more information, see *Starting Gentran Integration Suite in Windows* on page 71.
17. In the *install_dir\bin* directory, run *dump_info.cmd* to verify that the hot-fix was successfully installed.

Encrypting Database Passwords in Windows

Gentran Integration Suite uses a password to connect to the database being used. Currently, Gentran Integration Suite stores the password 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 Gentran Integration Suite. Encrypting these passwords is optional.

To encrypt the database password used by Gentran Integration Suite in Windows, follow these steps:

1. Stop Gentran Integration Suite.
2. Go to */install_dir/bin/*.
3. Run **enccfgs.cmd**.
4. Run **setupfiles.cmd**.
5. Run **deployer.cmd**.
6. Run **run.cmd** to start Gentran Integration Suite.
7. Enter your passphrase.

Setting Up Perimeter Servers with Gentran Integration Suite

Using a perimeter server with Gentran Integration Suite is optional.

A *perimeter server* is a software tool for communications management that is installed in a DMZ. The perimeter server manages the communications flow between outer layers of your network and Gentran Integration Suite's 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.

The Gentran Integration Suite 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 DMZ solution. However, if you require high-volume, secure connections, you must install a perimeter server in a DMZ.

When you install a perimeter server, use these guidelines:

- ◆ Licensing for a perimeter server is determined by the licensing restrictions on the corresponding transport adapters in Gentran Integration Suite: FTP Server, FTP Client, HTTP Server, HTTP Client, SFTP Server, SFTP Client, Connect:Direct Server, and Connect:Direct Requester.
- ◆ 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 Gentran Integration Suite. *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 may have multiple perimeter servers installed on the same computer interacting with one instance of Gentran Integration Suite. 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 Windows Environment

To install a perimeter server in a Windows environment:

1. Close all open Windows programs.
2. Insert the Gentran Integration Suite installation CD into the appropriate drive.
3. Open a DOS command window.
4. Copy the `ps42service_pack-patch.jar` installation files from the installation CD to your home directory or base directory. If you are using FTP to copy the file, be sure your session is set to binary mode.
5. To begin the installation, enter the absolute path to the following jar file:

```
\absolutepath\bin\java -jar ps42service_pack-patch.jar
```

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

6. Enter the name for the installation directory.
The program verifies the amount of available disk space.
7. At the prompt *Is this server in a less secure network than the integration server?*, do one of the following:

- ◆ If you are installing the perimeter server in a less secure location than the integration server (for example, in a DMZ when Gentran Integration Suite is installed in the secure network zone), type **y** and press **Enter**.
 - ◆ If you are installing the perimeter server in a more secure location than the integration server (for example, in a secure network zone when Gentran Integration Suite is installed in a second tier DMZ), type **n** and press **Enter**.
8. Enter the TCP/IP address or DNS name for the internal interface, or press **Enter** to use a wildcard 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, or press **Enter** to use a wildcard address.
 11. Verify the TCP/IP address or DNS name for the external interface.
 12. Take one of the following actions, based on the entry at Step 7:
 - ◆ If you typed **y** at Step 7, enter the port that the perimeter server will use to listen for the connection from the Gentran Integration Suite. The port number must be a valid number between 1 and 65535.
 - ◆ If you typed **n** at Step 7, enter and verify both the IP address (or host name) of the Gentran Integration Suite instance to which this perimeter server will connect, and the network port that this Gentran Integration Suite instance will be listening on.
 13. Verify that the port is correct.
 14. Enter the maximum amount of heap space, in MB, that the JVM should allocate, or press **Enter** to use the default size of 512MB. Valid values range from 64 to 2048MB.
 15. Verify the heap size.

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

Installation of Perimeter Service is finished
 16. Change to the installation directory.
 17. Enter **installPS.cmd** to begin the installation.
 18. Enter **startPSService.cmd** to start the perimeter server.

Starting and Stopping Perimeter Servers in Windows

To start a perimeter server in Windows, use the **startPSService.cmd** command.

To stop a perimeter server in Windows, use the **stopPSService.cmd** command.

Postinstallation in a Windows Environment

After installing Gentran Integration Suite, you should complete the following tasks:

- ◆ *Starting Gentran Integration Suite in Windows* on page 71
- ◆ *Accessing Gentran Integration Suite* on page 71

- ◆ *Validating the Installation* on page 73
- ◆ *Downloading Gentran Integration Suite Tools* on page 73
- ◆ *Performing Initial Administrative Setups in Gentran Integration Suite* on page 73
- ◆ *Stopping Gentran Integration Suite* on page 73
- ◆ *Starting or Stopping the Cluster Environment* on page 74
- ◆ *Cluster Environment Verification* on page 74

Starting Gentran Integration Suite in Windows

To start Gentran Integration Suite in a Windows environment, double-click the Gentran Integration Suite icon on your Windows desktop. Gentran Integration Suite starts running.

Note: It may take several minutes for Gentran Integration Suite components to initialize and start up.

If Gentran Integration Suite does not start or if you receive a message about an invalid or corrupt license file, go to *Troubleshooting: Windows Environment* on page 77.

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

Open your Web browser to `http://host:port/dashboard`, where `host:port` is the IP address and port number where Gentran Integration Suite resides on your system.

Make a note of the URL address so you can access Gentran Integration Suite later.

Accessing Gentran Integration Suite

To log in to Gentran Integration Suite the first time, follow these steps:

1. Be sure that Gentran Integration Suite is started and running.
2. Open a browser window and enter the address displayed at the end of startup.
3. The login page for Gentran Integration Suite displays.
4. Type the default user ID and 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.

System	Default login
Gentran Integration Suite	User ID: admin Password: password
AS2 Edition	User ID: as2_user Password: password
UCCnet Edition	User ID: uccnet_user Password: password

Technical Note: Changes to Network Interface Bindings

To increase the security of the Administrator Console user interface, Gentran Integration Suite Version 4.2 binds only to specific network interfaces. By default, previous versions had been bound to all network interfaces. After installing, if the URL for Gentran Integration Suite returns *Page cannot be displayed*, you can adjust property settings to correct the problem.

1. On the server where Gentran Integration Suite resides, edit the `noapp.properties.in` file.

- a. Locate the **admin_host** parameter. The default settings are as follows:

hostname1 is the name of primary network interface, the one given highest priority by Gentran Integration Suite.

localhost is the name of the network interface on the server where Gentran Integration Suite resides.

Default entries

```
admin_host.1    = hostname1
admin_host.2    = localhost
```

- b. Correct the parameters.

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

If an additional network interface needs to access Gentran Integration Suite, add an additional *admin_host* entry, as shown below.

Edited entries

```
admin_host.1    = hostname1
admin_host.2    = localhost
admin_host.3    = hostname2
```

2. Stop Gentran Integration Suite.
3. Run the `setupfiles.cmd` utility located in the *install_dir\bin* directory.
4. Restart Gentran Integration Suite.

For the Dashboard user interface, Gentran Integration Suite Version 4.2 provides unrestricted binding to network interfaces through the perimeter server. To restrict access to the Dashboard user interface, you can adjust property settings so that only one network interface accesses Gentran Integration Suite.

1. On the server where Gentran Integration Suite resides, edit the `perimeter.properties.in` file.

- a. Locate the **localmode.interface** parameter. The default setting is unrestricted, as shown below.

Unrestricted Setting (Default)

```
localmode.interface=*
```

- b. To restrict access to the Dashboard, enter the network interface that you want Gentran Integration Suite to support.

Restricted Setting

```
localmode.interface=hostname1
```

2. Stop Gentran Integration Suite.
3. Run the `setupfiles.cmd` utility located in the *install_dir\bin* directory.

4. Restart Gentran Integration Suite.

Validating the Installation

After you install, start, and log in to Gentran Integration Suite the first time, you can validate the installation by testing a sample business process. Follow these steps:

1. Open a browser window and enter the address for Gentran Integration Suite. This address was displayed at the end of startup.
2. Enter your user login and password.
3. From the **Administration** menu, select **Business Processes > Manager**.
4. In the Process Name field, type **Validation_Sample_BPML** and click **Go!**
5. Click **execution manager**.
6. Click **execute**.
7. Click **Go!** You see the *Status: Success* message in the upper left side of the page.

Downloading Gentran Integration Suite Tools

Gentran Integration Suite includes four tools that run on a desktop or personal computer. After you install, start, and access Gentran Integration Suite, you can install the following tools by downloading them from within Gentran Integration Suite:

- ◆ Map Editor and associated EDI and CII standards
- ◆ Graphical Process Modeler
- ◆ Web Template Designer
- ◆ Service Developer's Kit

Conflicting IP addresses can cause problems when you download a desktop tool. See *Troubleshooting: Windows Environment* on page 77.

Performing Initial Administrative Setups in Gentran Integration Suite

If you are installing Gentran Integration Suite for the first time, you need to perform some initial administrative setups before users can use the application. For example, the system administrator for Gentran Integration Suite must register users, grant permissions, and run several performance reports so that benchmarks are established for tuning the system in the future.

