# Gentran Integration Suite™

## Upgrade Guide

**Version 4.2 (from 3.0 and 3.1)**

**Sterling Commerce**
*An IBM Company*

# Contents

# Chapter 1

# Pre-Upgrade Information

This documentation describes how to upgrade from Gentran Integration Suite releases 3.0 and 3.1 to Gentran Integration Suite release 4.2 in a UNIX®, Microsoft® Windows, or iSeries® environment. For information about the enhancements in Gentran Integration Suite release 4.2, refer to the *Guide to What's New* document.

## Checklist

Use the following checklist to track your upgrade progress. This checklist also helps you know what documentation to use at each stage of your upgrade.

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# Before You Begin

Before you begin upgrading, be aware of the following prerequisite tasks and considerations. The following sections cover standard items for all upgrades, special items for particular kinds of upgrades, and process output logs.

Also, at several points in the upgrade process, you will be asked to download a file from https://support.sterlingcommerce.com. After logging in at this web page, click on the following links to reach the file: **Product Support** > **Gentran Integration Suite** > **Gentran Integration Suite Product Updates/Downloads**.

## Standard Tasks and Considerations

Before you begin upgrading, be aware of all of the following prerequisite tasks and considerations:

1. You must have a new license file to use the new licensed features of your upgraded installation.

2. Read through this entire document so that you have a clear understanding of what the upgrade requires.

3. Download the following information from the Gentran Integration Suite library page http://www.sterlingcommerce.com/Documentation/GIS42/homepage.htm.

   ◆ *Gentran Integration Suite 4.2 Installation Guide*

   **Caution:** It is important to remember that upgrading to 4.2 involves a full installation of Gentran Integration Suite. You need to prepare for an upgrade the same way that you would prepare for an installation.

   ◆ *Gentran Integration Suite 4.2 Release Notes*

   ◆ *Gentran Integration Suite 4.2 System Requirements*. With each release, Sterling Commerce™ introduces leading edge technology to improve and enhance its software. You should review the

System Requirements documentation to confirm that your system and databases meet the requirements and to manage any necessary upgrades or changes before upgrading.

4. Download the following item from the Support on Demand site, https://support.sterlingcommerce.com:

   ◆ upgrade_4_1_1.jar

   Be sure to copy the file to a location on your system from which you can retrieve it easily.

5. Make sure that any data in the offline tables is archived or it could be lost. If you want the ability to restore archived data, archive any data in the offline tables to physical media before upgrading.

6. Archived data can only be restored from the same version and patch of Gentran Integration Suite from which it was archived. If you need to restore archived data that was archived prior to performing the upgrade, then you must have a running instance of Gentran Integration Suite that matches the version and patch from which the archive was taken.

7. Back up your database. Export your business processes, trading partners, maps, etc.

8. Review and note the adapters, business processes, and other configurations on your current version. This will help identify any need for updating transport messages, third-party adapters, or configurations to adapters, such as the File System and Command Line Adapters.

9. If you have edited a pre-defined business process, be aware that the upgrade process overwrites pre-defined business processes. Your customized business process is preserved in the system, but it is no longer the default process.

10. If you have edited any property files (.properties or .properties.in), be aware that the upgrade process overwrites these property files, unless these changes were made using the customer_overrides.properties file. Your previous property file edits might not be applicable in Gentran Integration Suite 4.2.

11. *Always* install and test your upgrade in a non-production environment before upgrading your production environment.

## Special Tasks and Considerations

Before you begin upgrading, be aware of the following special tasks and considerations, depending on your type of upgrade:

✦ If you are using Oracle 8i with your current version of Gentran Integration Suite, upgrade to Oracle 9i or Oracle 10g before upgrading to Gentran Integration Suite 4.2.

✦ If you had LDAP (Lightweight Directory Access Protocol) configuration information in the security.properties file, this information will automatically be moved to the authentication_policy.properties file, which is first used in Gentran Integration Suite 4.2.

✦ Your version of Gentran Integration Suite was bundled with the JBoss™ application server and supported integration with WebLogic® and WebSphere® application servers. Gentran Integration Suite version 4.2 is installed without integration to an application server and does not require an application server for installation or at run-time.

   However, Gentran Integration Suite still supports integration with JBoss, WebLogic, and WebSphere. After you upgrade to 4.2, you can restore integration with your application server if desired. To do so,

use the Gentran Integration Suite EJB Adapter. For more information, refer to the documentation for the EJB Adapter.

# Creating a Process Output Log

A log of process activity during the upgrade will help if troubleshooting is required. Output from `upgrade.sh` and `upgrade.cmd` is automatically logged to upgrade.log.

Use this procedure to generate a separate output log for each process you want to log.

## UNIX

To create a process output log:

1.  Use the `script` command to record the session and save the standard output to a file.

2.  Run the `script` command to record the process, ensuring that you have created and specified the file name in which to save the process output.

    For example, to start recording output to a file named processoutput.log, at the command line, type `script processoutput.log`.

3.  After the upgrade is complete, type `exit` at the command line to stop recording.

4.  You can now retrieve the file containing the process output.

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

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

## Windows or iSeries

In Windows or iSeries, you must redirect the standard output and standard error of each command to create a log file.

1. To redirect the standard output and standard error to create a log file, type a command similar to the following:

   `process.cmd > processoutput.log 2>&1` (Windows)

   `process.sh > processoutput.log 2>&1` (iSeries)

   where *process* is the name of the command and *processoutput* is the name of the output log.

   The log-writing process time varies, depending on the size of your database and your system hardware.

   **Caution:** In Windows, if you attempt to view the log while it is being written, the upgrade.cmd script stops running and does not create a log of the upgrade process.

2. After you complete the command, you can review the output log using any text editor (for example, Microsoft Notepad).

# Verifying System and Database Compatibility

To verify system compatibility and prepare for the upgrade, perform the following tasks:

1. Review the *Gentran Integration Suite Release 4.2 System Requirements* document. Your system must meet the minimum requirements that are documented, while your database and JDBC driver versions must match the documented requirements. Complete any necessary upgrades or changes in preparation for the upgrade.

2. Collect information on any third-party libraries used for adapter configuration that were added to your current release. You must add each of these libraries to release 4.2 later in the upgrade process.

3. Locate any configuration file changes for the JDBC adapter or the Lightweight JDBC adapter in your current release. Later in the upgrade process, you will copy these changes to release 4.2.

4. Record your performance tuning configuration. You will restore these settings later in the upgrade process.

# Preparing Your System for the Upgrade

Verify your system compatibility as previously described before continuing with this procedure.

To prepare your system for the upgrade process, you must empty all OFFLINE and RESTORE tables by running the archive and purge process in Gentran Integration Suite.

1. To empty the OFFLINE tables, enter one of the following commands at the command line:

| Operating system | Command to empty the OFFLINE tables |
| --- | --- |
| UNIX | ◆ Change to the *install_dir*/bin directory<br><br>◆ Run the command `backup_wrapper.sh -d /absolutePath/backup_dir` |

| Operating system | Command to empty the OFFLINE tables |
|---|---|
| Windows | ◆ Change to the *install_dir*\bin directory<br>◆ Run the command `backup_wrapper.cmd -d` *absolutePath\backup_dir* |
| iSeries | In QSH:<br>◆ Change to the *install_dir*/bin directory<br>◆ Run the command `backup_wrapper.sh -d` */absolutePath/backup_dir* |

2. To empty the RESTORE tables:

   a. From the Gentran Integration Suite **Administration** menu, select **Operations** > **Archive Manager**.

   b. Next to Manage Restoring Business Processes, click **Go!**

   c. Next to Clean Restore Area, click **Go!**

   d. Click **OK** to the prompt *Are you sure you want to clean restore area?* to empty the RESTORE table.

3. Shut down Gentran Integration Suite using one of the following methods:

   ◆ In Windows, execute the commands `hardstop.cmd` and `uninstallwindowsservice.cmd`

   ◆ In UNIX, execute the command `hardstop.sh`

4. If you are using MySQL as your database, verify that no MySQL processes are running.

5. Back up Gentran Integration Suite and your current database.

   **Caution:** If there are problems with your upgraded system, the only way to ensure that you can roll-back to your previous version is to back up Gentran Integration Suite and your database.

6. To avoid upgrade failures in Windows, shut down all software that performs non-system processes, including processes that:

   ◆ Scan files and directories for viruses

   ◆ Back up file systems

   ◆ Monitor software (for example, HP OpenView)

   ◆ Disable pop-up windows

After you successfully back up Gentran Integration Suite and your database, you are ready to upgrade the software. Before you begin, see the *Gentran Integration Suite 4.2 Release Notes*.

# Chapter 2

# UNIX Upgrade

This chapter has instructions for UNIX only.  Please see Windows-specific instructions for Windows and iSeries-specific instructions for iSeries.

Always make a full backup of your Gentran Integration Suite instance prior to performing an upgrade.  It is also recommended that you thoroughly test this process in a test or development environment prior to implementing in a production environment.

## Upgrade Procedure (UNIX)

The following steps will lead you through a UNIX upgrade from Gentran Integration Suite version 3.0 or 3.1 to version 4.2. Remember that in addition to this guide, you will need the *Gentran Integration Suite 4.2 Installation Guide*. The installation guide and the upgrade guide are to be used together to perform the upgrade. If you are upgrading a cluster, you will need the cluster installation instructions from the *Gentran Integration Suite 4.2 Installation Guide*

**Caution:**  It is important to remember that upgrading to 4.2 involves a full installation of Gentran Integration Suite. You need to prepare for an upgrade the same way that you would prepare for an installation.

## Pre-Database Copy Upgrade Steps (UNIX)

The following steps begin the upgrade process and take you to the part of the process where you copy your database.

1.  To begin upgrading Gentran Integration Suite, you must first install Gentran Integration Suite release 4.2 as outlined in the *Gentran Integration Suite 4.2 Installation Guide*. Steps 1a through 1f are upgrade-related guidelines to be used when performing the installation.  The full installation process is in the *Gentran Integration Suite 4.2 Installation Guide*.

    a.  In order to perform an upgrade, you will need to pass "-upgrade" as a parameter for the install:

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

    b. When you are prompted for the passphrase, use the same passphrase that you did for the instance you are performing the upgrade on.

    c. Document the name of your installation directory.

    d. Choose the same port numbers that you did for the previous release.

    e. During the installation, select the same brand of database that you used in your previous release (Oracle, MySQL, DB2 or SQL Server), but you must use a different actual database.

       **Caution:** If you are also upgrading the version of your database, perform that upgrade after you upgrade Gentran Integration Suite.

       For example, if you want to upgrade from Gentran Integration Suite 3.0 using the Oracle 9i database to Gentran Integration Suite 4.2 using the Oracle 10g database, you must first upgrade from Gentran Integration Suite 3.0 to Gentran Integration Suite 4.2 (and select the Oracle 9i database during the upgrade). Then, you would upgrade from Oracle 9i to Oracle 10g on Gentran Integration Suite 4.2.

    f. Consider the following when you answer the database-related section of the installation:

       ◆ For MySQL, the upgrade process creates a new instance of the MySQL database.

       ◆ For Oracle, the installation program will ask you whether the Oracle instance is being used for an upgrade (Is this to upgrade a previous version of the product?). Select **Yes**.

       ◆ Additionally, the installation program will ask you whether you are using BLOB data in your Oracle database.

**Note:** An upgrade from Gentran Integration Suite 3.0 by default uses Long Raw data.

       ◆ Determine whether your existing Gentran Integration Suite system supports BLOB data. Locate the file *previous_install_dir*/**properties**/**sandbox.cfg** and search for the ORACLE_USE_BLOB parameter.

       ◆ If ORACLE_USE_BLOB is included in your existing system, select BLOB. Otherwise, select Long Raw.

**Caution:** After you install Gentran Integration Suite 4.2, you will see the following messages:

```
Change to directory: install_dir/bin
Execute the command: ./InstallService.sh
install_dir/packages/si_engine_4200.jar
To complete installation after upgrade process is complete.
```

    Do not take these actions yet. These actions are taken in *Post-Database Copy Upgrade Steps (UNIX)* on page 18.

2. After you install Gentran Integration Suite 4.2, copy the upgrade_4_1_1.jar file to the installation directory. If you did not download this jar file at the beginning of the upgrade process, you can obtain it from the Support on Demand site: https://support.sterlingcommerce.com.

3. Unpack the upgrade jar in the installation directory. Use the following sets of commands to create the *install_dir*/**upgrade** directory:

```
a. cd install_dir
b. ./jdk/bin/jar xf upgrade_4_1_1.jar
```

4. Use the following sets of commands to run the setupfiles script:

   a. `cd install_dir/bin`

   b. `./setupfiles.sh`

5. Copy your database, using one of the following procedures. The scripts provided are generic. Change the names of the databases and logins to match your system. Before copying your database, refer to *Copying Your Database (UNIX)* on page 13.

   ◆ *Copying a MySQL Database* on page 13

   ◆ *Copying an Oracle 8i or Oracle 9i Database* on page 13

   ◆ *Copying a Microsoft SQL Server Database* on page 15

   ◆ *Copying a DB2 Database* on page 16

# Copying Your Database (UNIX)

**Caution:** This procedure must be performed by a database administrator that has knowledge of your environment.

**Note:** Before copying your database, ensure all tables, sequences, triggers, stored procedures, constraints, and data are removed from the release 4.2 database. For MySQL, all database-related items are handled within the `./copyMySQLDB.sh` script that you enter in *Copying a MySQL Database* on page 13.

**Note:** Note: If you are upgrading a cluster, do not copy your database on nodes 2 and higher.

## Copying a MySQL Database

To copy an existing MySQL database to a new MySQL database, type the following command:

`cd install_dir/upgrade`

`./copyMySQLDB.sh full_path_to_previous_install_dir`

**Caution:** The upgrade process does not carry forward changes made to the MySQL configuration file (that is, my.cnf or my.cnf.in) to release 4.2. To extend the database by including additional data files, you must make the changes manually to this file.

You are ready to run the rest of the upgrade procedure in *Post-Database Copy Upgrade Steps (UNIX)* on page 18.

## Copying an Oracle 8i or Oracle 9i Database

You can use Oracle import and export functions to copy a database from Gentran Integration Suite 3.0 or 3.1 to 4.2. Use Oracle login and run scripts from the root.

### Exporting an Oracle Database

---

To export an Oracle database:

1. Log in to the Oracle server as the user *Oracle*.

   where user *Oracle* owns the instance and the binaries.

2. From the root/command, navigate to the directory where you want to place the export dump file, ensuring that you have enough space in this location for a database dump.

3. From the root, run the following command:

   ```
   $ exp gisuser/woodstock full=y file=gisupgrade.dmp
   ```

   *gisuser* is the user who owns the previous Gentran Integration Suite schema, which must be exported.

   *woodstock* is the password for this user.

   *gisupgrade.dmp* is the dump file.

4. You are prompted for the following entries:

   a. ```
      Connected to: Oracle9i Enterprise Edition Release 9.2.0.2.0-Production
      with the Partitioning, OLAP and Oracle Data Mining Options JServer
      Release 9.2.0.2.0-Production EXP-00023: Must Be a DBA to do Full Database
      or Tablespace Export (2)U(sers), or (3)T(ables: (2)U >
      ```

      Type **2** and press **Enter**.

   b. ```
      Export grants (yes/no): yes > no
      ```

      Type **no**.

   c. ```
      Export table data (yes/no): yes >
      ```

      Type **yes**.

   d. ```
      Compress extents (yes/no): yes >
      ```

      Type **no**.

The export database is successfully exported. The following message is displayed, `Export terminated successfully without warnings.`

## Importing an Oracle Database

Before importing Oracle database information, note that some tables are imported in a unique way. The following tables contain BLOB data and explicitly specify tablespaces. An error is generated if you import these tables using the instructions that appear later in this section.