Stopping Gentran Integration Suite

To stop Gentran Integration Suite in a Windows environment, follow these steps:

1. Open Gentran Integration Suite.
2. From the **Administration** menu, select **Operations > System > Troubleshooter**.

3. Click **Stop the System** and wait for shutdown to complete.

Starting or Stopping the Cluster Environment

Note: To run Gentran Integration Suite cluster, you need to get a valid Gentran Integration Suite license for multiple IP address of all the nodes where Gentran Integration Suite will be installed and configured as a cluster.

You can start the Gentran Integration Suite cluster environment by starting Gentran Integration Suite on each node, starting with node1 (It is recommended to start node1 first.):

You can stop a Gentran Integration Suite cluster by using one of the following options:

- ◆ `hardstop.cmd` from each node. This stops all Gentran Integration Suite Windows Services for each node.
- ◆ `softstop.cmd` from each node. This does a regular cleanup and shutdown of all components.

Caution: Running `softstop.cmd` command in a multiple node (clustered) environment will suspend all scheduled business processes. It is recommended to run the `hardstop.cmd` command when stopping individual nodes of a cluster.

- ◆ Shut down the whole cluster by selecting **Operations > System > Troubleshooter**, and then clicking the **Stop the System** link.
- ◆ Shut down specific nodes by selecting **Operations > System > Troubleshooter**, and then clicking the **shutdown** link.

Cluster Environment Verification

This section explains the verification process for the Gentran Integration Suite cluster environment.

- ◆ Verify the following properties:
 - ◆ The property `CLUSTER=true` is included in `sandbox.cfg`
 - ◆ The cluster property in `centralops.properties` and `noapp.properties` is true and the `clustered_env` property in `ui.properties` is set to true
- ◆ Using the System Troubleshooter, you can verify the cluster environment by viewing the following information for each node:
 - a. Queue information
 - b. JNDI Tree for each node
 - c. Host, state, status, adapters, and memory usage information
 - d. Perimeter Server
 - e. Shows adapter status for each node with a dropdown box listing all nodes in cluster
- ◆ Operations/Troubleshooter Admin UI page displays all the cluster nodes, ops URL, node URL, the status of the node and which node holds the token.
- ◆ The Operations/System/Logs UI information is useful for tracking the errors and exceptions in the system. In a clustered environment, the logs are provided for each node. A dropdown lists all the nodes

and by selecting the node the logs corresponding to the nodes is displayed. You can see each log item in this page for each node after all nodes start.

- ◆ The Activity Monitor UI provides the status of running business process and scheduled services. Using this feature, you can monitor all service activities including the node on which each activity is executing.
- ◆ The Operations/System/ Troubleshooter Admin UI, by selecting the Threads for a node, the pop-up window displays current threads that running on specific node.

Uninstalling Gentran Integration Suite from a Windows Environment

When you uninstall Gentran Integration Suite, the following components are affected:

- ◆ The Gentran Integration Suite application is automatically removed from the server.
- ◆ The MySQL database is automatically removed from the server (if you are using MySQL).

Additionally, you may perform the following tasks:

- ◆ Manually remove the JDK that was installed
- ◆ Manually remove Java WebStart and any desktop tools that were downloaded
- ◆ Free any database space in Oracle or SQL Server databases

To uninstall Gentran Integration Suite from a Windows environment, follow these steps:

1. Stop Gentran Integration Suite and wait for shutdown to complete.
2. Run `install_dir\bin\uninstallWindowsService.cmd` to remove the following Windows services:
 - ◆ Gentran Integration Suite
 - ◆ Opsserver
 - ◆ Noapp server
 - ◆ WebDav server
 - ◆ MySQL server

You should receive a message stating that the services were successfully removed. To verify their removal, open the Services window:

- a. Select **Start > Settings > Control Panel**.
- b. Click **Administrative Tools > Services**.

If the services were not removed, you must delete them from the Windows registry:

- a. Go to the Windows registry.
- b. Locate **HK_LOCAL_MACHINE\System\Current Control Set\Services**.
- c. Delete the keys for Gentran Integration Suite and Opsserver. These registry keys start with Gentran Integration Suite.
- d. Reboot to apply the registry changes.

3. If the JDK is not being used by another application, remove it.
 - a. From the Windows **Start** menu, select **Settings > Control Panel**.
 - b. From the Control Panel, select **Add/Remove Programs**.
 - c. In the Add/Remove Programs window, select **Java 2 SDK Runtime Environment Standard Edition v<version number>** and click **Remove**.
 - d. In the Add/Remove Programs window, select **Java 2 SDK Standard Edition v<version number>** and click **Remove**.
 - e. Close all windows and return to your desktop.
4. Remove the product installation folder from the Windows path:
 - a. In your Windows desktop, right-click **My Computer**.
 - b. Select **Properties**.
 - c. Click the **Advanced** tab.
 - d. Click **Environment Variables**.
 - e. In the System variables window, select **Path**.
 - f. Click **Edit**.
The system displays the Edit System Variable dialog box.
 - g. Delete the following entries located in Variable Value.
`<install_dir>\SI\lib\jnipass\1_0\windows;`
`<install_dir>\mysql2\SI\packages\lib\jni;`
`<install_dir>\mysql2\SI\packages\lib\jni\windows2000`
 - h. Click **OK**.
 - i. Close all windows to return to your desktop.
5. Delete the folder where Gentran Integration Suite was installed, including all subfolders. For example, delete `C:\SterlingCommerce` and its subfolders.
6. If you use an Oracle or SQL Server database, these remain intact even after you remove Gentran Integration Suite from the server. If you no longer want to reference the data, contact your database administrator about removing the unwanted tables and recovering the database space where Gentran Integration Suite resided.
7. After you remove Gentran Integration Suite from the server, you can remove Java WebStart and any tools that were downloaded to the desktop:
 - ◆ Map Editor and associated EDI and CII standards
 - ◆ Graphical Process Modeler
 - ◆ Web Template Designer
 - ◆ Service Developer's Kit

Troubleshooting: Windows Environment

Situation	Message or Symptom	Explanation/Resolution
Installing	You encounter errors or problems during installation.	<p>Explanation</p> <p>Installation creates two log files, one for the first (bootstrap) phase and a second for the actual installation phase.</p> <p>Resolution</p> <p>Examine the log files generated during installation:</p> <ul style="list-style-type: none"> ◆ <i>install_dir\bootstrap.log</i> ◆ <i>install_dir\SI\installSI.log</i>
Installing	During installation, you select the destination directory and the installation program stops running.	<p>Explanation</p> <p>The command window was closed after you selected the destination directory.</p> <p>Resolution</p> <p>Delete the destination directory and re-start the installation process. Do not close the command window.</p>
Installing	You started the installation program but realize that the license file has not been downloaded.	<p>Resolution</p> <p>Minimize the installation window, obtain the license file, and then continue with the installation procedure. See <i>Obtaining a License File</i> on page 53.</p>
Installing	During installation, you identify the initial port number and then see the message: <i>Port number is already in use.</i>	<p>Resolution</p> <p>Choose one:</p> <ul style="list-style-type: none"> ◆ Use a different port number. ◆ Stop the application that is using the port number you want to use.
Installing	During installation, you enter database information and see the message: <i>Information is incorrect.</i>	<p>Explanation</p> <p>One or more of the criteria for the database is incorrect.</p> <p>Resolution</p> <p>Click Back to redisplay the dialog box that asks for the database information. Correct the error and click Next.</p>

Situation	Message or Symptom	Explanation/Resolution
Installing	Installation appears to complete successfully, but Gentran Integration Suite services are not installed.	<p>Explanation</p> <p>You may have reinstalled Gentran Integration Suite on a Windows server and chosen the same initial port.</p> <p>Resolution</p> <p>If this is the case, either reinstall Gentran Integration Suite in a different directory using a different port, or follow the steps below to uninstall the existing Gentran Integration Suite services prior to reinstalling Gentran Integration Suite.</p> <ol style="list-style-type: none"> 1 Run <code>install_dir\bin\stopWindowsService.cmd</code> and wait for all Gentran Integration Suite Windows services to stop. 2 Run <code>install_dir\bin\uninstallWindowsService.cmd</code> and log off. This cleanly removes the old Windows services from Windows cache and verifies that there are no scheduled jobs running in the background. 3 Delete the <code>install_dir</code> directory. 4 You can now install the new version of Gentran Integration Suite at the same port.
Starting	If Gentran Integration Suite does not start, examine the log file in <code><install_dir>\SIVogs</code> for an invalid or corrupt license file.	<p>Resolution</p> <p>Obtain the license file. Then restart Gentran Integration Suite. See <i>Obtaining a License File</i> on page 53.</p>
Installing a desktop tool or resource	<p>Cannot download any of the following:</p> <ul style="list-style-type: none"> ◆ Map Editor ◆ Graphical Process Modeler ◆ Web Template Designer ◆ Service Developer's Kit 	<p>Explanation</p> <p>When you install Gentran Integration Suite, system files are created that contain an internal IP address. If you install Gentran Integration Suite 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 IP address from a client residing outside of the firewall.</p> <p>Resolution</p> <p>Modify the system files that contain the invalid IP address. Follow these steps:</p> <ol style="list-style-type: none"> 1 Navigate to the <code>install_dir\bin</code> directory. 2 Enter the following command followed by the external IP address: <code>patchJNLP.cmd external_IP address</code> 3 Stop Gentran Integration Suite. 4 Restart Gentran Integration Suite.
Accessing	Attempts to access the URL for Gentran Integration Suite display the message: <i>Page cannot be displayed.</i>	See <i>Accessing Gentran Integration Suite</i> on page 71.