✦ AUTHO
✦ DATA_TABLE
✦ DATA_TABLE_RESTORE
✦ DB_INSERT_TEST
✦ JETSPEED_GROUP_PF
✦ JETSPEED_ROLE_PF
✦ JETSPEED_USER_PF

- ✦ TURBINE_GROUP
- ✦ TURBINE_PERMISSION
- ✦ TURBINE_ROLE

To import these tables, you must create the table structures manually in the correct tablespace, and then execute the import utility a second time with the ignore=y and tables= parameters to load the data in these specific tables from the source schema into the manually created tables in the destination schema.

To import other tables into an Oracle database:

**Caution:** Before you import rows into populated tables, you must drop these tables to eliminate the old data. If you do not, the new data is appended to the existing tables. You must always drop existing sequences before reimporting. If the sequences are not dropped, they generate numbers inconsistent with the rest of the database.

1. Drop all of the objects from the Gentran Integration Suite 4.2 tablespace. This includes tables, indexes, sequences, views, and procedures.

2. From the root, as Oracle user, run the following command:

```
$ imp system/password fromuser=gisuser touser=gis411user
file=gisupgrade.dmp
```

*System/password* is the user with DBA privileges. Replace *password* with your password for the user system.

*GIS411user* is the name of the user who owns the Gentran Integration Suite 4.2 schema.

The database is imported into the tablespace used by Gentran Integration Suite 4.11 and the following message is displayed, `Import terminated successfully without warnings`.

You are ready to run the rest of the upgrade procedure in *Post-Database Copy Upgrade Steps (UNIX)* on page 18.

## Copying a Microsoft SQL Server Database

You can use SQL Server Data Transformation services (DTS) to copy your current database.

1. Drop all of the objects from the Gentran Integration Suite 4.2 database. This includes tables, indexes, views, and procedures.

   **Caution:** Before you import rows into populated tables, you must drop these tables from the Gentran Integration Suite 4.2 database to eliminate the old data. If you do not, the new data is appended to the existing tables.

2. Start the DTS wizard and choose your current database as the source database and the new 4.2 database as the destination database.

3. Select **Copy all of the objects and data between SQL databases**.

4. Select **Run immediately** to complete the wizard.

   The current database is copied to the new 4.2 database.

5. Change ownership of objects copied to the new Gentran Integration Suite 4.2 user.

6. Log in to SQL Query Analyzer and run the following script in the Gentran Integration Suite 4.2 database:

```
use name_of_GIS_database
go
declare @curown varchar(256), @newown varchar(256)
select @curown = 'current_owner', @newown = 'new_owner'
select 'exec sp_changeobjectowner '+ ''''
+ @curown + '.'
+ obj.name + ''','''
+ @newown + ''''
from sysobjects obj
where uid =
(Select uid from sysusers where name = @curown) and type in ('U', 'V', 'P') and
@newown in (select name from sysusers)
order by obj.name
```

Change *name_of_GIS_database* to the name of the new Gentran Integration Suite 4.2 database.

Change *current_owner* to the name of the user who currently owns objects in the copied database.

Change *new_owner* to the name of the current DBO of the new 4.2 database.

No other values should be changed in the script.

An output script is generated which, when executed, will change the ownership of all of the tables.

7. Copy the output script and run it on the Gentran Integration Suite 4.2 database.

You are ready to run the rest of the upgrade procedure in *Post-Database Copy Upgrade Steps (UNIX)* on page 18.

## Copying a DB2 Database

This procedure explains backing up and restoring your current Gentran Integration Suite database to the Gentran Integration Suite 4.2 database in DB2. The examples in this section refer to a Gentran Integration Suite 3.0 database. You will need to modify the sample commands as needed.

**Note:** This section applies to system-managed (SMS) tablespaces only. If you are using database managed tablespaces (DMS), you must create the new Gentran Integration Suite 4.2 database with tablespaces and containers in the same sequences and sizes as the Gentran Integration Suite 3.0 database.

To back up and restore your current Gentran Integration Suite database to the Gentran Integration Suite 4.2 database in DB2:

1. Confirm that no one is connected to your current Gentran Integration Suite database.

2. Log in to DB2 command as *db2inst1* or as the instance owner, and run the following command using appropriate values for the database name and path:

```
db2 backup database GIS3_0 to /dev/db2inst1
```

*GIS3_0* is the Gentran Integration Suite 3.0 database.

*/dev/db2inst1* is the physical path where the dump will be placed.

The following message is displayed, `Backup successful. The timestamp for this backup image is <<Timestamp>>.`

3.  To restore this database on the Gentran Integration Suite 4.2 database, from the DB2 command, run the following command:

    ```
    db2 RESTORE DATABASE GIS3_0 FROM /dev/db2inst1 TAKEN AT <<Timestamp>> INTO
    GIS4_2 REDIRECT WITHOUT PROMPTING ;
    ```

    *GIS4_2* is the Gentran Integration Suite 4.2 database.

    */dev/db2inst1* is the physical path where the dump was placed.

    The following message is displayed, `DB20000I The RESTORE DATABASE command completed successfully`. If you receive an SQL 1277N error, disregard it.

    The database is placed in Restore pending state.

4.  Run the following command:

    ```
    Db2 restore db GIS3_0 continue:
    ```

    The following message is displayed, `DB20000I The RESTORE DATABASE command completed successfully`.

You are ready to run the rest of the upgrade procedure in *Post-Database Copy Upgrade Steps (UNIX)* on page 18.

# Post-Database Copy Upgrade Steps (UNIX)

After you copy your database, you are ready to run the following series of upgrade processes:

1.  This step applies only if you previously upgraded from the Gentran Integration Suite AS2 Edition to Gentran Integration Suite version 2.2. Otherwise, skip this step.

    a.  Type, or copy and paste, the following commands at the command line:

    ```
    cd install_dir/bin

    ./control_mysql.sh start

    ./mysql_isql.sh

    use woodstock;

    create table EBXML_ACKNOWLEDGEMENT_REQUEST (CONVERSATION_ID VARCHAR(100)
    NOT NULL,

    MESSAGE_ID VARCHAR(100) NOT NULL, ROLE_NAME VARCHAR(50) NOT NULL,
    ACK_TYPE

    VARCHAR(50) NOT NULL, INSTANCE_ID VARCHAR(20) NOT NULL, STATUS
    VARCHAR(20) NOT NULL);

    create table BPSS_ACTIVITY (TRX_ID VARCHAR(50) NOT NULL, ACTIVITY
    VARCHAR(100) NOT

    NULL, TIMESTAMP VARCHAR(20) NULL);

    create table BPSS_TRANSACTION (TRX_ID VARCHAR(50) NOT NULL, CPA_ID
    VARCHAR(30) NOT

    NULL, CONVERSATION_ID VARCHAR(50) NOT NULL, ROLE_NAME VARCHAR(50) NOT
    NULL, STATUS

    VARCHAR(100) NOT NULL, TIMESTAMP VARCHAR(20) NULL);

    alter table EBXML_ACKNOWLEDGEMENT_REQUEST add constraint SCI_PK_144
    PRIMARY KEY

    (CONVERSATION_ID, MESSAGE_ID, ACK_TYPE);

    alter table BPSS_ACTIVITY add constraint SCI_PK_141 PRIMARY KEY (TRX_ID,
    ACTIVITY);

    alter table BPSS_TRANSACTION add constraint SCI_PK_142 PRIMARY KEY
    (TRX_ID);

    quit

    ./control_mysql.sh stop
    ```

2.  Applies to all users.

    To apply database updates, type the following sets of commands:

    a.  `cd install_dir/upgrade`

    b.  `./upgrade.sh`

3.  When prompted, enter your passphrase.

    a.  You have five opportunities to enter the correct passphrase. If you exceed the five retries, you must copy the database again and start over.

    b.  After typing your passphrase, if you see one of the following error messages, copy the database again and start over from step 1 of the Post Database Copy Upgrade Steps (Unix).

        ✦ Failed to upgrade system certificates!