Installing in an iSeries Environment

This section includes the following topics:

- ◆ *Preinstallation Setup Checklist for an iSeries Environment* on page 79
- ◆ *Installing in an iSeries Environment* on page 86
- ◆ *Postinstallation in an iSeries Environment* on page 90
- ◆ *Uninstalling Gentran Integration Suite from an iSeries Environment* on page 94
- ◆ *Troubleshooting: iSeries Environment* on page 95

Preinstallation Setup Checklist for an iSeries Environment

The following topics will assist you with preinstallation tasks when planning to install Gentran Integration Suite in an iSeries environment:

- ◆ *Key Terms* on page 80
- ◆ *Checklist for iSeries Preinstallation* on page 80
- ◆ *Checking System Requirements* on page 82
- ◆ *Downloading the JCE Distribution File* on page 82
- ◆ *Determining Port Numbers* on page 83
- ◆ *Configuring the System to View Files* on page 83
- ◆ *Mapping a Network Drive* on page 84
- ◆ *Specifying the QCCSID* on page 84
- ◆ *Creating a Gentran Integration Suite User Profile* on page 84
- ◆ *Preparing the Database* on page 84
- ◆ *Obtaining a License File* on page 85

Key Terms

The following terms and definitions will assist you in understanding the concepts that are discussed in this document:

- ◆ Java 2 Software Development Kit (JDK) – Software development kit (SDK) for producing Java programs. Produced by IBM, the JDK includes JavaBeans component architecture and support for JDBC.

Note: The Gentran Integration Suite *System Requirements* include information about upgrading your JDK for the changes enacted in 2007 for Daylight Savings Time.
- ◆ Gentran Integration Suite License File – Contains a license that is associated with your specific operating system and the IP address of your system. The license provides access, for a year, to the Gentran Integration Suite packages your company selected.
- ◆ The Java Cryptography Extension (JCE) is a set of Java packages from IBM that provides a framework and implementations for encryption, key generation and key agreement, and Message Authentication Code (MAC) algorithms.
- ◆ Gentran Integration Suite User Profile – In the iSeries environment, you must create a user profile for accessing the Gentran Integration Suite databases. You use this user profile when you submit the installation command. It is also used to start, end, and perform any system maintenance to the Gentran Integration Suite environment.

Checklist for iSeries Preinstallation

The preinstallation checklist contains the items you need to gather and tasks you need to complete prior to installing Gentran Integration Suite on iSeries.

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

- ◆ The first character must be alphabetic or one of the following: \$, @, or #
- ◆ The remaining characters may be alphanumeric or one of the following: \$, @, #, _ or .
- ◆ Do not use spaces or apostrophes.

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

Step	Description	Your Notes
1	Verify that your system meets the hardware and software requirements specified for this release. See <i>Checking System Requirements</i> on page 82.	
2	For systems with multiple IP addresses, verify that the IP address on which Gentran Integration Suite resides is accessible by any client computer that is running a browser interface. Caution: If you do not verify the IP addresses, your system may not operate properly after installing Gentran Integration Suite.	

Step	Description	Your Notes
3	Verify that all client computers are using Microsoft Internet Explorer 5.x or later.	
4	If you are using a non-English environment, confirm that you are using the appropriate character set.	
5	Configure the system to view Gentran Integration Suite files using Windows Explorer. See <i>Configuring the System to View Files</i> on page 83.	
6	Map a network drive to your working directory. See <i>Mapping a Network Drive</i> on page 84.	
7	Specify the QCCSID (Coded Character Set) under which Gentran Integration Suite will run. See <i>Specifying the QCCSID</i> on page 84.	
9	Determine and record the collection name for the database. See <i>Preparing the Database</i> on page 84.	
10	Determine and record the passphrase you want to use for the Gentran Integration Suite system. During installation, you are prompted twice to enter the passphrase, which is not displayed when you type it.	
11	Determine and record information to set up default system alerts from Gentran Integration Suite: <ul style="list-style-type: none"> ◆ The Administrative e-mail address to which system alert messages are sent. ◆ The SMTP Server IP address used for sending alert messages. 	
12	Determine and record the initial port number to be used by Gentran Integration Suite. See <i>Determining Port Numbers</i> on page 83.	
13	Determine and record the catalog name for the database. See <i>Preparing the Database</i> on page 84.	
14	Determine the Host IP address for Gentran Integration Suite. This is required even if you only have one IP address for your system. To find the IP Address of your system: <ul style="list-style-type: none"> ◆ Key in WRKTCPSTS *IFC ◆ Locate and record the IP address to use for Gentran Integration Suite. 	
15	Create the Gentran Integration Suite user profile and its associated password. Be sure to record the user password so you can enter it during installation. The user password is not displayed when you enter it. See <i>Creating a Gentran Integration Suite User Profile</i> on page 84.	

Step	Description	Your Notes
16	Determine and record the absolute path to the Gentran Integration Suite jar file. The jar file can reside in any directory on your system. During installation, you use this directory, but this is not the final directory where Gentran Integration Suite resides.	
17	Record the directory in which you want to install Gentran Integration Suite. The Gentran Integration Suite installation directory must be a new directory and cannot already exist. A large subdirectory tree will be created under this directory. During installation, this directory is referred to as the <code><install_dir></code> .	
18	Obtain the license file and record the absolute path to the license file. See <i>Obtaining a License File</i> on page 85.	
19	Obtain the JCE distribution file and record the absolute path to the zipped file. See <i>Downloading the JCE Distribution File</i> on page 82.	

Note: The Gentran Integration Suite installation program will automatically set the umask to 002 during the installation. However, iSeries system administrators should consider placing an appropriate umask command such as `umask 002` in their global or user login script because the default of 000 could allow many IFS files to be world-writable. Please consult the IBM iSeries Information Center for more information on umask and customizing your Qshell environment.

Checking System Requirements

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

For current information, see the *System Requirements* posted on the Gentran Integration Suite Documentation Library.

Note: Version 4.2 of Gentran Integration Suite does not require an application server for installation or at run-time. However, Gentran Integration Suite supports integration with JBoss™ and WebLogic®. You can also integrate with WebSphere®, JBoss, or WebLogic after installing version 4.2 by using the Gentran Integration Suite EJB Adapter.

Downloading the JCE Distribution File

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

To obtain this file for the IBM JDK 1.4

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**.
5. Review your personal information and the license agreement and click **I agree** 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 Gentran Integration Suite. To specify a port number, follow these guidelines:

- ◆ Gentran Integration Suite requires a range of 100 consecutive open ports between 1025 and 65535.
- ◆ The initial port number represents the beginning port number in the range.
Note: The WebDAV port is set to the initial (TCP/IP) port number plus 46. For example, if the initial port is 10000, the WebDAV port is 10046. This port number may be needed if you plan to set up WebDAV support.
- ◆ The port range starts with the initial port number and ends with the number that equals the initial port number plus 100. All ports in this range must be available for Gentran Integration Suite. For example, if you specify 10100, then you need to make sure that 10100 through 10199 are not used by any other applications on your system.

Note: In an iSeries environment, you can view the port numbers currently in use on your system. Choose one of these methods:

- a) Select from the **iSeries Navigator Network > TCP/IP Configuration > Connections**.
- b) Enter **WRKTCPSTS** on an iSeries command line and select **Option 3 (Work with TCP/IP connection status)**. Press **F14** to sort the port numbers in numerical sequence.

Configuring the System to View Files

In the iSeries environment, you must configure your system to view Gentran Integration Suite files using Windows Explorer. Use the NetServer component of OS/400 to set up file shares that are accessible through Windows networking. You must set up a file share to a working directory in your iSeries Integrated File System (IFS).

Mapping a Network Drive

In the iSeries environment, you must map a network drive to the working directory for Gentran Integration Suite. For more information, refer to the documentation on the IBM Web site.

Specifying the QCCSID

In the iSeries environment, you must specify the QCCSID (Coded Character Set) under which Gentran Integration Suite will run. Follow these steps:

1. From an iSeries command line, enter **DSPSYSVAL SYSVAL(QCCSID)**.
2. Is the QCCSID set to 65535?
 - ♦ If Yes, then complete one of the following tasks:
 - Change the CCSID to a specific coded character set:
 - Enter **CHGSYSVAL SYSVAL(QCCSID) VALUE(xxx)**, where *xxx* represents your coded character set.
 - IPL your iSeries.
 - Keep the QCCSID at 65535 and specify a specific CCSID other than 65535 when you create your Gentran Integration Suite user profile.

Note: Refer to the IBM National Language Support Guide for valid coded character sets. It is recommended that you use the coded character set 037 for US English system.

- ♦ If No, continue with the next preinstallation task.

Creating a Gentran Integration Suite User Profile

In the iSeries environment, you must create a user profile for accessing the Gentran Integration Suite databases. You use this user profile when you submit the installation command.

If your system value QCCSID is set to 65535, then set the CCSID parameter to a specific coded character set other than 65535 on the CRTUSRPRF command. See the IBM National Language Support Guide for valid coded character sets. See your operating system documentation for more information about creating user profiles.