        ✦ Failed to extract B2BHttp certificate!

        Be sure that you provide the correct passphrase.

    c.  Disregard error messages about drop index, drop constant, or drop foreign key. Also disregard messages such as Versions do not match, and need to update SDI.

    d.  Contact Sterling Commerce Customer Support if the process halts with the following message:

        Error running upgrade.

4.  Applies to all users.

    To update transport messages, type one of the following commands, providing the location of the previous installation directory when prompted:

    ◆ `cd` *`install_dir`*`/upgrade/ver4_0_0/misc/`

    ◆ `upgrade_wfctm.sh` *`full_path_to_previous_install_dir`*

5.  Download the following item from the Support on Demand site, https://support.sterlingcommerce.com:

    ◆ `si_engine_4204.jar` (or later)

6.  Generate the license file from https://productupdates.stercomm.com/ap/bp/APWelcome. Note the location where you saved this file.

7.  From *`new_install_dir`*`/bin`, run the following command:

    `AddLicenseSet.sh <`*`location of new license file`*`>`

8.  Run the command `./InstallService.sh` *`install_dir`*`/packages/si_engine_4200.jar`

9.  Run the following command:

    `./InstallService.sh` *`absolutePath`*`/si_engine_420X.jar`

10. Do not remove the old GIS release's directory until you are confident that you have completely tested your newly upgraded 4.2 instance.

You must now complete the steps outlined in *Post-Upgrade Processes* on page 33. Your upgrade is not complete until you perform the additional steps outlined in that section. If you are upgrading a cluster, refer to *Starting an Upgraded Cluster (UNIX Only)* on page 38.

# Chapter 3

# Windows Upgrade

This chapter has instructions for Windows only.  Please see UNIX-specific instructions for UNIX and iSeries-specific instructions for iSeries.

Always make a full backup of your Gentran Integration Suite instance prior to performing an upgrade.  It is also recommended that you thoroughly test this process in a test or development environment prior to implementing in a production environment.

## Upgrade Procedure (Windows)

The following steps will lead you through a Windows upgrade from Gentran Integration Suite version 3.0 or 3.1 to version 4.2. Remember that in addition to this guide, you will need the *Gentran Integration Suite 4.2 Installation Guide*.

**Caution:**  It is important to remember that upgrading to 4.2 involves a full installation of Gentran Integration Suite. You need to prepare for an upgrade the same way that you would prepare for an installation.

## Pre-Database Copy Upgrade Steps (Windows)

The following steps begin the upgrade process and take you to the part of the process where you copy your database.

1.  To begin upgrading Gentran Integration Suite, you must first install Gentran Integration Suite release 4.2 as outlined in the *Gentran Integration Suite 4.2 Installation Guide*.

    Keep in mind the following upgrade-related questions that you must answer properly in order to perform the upgrade:

    a.  When you are prompted for the passphrase, use the same passphrase that you did for the instance you are performing the upgrade on.

    b.  Document the name of your installation directory.

    The installation directory path must be eight characters or less.

c. Choose the same port numbers that you did for the previous release.

d. The first question you will get related to the upgrade will be "Is this installation going to be used to upgrade an existing pre-4.0 GIS installation?" Answer **YES**.

e. There will be another question related to upgrade that you must answer appropriately to continue the upgrade path. The next upgrade related question is "Is this install to upgrade version 4.0.3-5 or higher?"

   Answer NO to this question to continue with the upgrade.

f. During the installation, select the same brand of database that you used in your previous release (Oracle, MySQL or SQL Server), but you must use a different actual database.

   **Caution:** If you are also upgrading the version of your database, perform that upgrade after you upgrade Gentran Integration Suite.

   For example, if you want to upgrade from Gentran Integration Suite 3.0 using the Oracle 9i database to Gentran Integration Suite 4.2 using the Oracle 10g database, you must first upgrade from Gentran Integration Suite 3.0 to Gentran Integration Suite 4.2 (and select the Oracle 9i database during the upgrade). Then, you would upgrade from Oracle 9i to Oracle 10g on Gentran Integration Suite 4.2.

g. Consider the following when answer the database related section of the install

   ◆ For MySQL, the upgrade process creates a new instance of the MySQL database.

   ◆ For Oracle, the installation program will ask you whether the Oracle instance is being used for an upgrade (Is this to upgrade a previous version of the product?). Select YES.

   ◆ Additionally, the installation program will ask you whether you are using BLOB data in your Oracle database.

      ◆ Determine whether your existing Gentran Integration Suite system supports BLOB data. Locate the file *previous_install_dir*\**properties**\**sandbox.cfg** and search for the ORACLE_USE_BLOB parameter.

      ◆ If ORACLE_USE_BLOB is included in your existing system, select BLOB. Otherwise, select Long Raw. Note: An upgrade from Gentran Integration Suite 3.0 by default uses Long Raw data.

2. After you install Gentran Integration Suite 4.2, copy the upgrade_4_1_1.jar file to the installation directory. If you did not download this jar file at the beginning of the upgrade process, you can obtain it from our Support on Demand site: https://support.sterlingcommerce.com.

   On Windows, close all Command Prompt windows before performing the following step.

3. Unpack the upgrade jar in the installation directory. Use the following sets of commands to create the *install_dir*\SI\directory:

   a. `cd install_dir\si`

   b. `jdk\bin\jar xf upgrade_4_1_1.jar`

4. Use the following sets of commands to run the setupfiles script:

   a. `cd install_dir\bin`

   b. `setupfiles.cmd`

5. Copy your database, using one of the following procedures. The scripts provided are generic. Change the names of the databases and logins to match your system. Before copying your database, refer to *Copying Your Database (Windows)* on page 22.

# Copying Your Database (Windows)

**Caution:** This procedure must be performed by a database administrator that has knowledge of your environment.

**Note:** Before copying your database, ensure all tables, sequences, triggers, stored procedures, constraints, and data are removed from the release 4.2 database.

## Copying a MySQL Database

To copy an existing MySQL database to a new MySQL database, type one of the following sets of commands:

```
cd install_dir\upgrade

copyMySQLDB.cmd full_path_to_previous_install_dir
```

**Caution:** The upgrade process does not carry forward changes made to the MySQL configuration file (the my.ini file) to release 4.2. To extend the database by including additional data files, you must make the changes manually to this file.

You are ready to run the rest of the upgrade procedure in *Post-Database Copy Upgrade Steps (Windows)* on page 26.

## Copying an Oracle 8i or Oracle 9i Database

You can use Oracle import and export functions to copy a database from Gentran Integration Suite 3.0 or 3.1 to 4.2. Use an MS-DOS prompt with the login as Oracle user.

### Exporting an Oracle Database

To export an Oracle database:

1. Log in to the Oracle server as the user *Oracle*.

   where user *Oracle* owns the instance and the binaries.

2. From the root/command, navigate to the directory where you want to place the export dump file, ensuring that you have enough space in this location for a database dump.

3.  From the root, run the following command:

    ```
    $ exp gisuser/woodstock full=y file=gisupgrade.dmp
    ```

    *gisuser* is the user who owns the previous Gentran Integration Suite schema, which must be exported.

    *woodstock* is the password for this user.

    *gisupgrade.dmp* is the dump file.

4.  You are prompted for the following entries:

    a.  ```
        Connected to: Oracle9i Enterprise Edition Release 9.2.0.2.0-Production
        with the Partitioning, OLAP and Oracle Data Mining Options JServer
        Release 9.2.0.2.0-Production EXP-00023: Must Be a DBA to do Full Database
        or Tablespace Export (2)U(sers), or (3)T(ables: (2)U >
        ```

        Type **2** and press **Enter**.

    b.  ```
        Export grants (yes/no): yes > no
        ```

        Type **no**.

    c.  ```
        Export table data (yes/no): yes >
        ```

        Type **yes**.

    d.  ```
        Compress extents (yes/no): yes >
        ```

        Type **no**.