Note: The job description assigned to the user profile must have a job queue defined that allows at least two active jobs. If the maximum number of active jobs is less than two, Gentran Integration Suite will not install correctly. This also applies to starting Gentran Integration Suite after installation.

Preparing the Database

In an iSeries environment, Gentran Integration Suite uses the DB2 database that is included in OS/400.

In an iSeries environment, the installation process creates a new collection for Gentran Integration Suite. Before you install, you must determine and record the collection name and the catalog name.

- ◆ The collection name is the name of the collection (or library) that contains the database, journal, and journal receiver for your Gentran Integration Suite system. The default for this prompt is GIS42DB. This collection must not already exist.

Note: If you are upgrading from Gentran Integration Suite 4.0, please refer to *Copying a DB2 Database* in the iSeries chapter of the *Gentran Integration Suite Upgrade Guide Version 4.2 (from 4.0)* to prepare your database for the automatic upgrade. Also, during installation, answer ***YES** to the prompt *Upgrade from GIS 4.0?*

Note: If you are planning to upgrade from Gentran Integration Suite 3.0 or 3.1, you must answer ***YES** to the prompt *Upgrade from GIS 3.0 or 3.1?*

- ◆ The catalog name is the database name of your iSeries system, as defined by the WRKRDBDIRE command. Generally, this value is the name of your system.

Caution: If you are reinstalling Gentran Integration Suite, 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.

Translator Requirements for iSeries Database Files

All database files are required to be journaled when being used by the translator in Gentran Integration Suite. If your application files are not currently journaled, and you plan to access these files through Gentran Integration Suite, please refer to the IBM manuals for instructions on journaling physical files.

Obtaining a License File

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

The license file contains a license that is associated with your specific operating system and the IP address of your system. The license provides access, for 20 years from the date of issue, to the Gentran Integration Suite packages your company selected and is independent of your maintenance fee. Because the license is independent of your maintenance fee, the schedule for renewing your license and license file may be different than the maintenance fee schedule.

You must download the license file before you can install Gentran Integration Suite. Follow these steps:

1. Point your Web browser to <http://www.productupdates.stercomm.com>.
2. Review the Welcome to Sterling Commerce Product Update page and click **Next**.
3. Review the Authenticate page and click **Next**.
4. Type the License File Key, which is case-sensitive, and click **Next**. If the system displays the Retrieve Registration dialog box and you are upgrading, you may retrieve your registration information by entering your previous License File Key. If you are not upgrading, then click **Next**.
5. Verify the registration information and click **Next**.

6. On the Server Details page, update the fields and click **Next**.
If the operating system, application server, or database server version is not listed in the respective lists, type the version in the respective **Description of Other**.
All IP addresses assigned to the server in which you are installing Gentran Integration Suite should be listed in the license file..
7. Verify the list of packages and the type of license selected for each package and click **Next**. If the list of packages selected or the type of license selected is *not* correct, then contact Customer Support to correct the information.
8. Scroll to the bottom of the Review and Download Package License File page and click **Finish and Download**.
9. Click **Save** in the **File Download** dialog box.
10. Accept the default location for the license file or navigate to the location where you will store the license file. Note the absolute path of the file location on the Preinstallation Checklist. You will need the absolute path to install Gentran Integration Suite.
11. Click **Save**.
12. Close your Web browser.

Installing in an iSeries Environment

Installing Gentran Integration Suite in an iSeries environment includes the following sections:

- ◆ *Running the Installation Program in iSeries* on page 86
- ◆ *Installing the Current Maintenance Patch* on page 88

Caution: If you are upgrading, refer first to the *Upgrade Guide* for the release from which you are upgrading (3.0/3.1, 4.0 or 4.1/4.1.1). Upgrading from Gentran Integration Suite 3.0, 3.1 and 4.0 includes a full installation of Gentran Integration Suite 4.2, but you must follow additional steps in the *Upgrade Guide* to complete the upgrade. Upgrading from Gentran Integration Suite 4.1 and 4.1.1 does not include an installation of Gentran Integration Suite 4.2.

Running the Installation Program in iSeries

Note: The following instructions assume that you received an installation CD for Gentran Integration Suite. If you downloaded Gentran Integration Suite 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. Use this directory wherever there is a reference to the installation CD in the following instructions. Ignore any instructions to place the installation CD in a drive.

To install Gentran Integration Suite in an iSeries environment, you run an installation program. Refer to the information you recorded in the checklist and follow the steps below.

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.

1. Insert the Gentran Integration Suite installation CD in the appropriate drive. You can use a drive on your PC or on your iSeries CD reader.
2. Depending on the drive you are using, choose one method. Be sure to record the absolute path that you use.

- ◆ If the CD is in your PC, copy or FTP the file **si42.jar** from the installation CD to the *<absolute path>* in the IFS root or QOpenSys file system.
- ◆ If the CD is in your iSeries reader, enter the following command on the command line:

```
cp /qopt/si42.jar <absolute path>/si42.jar
```

Note: Do not place the **si42.jar** directory in the root directory. It is required to be placed in a subdirectory under the root directory. For example, **/gisinstallitems/si42.jar**

3. Copy the file **gis42savf** from the iSeries directory on the installation CD to the mapped network drive.
4. Is there a save file called GIS42SAVF in QGPL on your iSeries?
 - ◆ If Yes, clear the save file by entering **CLRSVF FILE(QGPL/GIS42SAVF)**.
 - ◆ If No, enter **CRTSAVF FILE(QGPL/GIS42SAVF)** to create a save file on your iSeries.
5. Copy the **gis42savf** file that you copied from the CD to the save file created in QGPL by entering:


```
CPYFRMSTMF  
FROMSTMF('/<directory>/<filename of the savf>') TOMBR('/QSYS.LIB/QGPL  
.LIB/GIS42SAVF.FILE') MBROPT(*REPLACE)  
CVTDTA(*NONE)
```
6. Enter **RSTLIB SAVLIB(GIS42) DEV(*SAVF) SAVF(QGPL/GIS42SAVF)** to restore the installation objects.
7. From an iSeries command line, enter the following command and press **Enter**:


```
CRTDUPOBJ OBJ(FINISHG42) FROMLIB(GIS42) OBJTYPE(*PGM)  
NEWOBJ(FINISHG41)
```
8. Log in to your iSeries using the user profile you created during preinstallation.
9. Enter **ADDLIB LIB(GIS42)** from an iSeries command line to add the installation programs to your library list.
10. Enter **INSTGIS42** and press **F4** to prompt the command. The system displays the list of configuration parameters needed to install Gentran Integration Suite.
11. For each configuration parameter listed, enter the value you want to use. Refer to your notes in the preinstallation checklist.
 - ◆ Collection
 - ◆ *Upgrade from GIS 4.0?* Enter YES, if you are upgrading from Gentran Integration Suite 4.0. Otherwise, enter NO.
 - ◆ *Upgrade from GIS 3.0 or 3.1?* Enter *YES, if you are upgrading from Gentran Integration Suite 3.0 or 3.1. Otherwise, enter *NO.

- ◆ GIS System Passphrase
- ◆ Verify GIS System Passphrase
- ◆ Administrative e-mail address
- ◆ IP Address for SMTP Server
- ◆ TCP/IP Port Number
- ◆ Catalog Name
- ◆ Host IP Address
- ◆ GIS User Profile
- ◆ GIS User Password

12. Press **Page Down** for the remaining parameters:

- ◆ Full Path to GIS Jar File
- ◆ GIS install directory. Be sure to enter a complete path name.
- ◆ Full license path name. Be sure to enter a complete path and file name.
- ◆ JCE distribution file. Be sure to enter a complete path and file name.

13. Verify the parameters you entered and press **Enter**.

The installation process takes between 15 minutes to an hour to complete. The installation time depends upon the size of your iSeries. Monitor the installation process to verify that no JAVA exception errors are generated.

The install runs in batch mode. To monitor the progress of the install, use the WRKLNK command display function to view the log file (**gisinstall.log**). This file resides in the same directory where you placed the si42.jar file. In addition to the job you submitted, various BCI jobs, command shells, and JVMs appear and disappear in your batch subsystem. This processing is normal.

Installing the Current Maintenance Patch

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

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

si_engine_<build_number>.jar

For example, a file named si_engine_1976.jar is the patch for build 1976 for Gentran Integration Suite 4.1, which is labeled Gentran Integration Suite 4.2 in the user interface.

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

si_engine_<build_number>_patch_info.txt

For example, a file named si_engine_1976_patch_info.txt contains information about build 1976 for Gentran Integration Suite 4.1, which is labeled Gentran Integration Suite 4.2 in the user interface.

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

To install the latest patch for Gentran Integration Suite in an iSeries 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 Gentran Integration Suite.
3. Sign on with your Gentran Integration Suite user profile and enter into QSH (QShell mode).
4. In QSH, change to the *install_dir/bin* directory where *<install directory>* = Gentran Integration Suite installation directory.

Example: `cd /install_dir/bin` and press **Enter**.