The export database is successfully exported. The following message is displayed, `Export terminated successfully without warnings.`

## Importing an Oracle Database

Before importing Oracle database information, note that some tables are imported in a unique way. The following tables contain BLOB data and explicitly specify tablespaces. An error is generated if you import these tables using the instructions that appear later in this section.

✦ AUTHO

✦ DATA_TABLE

✦ DATA_TABLE_RESTORE

✦ DB_INSERT_TEST

✦ JETSPEED_GROUP_PF

✦ JETSPEED_ROLE_PF

✦ JETSPEED_USER_PF

✦ TURBINE_GROUP

✦ TURBINE_PERMISSION

✦ TURBINE_ROLE

To import these tables, you must create the table structures manually in the correct tablespace, and then execute the import utility a second time with the ignore=y and tables= parameters to load the data in these specific tables from the source schema into the manually created tables in the destination schema.

To import other tables into an Oracle database:

1.  Drop all of the objects from the Gentran Integration Suite 4.2 tablespace. This includes tables, indexes, sequences, views, and procedures.

    **Caution:** Before you import rows into populated tables, you must drop these tables to eliminate the old data. If you do not, the new data is appended to the existing tables. You must always drop existing sequences before reimporting. If the sequences are not dropped, they generate numbers inconsistent with the rest of the database.

2.  From the root, as Oracle user, run the following command:

    ```
    $ imp system/password fromuser=gisuser touser=gis411user
    file=gisupgrade.dmp
    ```

    *System/password* is the user with DBA privileges. Replace *password* with your password for the user system.

    *GIS411user* is the name of the user who owns the Gentran Integration Suite 4.2 schema.

    The database is imported into the tablespace used by Gentran Integration Suite 4.11 and the following message is displayed, `Import terminated successfully without warnings.`

You are ready to run the rest of the upgrade procedure in *Post-Database Copy Upgrade Steps (Windows)* on page 26.

## Copying a Microsoft SQL Server Database

You can use SQL Server Data Transformation services (DTS) to copy your current database.

1.  Drop all of the objects from the Gentran Integration Suite 4.2 database. This includes tables, indexes, views, and procedures.

    **Caution:** Before you import rows into populated tables, you must drop these tables from the Gentran Integration Suite 4.2 database to eliminate the old data. If you do not, the new data is appended to the existing tables.

2.  Start the DTS wizard and choose your current database as the source database and the new 4.2 database as the destination database.

3.  Select **Copy all of the objects and data between SQL databases**.

4.  Select **Run immediately** to complete the wizard.

    The current database is copied to the new 4.2 database.

5.  Change ownership of objects copied to the new Gentran Integration Suite 4.2 user.

6.  Log in to SQL Query Analyzer and run the following script in the Gentran Integration Suite 4.2 database:

    ```
    use name_of_GIS_database
    go
    declare @curown varchar(256), @newown varchar(256)
    select @curown = 'current_owner', @newown = 'new_owner'
    select 'exec sp_changeobjectowner '+ ''''
    + @curown + '.'
    + obj.name + ''','''
    ```

```
+ @newown + ''''
from sysobjects obj
where uid =
(Select uid from sysusers where name = @curown) and type in ('U', 'V', 'P') and
@newown in (select name from sysusers)
order by obj.name
```

Change *name_of_GIS_database* to the name of the new Gentran Integration Suite 4.2 database.

Change *current_owner* to the name of the user who currently owns objects in the copied database.

Change *new_owner* to the name of the current DBO of the new 4.2 database.

No other values should be changed in the script.

An output script is generated which, when executed, will change the ownership of all of the tables.

7. Copy the output script and run it on the Gentran Integration Suite 4.2 database.

You are ready to run the rest of the upgrade procedure in *Post-Database Copy Upgrade Steps (Windows)*

# Post-Database Copy Upgrade Steps (Windows)

After you copy your database, you are ready to run the following series of upgrade processes:

1. This step applies only if you previously upgraded from the Gentran Integration Suite AS2 Edition to Gentran Integration Suite version 2.2. Otherwise, skip this step.

   Type, or copy and paste, the following commands at the command line:

   ```
   cd install_dir\si\bin
   control_mysql.cmd start
   mysql_isql.cmd
   use woodstock;
   create table EBXML_ACKNOWLEDGEMENT_REQUEST (CONVERSATION_ID VARCHAR(100) NOT NULL,
   MESSAGE_ID VARCHAR(100) NOT NULL, ROLE_NAME VARCHAR(50) NOT NULL, ACK_TYPE
   VARCHAR(50) NOT NULL, INSTANCE_ID VARCHAR(20) NOT NULL, STATUS VARCHAR(20) NOT NULL);
   create table BPSS_ACTIVITY (TRX_ID VARCHAR(50) NOT NULL, ACTIVITY VARCHAR(100) NOT
   NULL, TIMESTAMP VARCHAR(20) NULL);
   create table BPSS_TRANSACTION (TRX_ID VARCHAR(50) NOT NULL, CPA_ID VARCHAR(30) NOT
   NULL, CONVERSATION_ID VARCHAR(50) NOT NULL, ROLE_NAME VARCHAR(50) NOT NULL, STATUS
   VARCHAR(100) NOT NULL, TIMESTAMP VARCHAR(20) NULL);
   alter table EBXML_ACKNOWLEDGEMENT_REQUEST add constraint SCI_PK_144 PRIMARY KEY
   (CONVERSATION_ID, MESSAGE_ID, ACK_TYPE);
   alter table BPSS_ACTIVITY add constraint SCI_PK_141 PRIMARY KEY (TRX_ID, ACTIVITY);
   alter table BPSS_TRANSACTION add constraint SCI_PK_142 PRIMARY KEY (TRX_ID);
   quit
   ./control_mysql.sh stop
   ```

2. Applies to all users.

   To apply database updates, type the following sets of commands, providing the passphrase for the previous release when prompted:

   a. `cd install_dir\SI\upgrade`

   b. `upgrade.cmd`

---

3.  Applies to all users.

    To update transport messages, type the following commands, providing the location of the previous installation directory when prompted:

    a.  cd *install_dir*\SI\upgrade\ver4_0_0\misc\

    b.  upgrade_wfctm.cmd *full_path_to_previous_install_dir*

4.  Download the following item from the Support on Demand site, https://support.sterlingcommerce.com:

    ◆   si_engine_4204.jar (or later)

5.  Generate the license file from https://productupdates.stercomm.com/ap/bp/APWelcome. Note the location where you saved this file.

6.  From *new_install_dir*\SI\bin, run the following command:

    AddLicenseSet.cmd <location of new license file>

7.  Run the following command:

    InstallService.cmd *absolutePath*\si_engine_420X.jar

**Caution:**  Do not remove the old GIS release's directory until you are confident that you have completely tested your newly upgraded 4.2 instance.

You must now complete the steps outlined in *Post-Upgrade Processes* on page 33. Your upgrade is not complete until you perform the additional steps outlined in that section.

# Chapter 4

# iSeries Upgrade

This chapter has instructions for iSeries only. Please see UNIX-specific instructions for UNIX and Windows-specific instructions for Windows.

Always make a full backup of your Gentran Integration Suite instance prior to performing an upgrade. It is also recommended that you thoroughly test this process in a test or development environment prior to implementing in a production environment.

## Upgrade Procedure (iSeries)

The following steps will lead you through an iSeries upgrade from Gentran Integration Suite version 3.0 or 3.1 to version 4.2. Remember that in addition to this guide, you will need the *Gentran Integration Suite 4.2 Installation Guide*.

**Caution:** It is important to remember that upgrading to 4.2 involves a full installation of Gentran Integration Suite. You need to prepare for an upgrade the same way that you would prepare for an installation.

## Pre-Database Copy Upgrade Steps (iSeries)

The following steps begin the upgrade process and take you to the part of the process where you copy your database.

1. To begin upgrading Gentran Integration Suite, you must first install Gentran Integration Suite release 4.2 as outlined in the Gentran Integration Suite *4.2 Installation Guide*.