5. Run the following command to install the patch:

```
./InstallService.sh
<path>/si_<version>_sp_0_patch_<number>_<app_server>.jar
```

where:

<path> = Fully qualified path to maintenance patch file

<version> = Gentran Integration Suite Version

<number> = Patch number

<app_server> = Application Server

Example: `InstallService.sh /installdir/si_22_sp_0_patch_1_jboss.jar`

Information about the Patch installation is automatically logged to *install_dir/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 will provide the error message code from the database and the SQL command that failed. The failure information is also logged to the *system.log* file and to the *patch.log* file. If you cannot determine whether the failure can be safely ignored, contact Sterling Commerce Customer Support for assistance. Choose one of the following options when prompted:

- ◆ Continue – If you determine that the failure can be safely ignored, continue with the patch installation.
- ◆ Stop – Stop the patch installation. You should always contact Sterling Commerce Customer Support for assistance before choosing this option.
- ◆ Retry – Choose this option to retry the failed command.

Postinstallation in an iSeries Environment

After installing Gentran Integration Suite, you should complete the following tasks:

- ◆ *Starting Gentran Integration Suite* on page 90
- ◆ *Accessing Gentran Integration Suite* on page 91
- ◆ *Validating the Installation* on page 92
- ◆ *Downloading Gentran Integration Suite Tools* on page 93
- ◆ *Performing Initial Administrative Setups in Gentran Integration Suite* on page 93
- ◆ *Stopping Gentran Integration Suite* on page 93

Starting Gentran Integration Suite

To start Gentran Integration Suite in an iSeries environment, follow these steps:

1. Sign onto iSeries with your Gentran Integration Suite user profile.
2. Submit a batch job by entering the following command:

```
SBMJOB CMD(QSH CMD('umask 002 ; cd install_dir/bin ; ./run.sh')) JOB(SIMAIN)
```

Note: The job queue to which you submit the command must allow at least two active jobs. If the maximum number of active jobs is less than two, Gentran Integration Suite will not start up completely.

To reduce keying errors at startup, create a command language (CL) program similar to the following example:

```
PGM
SBMJOB CMD(QSH CMD('umask 002 ; cd install_dir/bin ; ./run.sh')) +
JOB(SIMAIN)
ENDPGM
```

3. Wait for startup to complete, a process that takes 10 to 15 minutes.
4. Startup creates a spool file. When startup is finished, open the QPRINT spool file and check the end of the file for a message about how to connect to Gentran Integration Suite. For example, you may see a message like the following:

*Open your Web browser to <http://host:port/dashboard>, where *host:port* is the IP address and port number where Gentran Integration Suite resides on your system.*

Make a note of the address so you can access Gentran Integration Suite later.

Note: It may take several minutes for Gentran Integration Suite to be available from the Web browser, even after the above URL message has been issued.

5. Optional. To verify that Gentran Integration Suite has started normally and completely, view the system through WRKACTJOB and verify that only two QP0ZSPWP jobs (of yours) are left running in your GIS batch subsystem.

6. Prepare your browser to log in to Gentran Integration Suite. Configure your browser so that there is direct connection between the Web browser and iSeries. Do not configure the browser to use any proxy server between you and iSeries (unless it is a requirement of your network).

Accessing Gentran Integration Suite

To log in to Gentran Integration Suite the first time, follow these steps:

1. Be sure that Gentran Integration Suite is started and running.
2. Open a browser window and enter the address displayed at the end of startup.
3. The login page for Gentran Integration Suite displays.
4. Type the default user ID and 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.

System	Default login
Gentran Integration Suite	User ID: admin Password: password
AS2 Edition	User ID: as2_user Password: password
UCCnet Edition	User ID: uccnet_user Password: password

Technical Note: Changes to Network Interface Bindings

To increase the security of the Administrator Console user interface, Gentran Integration Suite Version 4.2 binds only to specific network interfaces. By default, previous versions had been bound to all network interfaces. After installing, if the URL for Gentran Integration Suite returns *Page cannot be displayed*, you can adjust property settings to correct the problem.

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

hostname1 is the name of primary network interface, the one given highest priority by Gentran Integration Suite.

localhost is the name of the network interface on the server where Gentran Integration Suite resides.

Default entries

```
admin_host.1 = hostname1
admin_host.2 = localhost
```

- b. Correct the parameters.

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

If an additional network interface needs to access Gentran Integration Suite, add an additional *admin_host* entry, as shown below.

```
Edited entries
admin_host.1    = hostname1
admin_host.2    = localhost
admin_host.3    = hostname2
```

2. Stop Gentran Integration Suite.
3. Run the `setupfiles.sh` utility located in the *install_dir/bin* directory.
4. Restart Gentran Integration Suite.

For the Dashboard user interface, Gentran Integration Suite Version 4.2 provides unrestricted binding to network interfaces through the perimeter server. To restrict access to the Dashboard user interface, you can adjust property settings so that only one network interface accesses Gentran Integration Suite.

1. On the server where Gentran Integration Suite resides, edit the file **perimeter.properties.in**.
 - a. Locate the **localmode.interface** parameter. The default setting is unrestricted, as shown below.

```
Unrestricted Setting (Default)
localmode.interface=*
```

- b. To restrict access to the Dashboard, enter the network interface that you want Gentran Integration Suite to support.

```
Restricted Setting
localmode.interface=hostname1
```

2. Stop Gentran Integration Suite.
3. Run the `setupfiles.sh` utility located in the *install_dir/bin* directory.
4. Restart Gentran Integration Suite.

Validating the Installation

After you install, start, and log in to Gentran Integration Suite the first time, you can validate the installation by testing a sample business process. Follow these steps:

1. Open a browser window and enter the address for Gentran Integration Suite. This address was displayed at the end of startup.
2. Enter your user login and password.
3. From the **Administration** menu, select **Business Processes > Manager**.
4. In the Process Name field, type **Validation_Sample_BPML** and click **Go!**
5. Click **execution manager**.
6. Click **execute**.
7. Click **Go!** The *Status: Success* message displays in the upper left side of the page.

Downloading Gentran Integration Suite Tools

Gentran Integration Suite includes four tools that run on a desktop or personal computer. After you install, start, and access Gentran Integration Suite, you can install the following tools by downloading them from within Gentran Integration Suite:

- ◆ Map Editor and associated EDI and CII standards
- ◆ Graphical Process Modeler
- ◆ Web Template Designer
- ◆ Service Developer's Kit

Performing Initial Administrative Setups in Gentran Integration Suite

If you are installing Gentran Integration Suite for the first time, you need to perform some initial administrative setups before users can use the application. For example, the system administrator for Gentran Integration Suite must register users, grant permissions, and run several performance reports so that benchmarks are established for tuning the system in the future.

Stopping Gentran Integration Suite

To stop Gentran Integration Suite in an iSeries environment, follow these steps:

1. Sign onto iSeries with your Gentran Integration Suite user profile.
2. Enter the following commands:

QSH

`cd install_dir/bin`

`./hardstop.sh`

Note: To reduce keying errors at shutdown, create a command language (CL) program similar to the following example:

PGM

QSH CMD('cd install_dir/bin ; ./hardstop.sh')

ENDPGM

3. Wait for shutdown to complete. The length of this process is determined by how many temporary objects must be cleaned up and how many spool files must be created.

To ensure that you do not restart Gentran Integration Suite before shutdown is complete, monitor shutdown through either the `ps` command in Qshell or the `WRKACTJOB` display. Verify that the two `QP0ZSPWP` jobs are complete and disappear.

Uninstalling Gentran Integration Suite from an iSeries Environment

When you uninstall, the Gentran Integration Suite application is automatically removed from the server.

Additionally, you can manually remove Java WebStart and any desktop tools that were downloaded.

To uninstall Gentran Integration Suite from an iSeries environment, follow these steps:

1. Stop Gentran Integration Suite and wait for shutdown to complete.
2. Sign onto iSeries with your Gentran Integration Suite user profile.
3. In QSH, change to the directory above *install_dir*.

Example:

If the install directory is /GIS42, then you change to directory /.

4. Enter **rm -rf** *install_dir*.

Example:

```
rm -rf GIS42
```

5. Wait for the command prompt to return.
6. Select **F3 exit from Qshell**.
7. Enter **DLTLIB** *<collection name>*.

Example:

```
DLTLIB GIS42DB
```

A message like the following is displayed: *Receiver QSQRN0001 in GIS42DB never fully saved. (I C)*.

Enter **I** to one or more of these messages until the library is deleted.