   Keep in mind the following upgrade-related questions that you must answer properly in order to perform the upgrade:

   a. When you are prompted for the passphrase, use the same passphrase that you did for the instance you are performing the upgrade on.

   b. Document the name of your installation directory.

   c. Choose the same port numbers that you did for the previous release.

    d.   Since you are upgrading from Gentran Integration Suite 3.0 or 3.1 on the iSeries, answer **\*YES** to the prompt about whether you are upgrading from Gentran Integration Suite 3.0 or 3.1.

2.   After you install Gentran Integration Suite 4.2, copy the upgrade_4_1_1.jar file to the installation directory. If you did not download this jar file at the beginning of the upgrade process, you can obtain it from our Support on Demand site: https://support.sterlingcommerce.com.

3.   Unpack the upgrade jar in the installation directory. Use the following sets of commands in QSH to create the *install_dir*/upgrade directory:

    a.   `cd `*`install_dir`*

    b.   `jar xf upgrade_4_1_1.jar`

4.   Use the following sets of commands in QSH to run the setupfiles script:

    a.   `cd `*`install_dir`*`/bin`

    b.   `./setupfiles.sh`

5.   Copy your database, using the procedure *Copying a DB2 Database* on page 29. The scripts provided are generic. Change the names of the databases and logins to match your system. Before copying your database, refer to *Copying Your Database (iSeries)* on page 29.

# Copying Your Database (iSeries)

**Caution:**  This procedure must be performed by a database administrator that has knowledge of your environment.

**Note:**  Before copying your database, ensure all tables, sequences, triggers, stored procedures, constraints, and data are removed from the release 4.2 database

## Copying a DB2 Database

To copy (back up and restore) the DB2 database for your previous version of Gentran Integration Suite (version 3.1 or prior) for iSeries into Gentran Integration Suite 4.2, perform the following steps:

**Note:**  The following procedures reference Gentran Integration Suite version 3.1 as the previous version. If you are upgrading from Gentran Integration Suite 3.0, please replace the version number appropriately.

1.   Ensure that no one is using the Gentran Integration Suite 3.1 or Gentran Integration Suite 4.2 database.

2.   The save and restore procedure must be done by the iSeries System Security Officer (QSECOFR) or by a user with \*SECADM authority.

    To create a save file to hold your Gentran Integration Suite 3.1 database, type:
    `CRTSAVF FILE(QGPL/SAVE31DB)`

    If the save file already exists, type in:
    `CLRSAVF FILE(QGPL/SAVE31DB)`

3. Save your Gentran Integration Suite 3.1 database into the new save file using the following command:

   `SAVLIB LIB(GIS31DB) DEV(*SAVF) SAVF(QGPL/SAVE31DB)`

   *GIS31DB* represents your Gentran Integration Suite 3.1 database (collection).

4. To delete your new Gentran Integration Suite 4.2 database, type:

   `DLTLIB GIS42DB`

   *GIS42DB* represents your Gentran Integration Suite 4.2 database (collection).

   **Note:** When you receive a message similar to the following:

   `Receiver QSQJRN0001 in GIS42DB never fully saved. (I C)`

   Enter **I** to fully delete the library. This message may appear multiple times. Respond with **I** for each occurrence.

5. To create the collection again that will hold your Gentran Integration Suite 4.2 database, complete the following steps:

   a. Sign on to your iSeries using the user profile that you will use to run Gentran Integration Suite.

   b. From an iSeries command line, type `STRSQL` to get to an interactive SQL session.

   c. Type `create collection GIS42DB`.

      *GIS42DB* represents your Gentran Integration Suite 4.2 database.

      The create collection command creates a collection (library), called GIS42DB, that contains a journal, journal receiver, and several logical views.

   d. Exit without saving after the create command finishes.

6. To restore your Gentran Integration Suite 3.1 database to the same collection (library name) that you just created in step 5, type:

   `RSTLIB SAVLIB(GIS31DB) DEV(*SAVF) SAVF(QGPL/SAVE31DB) RSTLIB(GIS42DB)`

   *GIS31DB* represents your Gentran Integration Suite 3.1 database.

   *GIS42DB* represents your Gentran Integration Suite 4.2 database.

   You should receive a message similar to the following message, `254 objects restored. 19 not restored to GIS42DB`.

   **Note:** The 19 objects that are not restored are the journal and journal receiver files. This is expected.

7. After you restore the old database library into the new database, you must unjournal all of the files and then rejournal them to the new collection journals.

You are ready to run the rest of the upgrade procedure in *Post-Database Copy Upgrade Steps (iSeries)* on page 31.

# Post-Database Copy Upgrade Steps (iSeries)

After you copy your database, you are ready to run the following series of upgrade processes:

1.  This step applies only if you previously upgraded from the Gentran Integration Suite AS2 Edition to Gentran Integration Suite version 2.2. Otherwise, skip this step.

    Type, or copy and paste, the following commands at the command line:

    ```
    cd install_dir/bin
    ./control_mysql.sh start
    ./mysql_isql.sh
    use woodstock;
    create table EBXML_ACKNOWLEDGEMENT_REQUEST (CONVERSATION_ID VARCHAR(100)
    NOT NULL,
    MESSAGE_ID VARCHAR(100) NOT NULL, ROLE_NAME VARCHAR(50) NOT NULL, ACK_TYPE
    VARCHAR(50) NOT NULL, INSTANCE_ID VARCHAR(20) NOT NULL, STATUS VARCHAR(20)
    NOT NULL);
    create table BPSS_ACTIVITY (TRX_ID VARCHAR(50) NOT NULL, ACTIVITY
    VARCHAR(100) NOT
    NULL, TIMESTAMP VARCHAR(20) NULL);
    create table BPSS_TRANSACTION (TRX_ID VARCHAR(50) NOT NULL, CPA_ID
    VARCHAR(30) NOT
    NULL, CONVERSATION_ID VARCHAR(50) NOT NULL, ROLE_NAME VARCHAR(50) NOT NULL,
    STATUS
    VARCHAR(100) NOT NULL, TIMESTAMP VARCHAR(20) NULL);
    alter table EBXML_ACKNOWLEDGEMENT_REQUEST add constraint SCI_PK_144 PRIMARY
    KEY
    (CONVERSATION_ID, MESSAGE_ID, ACK_TYPE);
    alter table BPSS_ACTIVITY add constraint SCI_PK_141 PRIMARY KEY (TRX_ID,
    ACTIVITY);
    alter table BPSS_TRANSACTION add constraint SCI_PK_142 PRIMARY KEY
    (TRX_ID);
    quit
    ./control_mysql.sh stop
    ```

2.  From an iSeries command line, enter `WRKLNK '/install_dir/upgrade'` and press **Enter**.

3.  Enter **5** next to the upgrade directory.

    A listing of all items in the upgrade directory appears.

4.  Find `upgrade.sh stmf`, and then enter **9** next to it.

5.  Enter **2** next to the GIS user profile and press **Enter**.

6.  Change the New data authorities to **\*RWX** and press **Enter**.

7.  Once updated, you can press **F3**.

8.  To apply database updates, type the following sets of commands in QSH:

    a.  `cd install_dir/upgrade`

    b.  `./upgrade.sh`

9.  To update transport messages, type the following commands, providing the location of the previous installation directory when prompted:

    a.  `cd install_dir/upgrade/ver4_0_0/misc/`

    b.  `./upgrade_wfctm.sh full_path_to_previous_install_dir`

10. Download the following item from the Support on Demand site, https://support.sterlingcommerce.com:

    ◆  si_engine_4204.jar (or later)

11. Generate the license file from https://productupdates.stercomm.com/ap/bp/APWelcome. Note the location where you saved this file.

12. From *new_install_dir*/bin, run the following command:

    `AddLicenseSet.sh <location of new license file>`

13. Run the command `InstallService.sh install_dir/packages/si_engine_4200.jar`

14. Run the command `InstallService.sh absolutePath/si_engine_420X.jar`

**Caution:**  Do not remove the old Gentran Integration Suite release's directory until you are confident that you have completely tested your newly upgraded 4.2 instance.

You must now complete the steps outlined in *Post-Upgrade Processes* on page 33. Your upgrade is not complete until you perform the additional steps outlined in that section.

# Post-Upgrade Processes

## Configuring ASAPROUT (iSeries Only)

If you are using iSeries, perform the following steps to configure ASAPROUT:

1. Start Gentran Integration Suite 4.2.

2. Log into Gentran Integration Suite as a user with administrative rights.

3. From the **Administration** menu, select **Operations** > **System** > **Support Tools** > **SQL Manager**.

4. Type, or copy and paste, the following SQL command in the command box:

   ```
   drop procedure ASAPROUT
   ```

5. Click **Execute**.

6. Clear the command box.

7. Copy and paste the following SQL command in the command box, ensuring the entire command is on a single line:

```
CREATE PROCEDURE ASAPROUT ( IN generationID VARCHAR(255) )  LANGUAGE SQL P1: BEGIN
DECLARE ruleID VARCHAR(255);  DECLARE mailboxID INTEGER;  DECLARE messagePattern
VARCHAR(255);  DECLARE messageID INTEGER;  DECLARE actionType VARCHAR(255);  DECLARE
processName VARCHAR(255);  DECLARE userID VARCHAR(255);  DECLARE contractName
VARCHAR(255);  DECLARE contractID VARCHAR(255);  DECLARE at_end SMALLINT DEFAULT 0;
DECLARE not_found CONDITION FOR SQLSTATE '02000';  DECLARE actionsets CURSOR WITH
RETURN FOR  SELECT RULE_ID, MESSAGE_PATTERN, MESSAGE_ID, MAILBOX_ID, ACTION_TYPE,
PROCESS_NAME,  USER_ID, CONTRACT_NAME, CONTRACT_ID   FROM MBX_ACTIONSET WHERE
GENERATION=generationID ORDER BY RULE_ID;  DECLARE rules CURSOR WITH RETURN FOR
SELECT  R.RULE_ID, MATCH_MBX.MAILBOX_ID,UPPER(PATTERN.MSG_NAME_PAT),   'Contract' AS
ACTION_TYPE,  CONTRACT.WORKFLOW_NAME AS PROCESS_NAME, ACTION.USER_ID,
CONTRACT.OBJECT_NAME AS CONTRACT_NAME, CONTRACT.OBJECT_ID AS CONTRACT_ID  FROM
MBX_RULE R, MBX_PATTERN PATTERN, MBX_CONTRACT_ACT CONT_ACTION,  MBX_ACTION ACTION,
SCI_CONTRACT CONTRACT, MBX_MATCH_MBX MATCH_MBX  WHERE  R.RULE_ID = PATTERN.RULE_ID
AND R.RULE_ID = ACTION.RULE_ID   AND CONT_ACTION.RULE_ID = R.RULE_ID AND
MATCH_MBX.RULE_ID = R.RULE_ID  AND CONT_ACTION.CONTRACT_NAME=CONTRACT.OBJECT_NAME AND
R.EVALUATE_ASAP > 0  UNION  SELECT  R.RULE_ID,
MATCH_MBX.MAILBOX_ID,UPPER(PATTERN.MSG_NAME_PAT),   'New_Proc' AS ACTION_TYPE,
NP_ACTION.PROCESS_NAME, ACTION.USER_ID,  '' AS CONTRACT_NAME, '' AS CONTRACT_ID
FROM  MBX_RULE R, MBX_PATTERN PATTERN, MBX_NEW_PROC_ACT NP_ACTION,  MBX_ACTION
ACTION, MBX_MATCH_MBX MATCH_MBX  WHERE  R.RULE_ID = PATTERN.RULE_ID AND R.RULE_ID =
ACTION.RULE_ID  AND  MATCH_MBX.RULE_ID = R.RULE_ID  AND NP_ACTION.RULE_ID = R.RULE_ID
AND R.EVALUATE_ASAP > 0;   DECLARE CONTINUE HANDLER FOR not_found  SET at_end = 1;
```

```
OPEN rules;  asap_loop:  LOOP  SET at_end = 0;  FETCH rules INTO ruleID, mailboxID,
messagePattern, actionType, processName,userID,contractName,contractID;  IF at_end <>
0 THEN  LEAVE asap_loop;  END IF;  INSERT INTO MBX_ACTIONSET (RULE_ID,
MESSAGE_PATTERN, MESSAGE_ID, MAILBOX_ID, ACTION_TYPE, PROCESS_NAME, USER_ID,
CONTRACT_NAME, CONTRACT_ID, GENERATION )  SELECT ruleID, messagePattern,
MSG.MESSAGE_ID, mailboxID, actionType, processName, userID, contractName, contractID,
generationID  FROM MBX_NEEDS_ROUTING NEEDS_ROUTING, MBX_MESSAGE MSG,
MBX_ROUTING_GNR8N GNR8N   WHERE NEEDS_ROUTING.MESSAGE_ID= MSG.MESSAGE_ID   AND
NEEDS_ROUTING.GENERATION < GNR8N.GENERATION   AND (MSG.MAILBOX_ID=mailboxID or
mailboxID is null)   AND UPPER(MSG.MESSAGE_NAME) LIKE messagePattern ESCAPE '|';  END
LOOP asap_loop;  CLOSE rules; END P1
```

8.  Click **Execute**.

# Adding Third-Party Libraries

If you added third-party libraries to configure adapters for the previous release, you need to add each of the libraries again after you complete the upgrade process for release 4.2. See the documentation for each third party adapter you use.

# Configuring Services and Adapters

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

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

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

✦ SyncEngine HTTP Server adapter
✦ Federation adapter
✦ FTP adapter
✦ System services, like the Alert service and the BP Fault Log adapter

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

The following adapters need special consideration following an upgrade:

✦ *JDBC Adapter and Lightweight JDBC Adapter* on page 35
✦ *File System Adapter and Command Line Adapters* on page 37

# JDBC Adapter and Lightweight JDBC Adapter

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

## Upgrading from Gentran Integration Suite 3.0

If you are upgrading from version 3.0 and you used the JDBC adapter or the Lightweight JDBC adapter in that version, perform the following steps:

1. Save a copy of the jdbc.properties file and the poolManager.properties file from the earlier system. You will need any properties settings you customized for your external database.

2. Set up your Lightweight JDBC adapter or JDBC adapter according to the instructions in the *Lightweight JDBC Adapter* topic or the *JDBC Adapter* topic in the Gentran Integration Suite Documentation site.

## Upgrading from Gentran Integration Suite 3.1

If you are upgrading from version 3.1 and you used a jdbc_customer.properties.in file in that version, perform the following steps:

1. Copy the jdbc_customer.properties.in file from the Gentran Integration Suite 3.1 installation to the *install_dir*/**properties** directory in the Gentran Integration Suite 4.2 installation. You will edit this copied file in the following steps.

2. Open the *install_dir*/**properties**/**jdbc_customer.properties.in** file in a text editor.

3. Add the following properties:

   **Note:** In the following property names, replace *databasePool* with the name of the pool.

| Property | Description |
|---|---|
| *databasePool*.factory | Always enter: `com.sterlingcommerce.woodstock.util.frame.jdbc.ConnectionFactory`. |
| *databasePool*.behaviour | Sets the behavior that a connection pool exhibits when it runs out of connections. This property replaces the databasePool.onEmpty property in the former poolManager.properties file. Valid values: <br><br> ◆ 0–The pool returns, indicating to the software to abort its current action and try again later. This value corresponds to the value **return** in the *databasePool*.**onEmpty** property. <br><br> ◆ 1–The pool waits the number of milliseconds specified in *databasePool*.**waittime** for a connection to be returned before indicating to the software to abort and try again. This value corresponds to the value **wait** in the *databasePool*.**onEmpty** property. <br><br> ◆ 2–The pool creates a buffered connection (a connection above the size specified in *databasePool*.**maxsize**). When using a setting of 2, the maximum number of connections for the pool is the value specified for *databasePool*.**maxsize** plus the value specified for *databasePool*.**buffersize** connections. This allows connections to be created under heavy demand. This value corresponds to the value **new** in the *databasePool*.**onEmpty** property. |
| *databasePool*.buffersize | Number of extra connections that the connection pool can create above the value specified for *databasePool*.**maxsize** to improve handling of unanticipated loads on the system. This property is only used if *databasePool*.**behaviour** is set to 2. |
| *databasePool*.maxsize | Maximum size of the database pool. This property was previously contained in the poolManager.properties file. <br><br> This value must not exceed the value specified for the *databasePool*.**maxconn** parameter in the jdbc.properties file. |
| *databasePool*.initsize | Initial size of the database pool. This property was previously contained in the poolManager.properties file. |
| *databasePool*.waittime | Amount of time (in milliseconds) to wait for a connection to become available before indicating to the software to abort the current action and try again later. This property is only used if *databasePool*.**behaviour** is set to 1. |

   For more information, see the *Lightweight JDBC Adapter* topic or the *JDBC Adapter* topic in the Gentran Integration Suite Documentation site.