8. After you remove Gentran Integration Suite from the server, you can remove Java WebStart and any tools that were downloaded to the desktop:
 - ◆ Map Editor and associated EDI and CII standards
 - ◆ Graphical Process Modeler
 - ◆ Web Template Designer
 - ◆ Service Developer's Kit

Troubleshooting: iSeries Environment

Situation	Message or Symptom	Explanation/Resolution
Installing	Cannot find the license file that was downloaded as a preinstallation task.	<p>Explanation</p> <p>The license file is located on a personal computer rather than the server.</p> <p>Resolution</p> <p>Save the license file to the server using the mapped network drive.</p>
Starting	Invalid or corrupt license file.	<p>Explanation</p> <p>Either the license file was altered or was not downloaded prior to starting Gentran Integration Suite.</p> <p>Resolution</p> <p>Download your license file from http://www.productupdates.stercomm.com. See <i>Obtaining a License File</i> on page 85.</p>
Accessing	Attempts to access the URL for Gentran Integration Suite display the message: <i>Page cannot be displayed.</i>	See <i>Accessing Gentran Integration Suite</i> on page 91.
Stopping	Ending jobs from Gentran Integration Suite when a hardstop is not successful.	<p>Explanation</p> <p>There was a problem during the installation process or the subsystem was not defined correctly.</p> <p>Resolution</p> <ol style="list-style-type: none"> 1 Key in WRKACTJOB and locate the job that didn't end successfully. 2 Press F11 twice to obtain the job number that you want to end. 3 Press F3 to end the WRKACTJOB panel. 4 Key in QSH to enter Qshell mode. 5 Key in ps and press Enter. 6 Locate the pid number that corresponds to job number from the WRKACTJOB panel. 7 Key in kill -kill <pid number> 8 Review the install log to determine the error and resolution. If the error is due to: <ul style="list-style-type: none"> ◆ A problem with the installation of Gentran Integration Suite, then delete the <i><install_dir></i> and install Gentran Integration Suite again. ◆ The job queue having 1 as the maximum number of active jobs in the subsystem, then either change the subsystem that you start Gentran Integration Suite in, or change the number of maximum active jobs.

Installing and Configuring MESA Developer Studio

This section includes the following topics:

- ◆ *Overview for Installing and Configuring MESA Developer Studio* on page 96
- ◆ *Configuring J2SE on Your PC* on page 98
- ◆ *Verifying that MESA Developer Studio Uses the Correct JRE* on page 98
- ◆ *Starting the WebDAV Server* on page 99
- ◆ *Installing MESA Developer Studio Components* on page 100
- ◆ *Setting Up a Gentran Integration Suite Instance* on page 101
- ◆ *Installing Additional MESA Developer Studio Components and Updates* on page 103

Overview for Installing and Configuring MESA Developer Studio

Gentran Integration Suite MESA™ Developer Studio is an Integrated Development Environment (IDE) that uses Eclipse software plug-ins. Use the MESA Developer Studio to connect with a Gentran Integration Suite instance for resource access and control of operations of Gentran Integration Suite, change the template Gentran Integration Suite uses, and develop custom services, all from within a development environment.

Note: MESA Developer Studio is not supported in the iSeries platform.

In addition to MESA Developer Studio, the following plug-ins are available:

- ◆ MESA Developer Studio SDK – for developing and deploying custom services and adapters.
- ◆ MESA Developer Studio Skin Editor – for customizing the look and feel of the Gentran Integration Suite interface.
- ◆ Reporting Services – a separately-licensed set of plug-ins used to create fact models and reports for Gentran Integration Suite Reporting Services.

Assumptions and Prerequisites

Read the following assumptions and prerequisites prior to installing MESA Developer Studio:

- ◆ Basic knowledge of Gentran Integration Suite and its architecture. This is especially important if you are using MESA Developer Studio SDK to create services and adapters. For more information, see the MESA Developer Studio documentation.
- ◆ Basic knowledge of Eclipse is assumed. For more information, see the Eclipse online help or go to <http://www.eclipse.org>.
- ◆ Extensive knowledge of how to create and deploy a service. For more information, see the MESA Developer Studio documentation.
- ◆ Thorough knowledge of and experience with the Java programming language for creating services.
- ◆ You have the required MESA Developer Studio (and if purchased, Reporting Services) product licensing.

Steps to Set Up MESA Developer Studio

Setting up MESA Developer Studio is a multi-step process which should be completed in the order described. The following is a checklist for each stage in the process. The checklist provides an overview of the entire process. Separate instructions for completing each step are available:

1. Install and configure Gentran Integration Suite 4.2.
2. Download and install the latest Gentran Integration Suite patch.
3. Download and install a full release version of Eclipse 3.1. For more information, see <http://eclipse.org/downloads/index.php>.

Note: MESA Developer Studio requires specific plug-in versions. We recommend you to install Eclipse for MESA development only. If you are using Eclipse with development projects other than MESA, disable plug-ins that report conflicts.
4. Download and install the latest version of Java™ 2 SDK Standard Edition 1.4.2_06 (or higher) on the same PC that you installed Eclipse 3.1. It is important that you have the full SDK and not just the JRE.

After installation, additional configuration is required. For information on configuring the J2SE environment on your PC, see *Configuring J2SE on Your PC* on page 98.
5. Verify that MESA Developer Studio uses the correct JRE. For more information, see *Verifying that MESA Developer Studio Uses the Correct JRE* on page 98.
6. Start the WebDAV server (for Gentran Integration Suite installations on UNIX only). See *Starting the WebDAV Server* on page 99.
7. Install the MESA Developer Studio (and if purchased, Reporting Services) Plug-ins. For more information, see *Installing MESA Developer Studio Components* on page 100.
8. Set up a Gentran Integration Suite Instance in MESA Developer Studio. For more information, see *Setting Up a Gentran Integration Suite Instance* on page 101.
9. Set up Gentran Integration Suite resources to be used with MESA Developer Studio. For more information, see the MESA Developer Studio documentation.

Eclipse Terms

The following Eclipse terms might be used in this documentation when describing MESA Developer Studio components:

- ◆ Project - All the resources related to a particular implementation reside in a project. It can contain folders, files, and other Eclipse objects.
- ◆ Workspace - Directory where work is stored.
- ◆ Workbench - UI window that contains these elements:
 - ◆ Perspective - group of views and editors in a Workbench window that correspond to a certain project.
 - ◆ View - visual component within the Workbench and dependent on the perspective that was selected. Used to navigate or display information such as properties or messages.
 - ◆ Editors - visual component in the Workbench used to create, change, or browse a resource.

Configuring J2SE on Your PC

In order for Eclipse to work correctly, you must have Java 2 SDK Standard Edition 1.4.2_06 (or higher) installed on the same PC you installed Eclipse 3.1. You need to have the full SDK installed. The JRE alone is not enough. You must close Eclipse to download and install the JDK. After installing J2SE, you must configure your PC to use it.

To configure your PC for the new JDK:

1. From the Windows Start menu, select **Settings > Control Panel > System**.
2. Click the Advanced tab.
3. In the Environment Variables section, click **Environment Variables**.
4. In the System Variables section, click **New**.
5. Complete the following and click **OK**:
 - ◆ Variable Name - type **JAVA_HOME**.
 - ◆ Variable Value - type the directory path for the location where you installed the J2SE SDK. The default location is C:\j2sdk1.4.2_06\.
6. Click **OK** to exit.

Verifying that MESA Developer Studio Uses the Correct JRE

In addition to adding a home directory on Windows for this JDK instance, you must also verify that MESA Developer Studio uses the correct JRE.

To verify the MESA Developer Studio JRE:

1. Open Eclipse.
2. From the Window menu, select **Preferences**.
3. Expand the Java section and select **Installed JREs**. The Installed JREs window appears.
4. If C:\j2sdk4.2.4_06 is not listed (location and version may be different, but version should be as listed or higher), click **Add** and go to next step.
If it is listed, make sure it is selected and click **OK**. You are ready to use MESA Developer Studio.
5. Complete the following and click **OK**:
 - ◆ JRE Name - type any name for this JRE.
 - ◆ JRE home directory - click Browse to select the home directory you defined in *Configuring J2SE on Your PC* on page 98.
 - ◆ Default VM Arguments - leave blank.
 - ◆ JRE system libraries - make sure Use default system libraries is selected.
6. Click **OK** to exit.

Starting the WebDAV Server

MESA Developer Studio uses a WebDAV server as the datastore that provides access to Gentran Integration Suite resources, including MESA Developer Studio plug-in updates. This WebDAV server is automatically installed with Gentran Integration Suite 4.2 for use with MESA Developer Studio.

While the WebDAV server starts automatically with Gentran Integration Suite Windows, you must start the WebDAV server manually with Gentran Integration Suite UNIX. For specific instructions, see the following sections.

Gentran Integration Suite Windows

The WebDAV server that is used with MESA Developer Studio is implemented as a service, and starts automatically when you start Gentran Integration Suite (startWindowsService.cmd). When Gentran Integration Suite is stopped (stopWindowsService.cmd), the WebDAV server, and MySQL if used, remains running. This is necessary to start and stop instances of Gentran Integration Suite from within Eclipse and MESA Developer Studio.

You can stop the WebDAV Server Service using the stopWebdavWindowsService.cmd. Also, when Gentran Integration Suite and WebDAV Server Service are running and WebDAV Server Service gets stopped Gentran Integration Suite (and MySQL if used) will remain running. The logfilename of the WebDAV Server Service is webdav.log (not gisdav.log as in UNIX).

Gentran Integration Suite UNIX

You do not need to have Gentran Integration Suite running to start the WebDAV server.

Note: You must start the WebDAV server for each Gentran Integration Suite instance you want to work with in MESA Developer Studio.

To start the WebDAV server:

1. Open a UNIX command window.
2. Go to the Gentran Integration Suite install directory. This is usually *installDir/bin*.
3. Start the WebDAV server by executing the `./runDAVServer.sh` command.
4. You are asked to enter your installation password. You must enter this information only once for each Gentran Integration Suite installation because the password is written permanently to the properties file. This step is optional, however if you do not enter the password you will not be able to start and stop Gentran Integration Suite instances from MESA Developer Studio.
5. After the startup process is complete, the WebDAV port is listed. Make a note of this number. Format is base install port + 46. The WebDAV port is needed when requesting to download and install the MESA Developer Studio plug-ins.

Note: The default WebDAV port is the base install port + 46. This port is assigned when you install Gentran Integration Suite and should not be changed. The WebDAV port number is used when installing the plug-ins and when adding a Gentran Integration Suite instance to MESA Developer Studio. For more information, see *Setting Up a Gentran Integration Suite Instance* on page 101.

Installing MESA Developer Studio Components

You must install and configure MESA Developer Studio to connect with the desired Gentran Integration Suite instances for resource access and for control operations of Gentran Integration Suite from within MESA Developer Studio. Use this procedure to install Reporting Services plug-ins, as well.

Changing Proxy Preferences

You might need to change you proxy server settings to enable an HTTP proxy connection between the PC where you have Eclipse installed and the server where Gentran Integration Suite is installed.

To change proxy settings:

1. From the Windows menu, select **Preferences > Install/Update**.
2. Under Proxy settings, type your proxy information.
3. Click **OK**.

Installing New Features

To install MESA Developer Studio:

1. Open Eclipse.
2. Select a default workspace folder location. You can add additional workspace folder locations at any time. The Package View in the lower left area of the MESA Developer Studio workspace displays a local explorer view of your project folders. This enables you to store files that you check out.

3. From the Eclipse Help menu, select **Software Updates > Find and install**.
4. Select **Search for new features to install**.
5. Click **Next**.
6. Click **New Remote Site**.
7. Complete the following information and click **OK**.
 - ◆ Name – type a descriptive name for the application server.
 - ◆ URL – type the IP address or name of your server. Format is `http://<servername>:<WebDAVportnumber>/eclipse`.

Your new site will appear in the list of sites to include in the search.

8. Select the check-box to the left of the new site. Click **Finish**.

The system verifies the selected site and displays the results. On the search results page, expand the update site node and select from the following plug-ins, according to your licenses:

- ◆ MESA Developer Studio
- ◆ Service SDK
- ◆ Skin Editor
- ◆ Reporting Services (automatically selects all three Reporting Services plug-ins: Fact Model Editor, Report Editor, and Report Format Editor)

Cautions:

- ◆ Do not change the default installation path for the plug-ins.
- ◆ If you are selecting Reporting Services, you must also select the MESA Developer Studio plug-in (unless you have already installed MESA Developer Studio). Dependencies require that the MESA Developer Studio plug-in be installed either before or at the same time as the Reporting Services plug-ins.

9. Click **Next**. Accept the terms of the license and click **Next**.
10. Click **Finish**.
11. Click **Install All** to accept the feature verification.

You must restart Eclipse for the changes to take affect.

Setting Up a Gentran Integration Suite Instance

You can only view resources that are available for the specified Gentran Integration Suite instance. If a desired resource resides in a different Gentran Integration Suite installation you must configure a new instance in MESA Developer Studio to work with it.

Note: If you are installing Reporting Services, you must complete this task.

1. From the Window menu, select **Open Perspective > Other**.

2. Select MESA Developer Studio and click **OK**.
3. In the MESA Developer Studio view in the upper left, right-click and select **New instance**.
4. Complete the following information and click **Finish**:
 - ◆ Hostname - name of machine for Gentran Integration Suite install.
 - ◆ Port - WebDAV port assigned at install (see *Starting the WebDAV Server* on page 99).
 - ◆ Name - name you assign to this Gentran Integration Suite connection.
 - ◆ User name - valid Gentran Integration Suite user name (for example, admin).
 - ◆ Password - valid Gentran Integration Suite password.

MESA Developer Studio attempts to establish a connection to the instance using the WebDAV server. The status of the instance is displayed:

- ◆ Red – the instance has not been started.
- ◆ Yellow – the instance was started but is not yet running.
- ◆ Green – the instance is running.

Note: Refresh the workspace to see a newly added environment.

Editing Connection Information

Once you have set up a Gentran Integration Suite instance for use with MESA Developer Studio, you can edit the connection information, view configuration details, test the connection, and refresh the connection.

To edit the connection information:

1. Right-click on the instance name.
2. Select **Edit**.
3. Edit the settings as needed.
4. Click **Finish**.

MESA Developer Studio attempts to establish a connection to the instance using the new information. The status is displayed (green, yellow, or red) according to the status of the instance.

Viewing Configuration Details

To view configuration details, double-click on the instance name.

Note: The ports on the Overview window are static. Only the ports present at the installation are displayed. Any changes or additions made after installation are not displayed.

Refreshing the Instance

Use Refresh if you have locked or unlocked business processes and maps through in Gentran Integration Suite, and you want to see their current status in MESA Developer Studio.

To refresh the Gentran Integration Suite instance connection:

1. Right-click on the instance name.
2. Select **Refresh**.

The Progress Information window appears and closes automatically when the refresh process is complete. The status is displayed (green, yellow, or red) according to the status of the instance.

Installing Additional MESA Developer Studio Components and Updates

You can install additional MESA Developer Studio components not installed at the time of the original installation at any time. To install additional components follow the steps listed in *Installing MESA Developer Studio Components* on page 100. The system verifies that the license file has newly licensed components and installs them.

The system verifies that the additional components are licensed in Gentran Integration Suite. If not, you are asked to provide new connection parameters to a Gentran Integration Suite instance that has the appropriate license for the additional MESA Developer Studio components. Once the license check is complete, the new components are activated.

If you are updating an existing component, restart Eclipse in order for the new component to be updated.

Installing Reporting Services Plug-Ins

Reporting Services works with Gentran Integration Suite MESA Developer Studio, which is an an Integrated Development Environment (IDE) that uses Eclipse software plug-ins. The Reporting Services Fact Model Editor, Report Editor, and Report Format Editor are all accessed as Eclipse plug-ins.

Note: Reporting Services are not supported in the iSeries platform.

To set up the Reporting Services plug-ins:

1. Follow the procedures for the MESA Developer Studio configuration. See *Steps to Set Up MESA Developer Studio* on page 97 for the complete list of tasks and the correct order of completion.

Note: When completing the procedure *Installing MESA Developer Studio Components* on page 100, ensure that you select both the Reporting Services plug-ins and the MESA Developer Studio plug-in for download and installation in Eclipse.

Caution: The MESA Developer Studio plug-in is a prerequisite for the Reporting Services plug-ins. You must install it either with or prior to installing the Reporting Services plug-ins.

After installing the MESA Developer Studio and Reporting Services plug-ins, complete the following tasks:

2. Start the WebDAV server for your Gentran Integration Suite instance. See *Starting the WebDAV Server* on page 99.
3. Start the Event Listeners.

4. Configure your Eclipse installation to point to the Gentran Integration Suite WebDAV server. See *Setting Up a Gentran Integration Suite Instance* on page 101.
5. Customize the Window Perspective in Eclipse to include Sterling Commerce Reporting Services. This makes the Reporting Services options available directly from the Eclipse menus. In Eclipse, select **Window > Customize Perspective**. In the Shortcuts pane on the left, select **Sterling Commerce Reporting Services** and click **OK**.

Configuring Gentran Integration Suite for a Non-English Environment

You can install Gentran Integration Suite in an English or a non-English environment on the following operating systems:

- ◆ UNIX or Linux
- ◆ Windows
- ◆ iSeries

By modifying a few system settings, you can then configure Gentran Integration Suite for your locale.

This section includes the following topics:

- ◆ *Configuring Encodings for Gentran Integration Suite* on page 105
- ◆ *Configuring Locales* on page 107

Configuring Encodings for Gentran Integration Suite

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/1.4.2/docs/guide/intl/encoding.doc.html.

The default encoding for Gentran Integration Suite is 8-bit Unicode Transformation Format (UTF-8).

Gentran Integration Suite provides two property files that contain supported encoding sets. These properties files reside in the *install_dir*/properties directory.

- ◆ `encodings.properties` – Contains the default encoding set used in the Gentran Integration Suite interface.
- ◆ `encodings_large.properties` – Contains all supported encoding sets.

The default encoding set in Gentran Integration Suite includes the following encodings:

- ◆ UTF-8
- ◆ ISO-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. Gentran Integration Suite enables you to configure the encodings properties files to expand the number of encodings you can use.

To configure your encoding set:

1. Stop Gentran Integration Suite and wait for shutdown to complete.
2. Change to the `install_dir/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 Gentran Integration Suite 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/bin` directory.
8. Run the `setupfiles.sh` script or the `setupfiles.cmd` script (Windows only).

9. Start Gentran Integration Suite.

Configuring Locales

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

Note: 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.

To determine and set your locale in a Windows environment:

1. Select **Control Panel > Regional Options > General tab**.
2. From the **Your locale (location)** list, select the language and location.
3. Click **Set Default** and select the locale from the **Set the appropriate locale** list.

Using Gentran Integration Suite with Gentran:Server for UNIX

You can configure Gentran Integration Suite to run with Gentran:Server for UNIX.