4. Run the setupfiles.sh (UNIX) or setupfiles.cmd (Windows) utility located in the /*install_dir*/bin directory of the Gentran Integration Suite installation directory.

5. Stop and restart Gentran Integration Suite to use the updated settings.

If you are upgrading from version 3.1 and you used the JDBC adapter or the Lightweight JDBC adapter but you did not use a jdbc_customer.properties.in file in that version, perform the following steps:

1. Save a copy of the jdbc.properties file and the poolManager.properties file from the Gentran Integration Suite 3.1 installation. You will need any properties settings you customized for your external database.

2. Set up your Lightweight JDBC adapter or JDBC adapter according to the instructions in the *Lightweight JDBC Adapter* topic or the *JDBC Adapter* topic in the Gentran Integration Suite Documentation site.

## File System Adapter and Command Line Adapters

You must configure your File System and Command Line adapters before you remove the previous release directory. Reconfigure any File System and Command Line adapters that were configured to use directories or scripts in the installation directory for the previous Gentran Integration Suite release. Ensure that you create new directories and save scripts outside of the release 4.2 installation directory and edit each configuration to use the appropriate directories and scripts.

**Note:** Creating directories and saving scripts outside of the release 4.2 installation directory makes future upgrade processes easier.

### Command Line Adapter

If you are upgrading to Gentran Integration Suite 4.2 from a version prior to 4.0 and are using the Command Line adapter, you must update the version of the CLAClient.jar file with the CLAClient.jar located in the *install_dir*/client/cmdline directory. If you installed the CLAClient.jar file anywhere other than the default location, you must replace each copy of the file with the new version. If you only installed it in the default location, the update occurs automatically during the upgrade process.

### Command Line2 Adapter

There is a new version of the CLA2Client.jar file beginning with Gentran Integration Suite 4.0 SP1. If you are using the Command Line2 adapter and have located the CLA2Client.jar file anywhere other than the default location, you must replace it with the new version. For information about the default location and how to start the Command Line2 adapter, see the Command Line2 adapter information in the online Documentation site.

If you are upgrading to Gentran Integration Suite 4.2 from a version lower than 4.0.1 and are using the Command Line 2 adapter, you must update the version of the CLA2Client.jar file with the CLA2Client.jar located in the *install_dir*/client/cmdline2 directory. If you installed the CLA2Client.jar file anywhere other than the default location, you must replace each copy of the file with the new version. If you only installed it in the default location, the update occurs automatically during the upgrade process.

## Restoring Performance Tuning Configuration

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

**Note:** Before completing this procedure, see *Final Upgrade Notes* on page 38.

To restore the performance tuning configuration:

1. From the Gentran Integration Suite **Administration** menu, select **Operations** > **System** > **Performance** > **Tuning**.

2. Under Edit, click **Go!**

3. Complete the Performance Tuning Wizard, using the settings you obtained from the previous release.

# Starting an Upgraded Cluster (UNIX Only)

After you upgrade all nodes of a cluster, start the cluster using the following procedure:

**Note:** When running `startCluster.sh` on the second node of a cluster, the following error appears:

> *Exception in thread "main" java.lang.OutOfMemoryError*

> Ignore this error. The cluster will start normally and function.

1. Node 1

   Run the command `startCluster.sh 1 false`

2. Nodes after node 1

   a. Copy *install_dir*/bin/FeatureSet.xml from the node 1 to *install_dir*/bin on node 2.

   b. Run the command `startCluster.sh (node number)`

   c. After `startCluster.sh (node number)` completes successfully, go to *install_dir*/bin and run the command `run.sh`.

# Final Upgrade Notes

The upgrade is complete. At this point, you should download and apply the latest maintenance update from Support on Demand before using Gentran Integration Suite.

**Note:** The upgrade process enables services that might have been disabled before the upgrade. If you want to disable these services again, you must disable them in Gentran Integration Suite 4.2 after the upgrade process.

After you upgrade, do not use the previous release of Gentran Integration Suite. However, you should maintain your backup copy for future reference.

For additional information, see the following sections:

✦ *Technical Note: Changes to Network Interface Bindings* on page 39

✦ *Advanced File Transfer Tab* on page 40

✦ *Restoring Performance Tuning Configuration* on page 37

✦ *Reconfiguring Archive Settings* on page 40

# 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, versions prior to 4.0 had been bound to all network interfaces. After upgrading, if the previous 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.

2.  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
    ```

3.  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
    ```

4.  Stop Gentran Integration Suite.

5.  Run the setupfiles.sh (UNIX) or setupfiles.cmd (Windows) utility located in the *install_dir*/bin directory.

6.  Restart Gentran Integration Suite to use the updated settings.

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.

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

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

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

    **Restricted Setting**

        localmode.interface=hostname1

4.  Stop Gentran Integration Suite.

5.  Run the setupfiles.sh (UNIX) or setupfiles.cmd (Windows) utility located in the *install_dir*/bin directory.

6.  Restart Gentran Integration Suite to use the updated settings.

## Advanced File Transfer Tab

The Advanced File Transfer tab in the Dashboard interface will not be enabled by default after an upgrade installation of Gentran Integration Suite 4.2. You will need to configure the Dashboard to enable the tab.

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

1.  Log in as **Admin**.

2.  Click **Manage Layout**.

3.  Click **Add Pane**.

4.  Enter the following name:
    Advanced File Transfer

5.  Click **Apply**.

6.  Click the link for the new **Advanced File Transfer** tab.

7.  Click **Add Portlet**.

8.  Select the Add box for **Advanced File Transfer Management**.

9.  Click **Apply**.

10. Select **Clear Borders and Title** from the Decoration menu.

11. Click **Apply**.

12. Click **Save and Apply**.

## Reconfiguring Archive Settings

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

To reconfigure your Archive settings, use the following procedure:

1.  From the Administration menu, choose **Operations** > **Archive Manager**.

2.  Under Configure Archive Settings, click **Go!**

3.  If a message displays about the UI Lock, click **OK** to continue.

4.  Click **Next**.

5. Update the Backup Directory field with the correct path information:

6. Click **Save**.

7. Confirm the settings and click **Finish**.

## Correcting Missing Manager IDs

If you created a Manager ID with no corresponding User ID in your previous version of Gentran Integration Suite, the Manager ID may be missing after upgrading to Gentran Integration Suite 4.2. If this occurs, create a user in the system with a User ID that matches the missing Manager ID.

# Accessing User Documentation for Gentran Integration Suite

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

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

## Using the Online Documentation

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

To access the Documentation site, from within Gentran Integration Suite or one of its tools, select the Help

icon. (Note that the application must reside on a computer that supports Internet access and an Internet browser.)

You can also access the Documentation site by opening your Internet browser and typing the following URL: http://www.sterlingcommerce.com/Documentation/GIS42/homepage.htm

## Documentation Available in PDF Format

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

## Requesting a Documentation CD

You can request a CD that contains all the documentation found on the Documentation site. To submit a request, go to the following URL:
http://support.sterlingcommerce.com/forms/Gentran_GIS_UpgradeRequest.aspx

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