This section includes the following topics:

- ◆ *About Gentran:Server for UNIX and Gentran Integration Suite* on page 108
- ◆ *Installing and Configuring Attunity® Data Connect* on page 109
- ◆ *Configuring Gentran Integration Suite to Run with Gentran:Server for UNIX* on page 110

About Gentran:Server for UNIX and Gentran Integration Suite

Gentran Integration Suite 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 Gentran Integration Suite 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 Gentran Integration Suite 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 Gentran Integration Suite with Gentran:Server for UNIX either immediately following installation or at a later date. When you configure Gentran Integration Suite 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 Gentran Integration Suite, configure tracking and operations.

Installing and Configuring Attunity® Data Connect

If you want Gentran Integration Suite 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 Gentran Integration Suite 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 Gentran Integration Suite to Run with Gentran:Server for UNIX

To configure Gentran Integration Suite to run with Gentran:Server for UNIX:

1. Set the Umask to **002** in Gentran Integration Suite.
2. Is Gentran Integration Suite 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 Gentran Integration Suite 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 Gentran Integration Suite to run with Gentran:Server for UNIX.

4. Change directory in Gentran Integration Suite to *install_dir/bin*.
5. Run **./softstop.sh** to stop Gentran Integration Suite.

Caution: Running `softstop.sh` command in a multiple node (clustered) environment will suspend all scheduled business processes. It is recommended to run the `hardstop.sh` command when stopping individual nodes of a cluster.

6. Run **./configGSUnix.sh** to begin configuring Gentran Integration Suite to run with Gentran:Server for UNIX.
7. Press **Enter** to continue configuring Gentran Integration Suite to run with Gentran:Server for UNIX.
8. Do you want to configure Tracking and Ops using the Gentran Integration Suite 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 Gentran Integration Suite?
- ◆ 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 Gentran Integration Suite 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 Gentran Integration Suite:

- ◆ 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**.

A

accounts
 Linux 13
 UNIX 13

administration, initial
 iSeries 93
 UNIX/Linux 40
 Windows 73

administrator login
 iSeries 91
 UNIX/Linux 38
 Windows 71

application servers
 iSeries 82
 UNIX/Linux 12
 Windows 48

Attunity Data Connect 109

B

binary mode 64

C

ccaseid.jar 35, 68

character sets 105

coded character set, iSeries 84

D

database passwords
 UNIX/Linux 35
 Windows 68

databases
 configuring (iSeries) 84
 configuring (UNIX/Linux) 13
 configuring (Windows) 49
 MySQL (UNIX/Linux) 14
 MySQL (Windows) 49

Oracle 14, 15, 16, 51, 52

password encryption, Windows 68

reinstalling (iSeries) 85

reinstalling (UNIX/Linux) 13

reinstalling (Windows) 49

SQL Server 50

desktop tools
 iSeries 93
 UNIX/Linux 40
 Windows 73

DNS name 32, 64

downloading, tools
 iSeries 93
 UNIX/Linux 40, 44
 Windows 73, 78

E

EJB Adapter
 iSeries 82
 UNIX/Linux 12
 Windows 48

encoding 105

encrypting database passwords
 UNIX/Linux 35
 Windows 68

external interface
 UNIX/Linux 32
 Windows 65

F

file shares, iSeries 83

G

Gentran:Server for UNIX
 configuring 110
 integration with 108, 109

Graphical Process Modeler

downloading tips 44, 78

H

hardstop

- Linux 40
- UNIX 40

heap 65

hot-fix, installing (UNIX/Linux) 34

hot-fix, installing (Windows) 67

I

installing

- hot-fix (UNIX/Linux) 34
- hot-fix (Windows) 67
- iSeries 86
- JDK (UNIX/Linux) 12
- JDK (Windows) 48
- Linux 21, 22
- patch (UNIX/Linux) 29, 34
- patch (Windows) 62, 67
- silent installation 21
- tools on desktops 40, 73, 93
- troubleshooting iSeries 95
- troubleshooting Linux 43, 44
- troubleshooting UNIX 43, 44
- troubleshooting Windows 77, 78
- UNIX 21, 22
- validating (UNIX/Linux) 40
- validating (Windows) 73
- Windows 54, 55, 68, 69

installPS.cmd 65

InstallService.sh 35

installWindowsService.cmd 68

interface

- external (UNIX/Linux) 32
- external (Windows) 65
- internal (UNIX/Linux) 32
- internal (Windows) 64
- network bindings 38, 71, 91

internal interface

- UNIX/Linux 32
- Windows 64

IP addresses, correcting conflicts 44, 78

iSeries

- file shares 83
- installing 86
- log file 88
- network drives 84
- postinstallation 90
- QCCSID 84
- spool files 90
- starting 90
- stopping 93
- system requirements 82
- troubleshooting 95
- uninstalling 94
- user profiles 84

J

Java 2 Software Development Kit. See JDK

JBoss 12, 48, 82

JDK

- installing (UNIX/Linux) 12
- installing (Windows) 48
- patch installation 31, 64

L

languages, supported 105, 107

license files 53, 85

Linux

- accounts 13
- installing 21, 22
- installing hot-fix 34
- postinstallation 37
- silent installation 21
- starting 38
- stopping 40
- troubleshooting 43
- uninstalling 42

Linux desktop tools 44

locales 107

localization 105, 107

log files

- iSeries 88

login

- default 38, 71, 91

M

maintenance patch
 Windows 62

Map Editor, downloading tips 44, 78

Microsoft SQL Server. See SQL Server

MySQL databases
 UNIX/Linux 14
 Windows 49

N

network drives
 iSeries 84

network interfaces
 iSeries 91
 UNIX/Linux 38
 Windows 71

non-English language 105, 107

O

Oracle databases 14, 15, 16, 51, 52

P

Page cannot be displayed error 38, 71, 91

password
 default 38, 71, 91

password encryptions
 Windows 68

passwords
 database (UNIX/Linux) 35
 database (Windows) 68

patch
 installing (UNIX/Linux) 34
 installing (Windows) 67
 Windows 62

perimeter servers
 installing in Linux 36
 installing in UNIX 36
 installing in Windows 69
 Linux 37
 setup 35, 68
 UNIX 37
 Windows 70

port numbers 49, 83

postinstallation
 iSeries 90
 Linux 37
 UNIX 37
 Windows 70

profiles, user 84

Q

QCCSID
 iSeries 84

R

reinstalling
 databases 13, 49, 85

removing
 iSeries 94
 Linux 42
 UNIX 42
 Windows 75

Reporting Services
 configuring 103
 installing 103
 WebDAV server 103

S

script
 InstallService.sh 35
 installWindowsService.cmd 68
 uninstallWindowsService.cmd 68

servers
 application 12, 48, 82
 perimeter 35, 68
 perimeter, in Linux 36, 37
 perimeter, in UNIX 36, 37
 perimeter, in Windows 69, 70

Service Developer's Kit
 downloading tips 44, 78

setups, administrative
 iSeries 93
 UNIX/Linux 40
 Windows 73

shutdown

- iSeries 93
- silent installation 21
- softstop
 - Linux 40
 - UNIX 40
- spool files
 - iSeries 90
- SQL Server databases 50
- starting
 - iSeries 90
 - Linux 38
 - perimeter servers in Linux 37
 - perimeter servers in UNIX 37
 - perimeter servers in Windows 70
 - troubleshooting iSeries 95
 - troubleshooting Windows 78
 - UNIX 38
 - Windows 71
- startPSService.cmd 65
- startupPs.sh 32
- stopping
 - iSeries 93
 - Linux 40
 - perimeter servers in Linux 37
 - perimeter servers in UNIX 37
 - perimeter servers in Windows 70
 - troubleshooting iSeries 95
 - UNIX 40
 - Windows 73
- system administration
 - initial (iSeries) 93
 - initial (UNIX/Linux) 40
 - initial (Windows) 73
- system requirements
 - iSeries 82
 - UNIX/Linux 12
 - Windows 48

T

- theworld.csg.stercomm.com 34
- tools, downloading 40, 73, 93
- troubleshooting
 - access 38, 71, 91
 - installation (Windows) 73

- iSeries 95
- Linux 43
- Page cannot be displayed 38, 71, 91
- UNIX 43
- Windows 77

U

- uninstalling
 - iSeries 94
 - Linux 42
 - UNIX 42
 - Windows 75
- uninstallWindowsService.cmd 68
- UNIX
 - accounts 13
 - desktop tools 44
 - installing 21, 22
 - installing hot-fix 34
 - postinstallation 37
 - silent installation 21
 - starting 38
 - stopping 40
 - troubleshooting 43
 - uninstalling 42
- UNIX/Linux
 - license files 19
 - port numbers 13
 - system requirements 12
- user ID
 - default (iSeries) 91
 - default (UNIX/Linux) 38
 - default (Windows) 71
- user profiles
 - iSeries 84
- UTF-8 character set 105

V

- validating
 - installation (Windows) 73

W

- Web Template Designer
 - downloading tips 44, 78
- WebDAV server

using with Reporting Services 103

WebLogic

iSeries 82

UNIX/Linux 12

Windows 48

WebSphere

iSeries 82

UNIX/Linux 12

Windows 48

wildcard 32

Windows

desktop tools 78

installing 54, 55, 68, 69

installing hot-fix 67

password encryptions 68

postinstallation 70

starting 71

stopping 73

system requirements 48

troubleshooting 77

uninstalling 75

