

---

# Upgrading Your Gentran Integration Suite 4.2 Database from MS SQL 2000 to MS SQL 2005

This documentation shows you how to upgrade your Gentran Integration Suite 4.2 database from Microsoft SQL Server 2000 to Microsoft SQL Server 2005 using one of the following procedures:

- ◆ *Upgrading from MS SQL 2000 to MS SQL 2005 in a Windows Environment* on page 1
- ◆ *Upgrading from MS SQL 2000 to MS SQL 2005 in a UNIX/Linux Environment* on page 6

**Note:** This procedure requires some unique tasks, additional effort and coordination, and more production downtime than a typical patch installation. You should review this documentation before making your detailed plans to upgrade the database and update your Gentran Integration Suite application.

If you have defined JDBC connections to MS SQL Server databases other than the Gentran Integration Suite database (to be accessed by the JDBC Adapter or Lightweight JDBC Adapter, for example), you need to modify the url connection parameter, even if the other database is staying at SQL 2000. This connection parameter may be defined in one of the following properties files: `jdbc.properties.in`, `jdbc_customer.properties.in`, and `customer_overrides.properties`.

For example, using an entry from the `customer_overrides.properties` file, the record would initially look like this:

```
jdbcServiceCustomer.DSN.url=jdbc:microsoft:sqlserver://hostname:1433;DatabaseName=dbname;SelectMethod=cursor
```

It would need to be changed to look like this:

```
jdbcServiceCustomer.DSN.url=jdbc:sqlserver://hostname:1433;DatabaseName=dbname;SelectMethod=cursor
```

## Upgrading from MS SQL 2000 to MS SQL 2005 in a Windows Environment

The following instructions show how to upgrade Gentran Integration Suite 4.2 from MS SQL 2000 to MS SQL 2005 in a Windows environment, using one of the following procedures:

- ◆ *Upgrading from MS SQL 2000 to MS SQL 2005 in a Windows Clustered Environment* on page 2
- ◆ *Upgrading from MS SQL 2000 to MS SQL 2005 in a Windows Non-Clustered Environment* on page 4

### Before Upgrading

This procedure is applicable to previously installed Gentran Integration Suite 4.2 (any patch level) configurations with MS SQL 2000 installed.

Installation of Gentran Integration Suite 4.2 patch 4209 is a prerequisite for upgrading from MS SQL 2000 to MS SQL 2005.

If you choose not to upgrade to MS SQL 2005 at this time, you can upgrade later with patch 4210 or higher.

## Upgrading from MS SQL 2000 to MS SQL 2005 in a Windows Clustered Environment

The following instructions show how to use a script to upgrade Gentran Integration Suite 4.2 from MS SQL 2000 to MS SQL 2005 in a Windows clustered environment.

All nodes in a cluster should be shut down before any upgrade is attempted, and should remain so until the upgrade is complete.

Except where noted, you must complete these steps on each node in your cluster, beginning with node 1.

1. To upgrade to MS SQL 2005 you must install Patch 4209 or higher, using the following command:

```
install_dir\SI\bin\InstallService.cmd patch_file
```

For more information, refer to the *Gentran Integration Suite 4.2 Installation Guide*.

2. (Node 1 only) Perform the following tasks. For more information, refer to *Copying a Microsoft SQL Server 2000 Database to an SQL Server 2005 Database* on page 10.

- a. Back up the MS SQL 2000 database.
- b. Migrate the MS SQL 2000 backup to the MS SQL 2005 database server file system.

3. Modify the parameters in the *sandbox.cfg* file to point to the new MS SQL 2005 database server, by using the following command:

```
install_dir\SI\bin\UpgradeToMSSQL2005.cmd
```

This command prompts you for the following parameters. Use the values in the table that follows this list.

- a. Database user name
- b. Database password (DB\_PASS)
- c. Database catalog name
- d. Database host (DB\_HOST)
- e. Database port

- f. Location of database drivers
- g. Database driver version (DB\_DRIVERS\_VERSION)

Parameter	New Value
DB_DRIVERS	sqljdbc.jar
DB_DRIVERS_VERSION	1_1_1501_101
DB_HOST	(MS SQL 2005 database host)
DB_PASS	(MS SQL 2005 database password)
JDBC_DRIVER	sqljdbc.jar
JDBC_VER	1_1_1501_101

This script also automatically does the following, without any user actions:

- a. Makes a backup copy of the `sandbox.cfg` file. The backup file will be placed in the `install_dir\properties` directory and will be named `sandbox_cfg_UpgradeToMSSQL2005.Backup`.
  - b. Adds the following parameter to the `sandbox.cfg` file and changes other parameters. The complete list of changes is available in *Changes to sandbox.cfg File* on page 11.  
`MSSQL2005=TRUE`
  - c. Deletes the following files from the `install_dir\SI\jdk\jre\lib\ext` directory:
    - `msbase.jar`
    - `mssqlserver.jar`
    - `msutil.jar`
  - d. Copies the `sqljdbc.jar` file to the `install_dir\SI\jdk\jre\lib\ext` directory.
  - e. Runs the `setupfiles.cmd` command in the `install_dir\SI\bin` directory.
  - f. Tests the new settings by performing a database connection test. If the database connection test fails, you should review your database connection parameter values, rename the backup file that the upgrade script created, and rerun the upgrade script.
4. (Optional) The script will place your database password into the `sandbox.cfg` file in clear text. If you prefer to encrypt the database password, then encrypt the passwords for the MS SQL 2005 databases inside `sandbox.cfg`, using the following procedure:
- a. Go to `install_dir\bin`.
  - b. Run `enccfgs.cmd`.
  - c. Run `setupfiles.cmd`.
  - d. Run `deployer.cmd`.
5. You have upgraded from MS SQL 2000 to MS SQL 2005 on node 1. Repeat steps 1, 3 and 4 on each additional node in the cluster before going on to the next step.

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

For example, use the following commands on the first two nodes:

- a. `startCluster.cmd 1`
- b. `startCluster.cmd 2`

7. Start Gentran Integration Suite 4.2 on MS SQL 2005, beginning with node 1.

For more information about this task, refer to the *Gentran Integration Suite 4.2 Installation Guide*.

## Upgrading from MS SQL 2000 to MS SQL 2005 in a Windows Non-Clustered Environment

The following instructions show how to use a script to upgrade Gentran Integration Suite 4.2 from MS SQL 2000 to MS SQL 2005 in a Windows non-clustered environment.

1. To upgrade to MS SQL 2005 you must install Patch 4209 or higher, using the following command:

```
install_dir\SI\bin\InstallService.cmd patch_file
```

For more information, refer to the *Gentran Integration Suite 4.2 Installation Guide*.

2. Perform the following tasks. For more information, refer to *Copying a Microsoft SQL Server 2000 Database to an SQL Server 2005 Database* on page 10.

- a. Back up the MS SQL 2000 database.
- b. Migrate the MS SQL 2000 backup to the MS SQL 2005 database server file system.

3. Modify the parameters in the `sandbox.cfg` file to point to the new MS SQL 2005 database server, by using the following command:

```
install_dir\SI\bin\UpgradeToMSSQL2005.cmd
```

This command prompts you for the following parameters. Use the values in the table that follows this list.

- a. Database user name
- b. Database password (DB\_PASS)
- c. Database catalog name
- d. Database host (DB\_HOST)
- e. Database port
- f. Location of database drivers

g. Database driver version (DB\_DRIVERS\_VERSION)

Parameter	New Value
DB_DRIVERS	sqljdbc.jar
DB_DRIVERS_VERSION	1_1_1501_101
DB_HOST	(MS SQL 2005 database host)
DB_PASS	(MS SQL 2005 database password)
JDBC_DRIVER	sqljdbc.jar
JDBC_VER	1_1_1501_101

This script also automatically does the following, without any user actions:

- a. Makes a backup copy of the `sandbox.cfg` file. The backup file will be placed in the `install_dir\properties` directory and will be named `sandbox_cfg_UpgradeToMSSQL2005.Backup`.
  - b. Adds the following parameter to the `sandbox.cfg` file and changes other parameters. The complete list of changes is available in *Changes to sandbox.cfg File* on page 11.  
`MSSQL2005=TRUE`
  - c. Deletes the following files from the `install_dir\SI\jdk\jre\lib\ext` directory:
    - `msbase.jar`
    - `mssqlserver.jar`
    - `msutil.jar`
  - d. Copies the `sqljdbc.jar` file to the `install_dir\SI\jdk\jre\lib\ext` directory.
  - e. Runs the `setupfiles.cmd` command in the `install_dir\SI\bin` directory.
  - f. Tests the new settings by performing a database connection test. If the database connection test fails, you should review your database connection parameter values, rename the backup file that the upgrade script created, and rerun the upgrade script.
4. (Optional) The script will place your database password into the `sandbox.cfg` file in clear text. If you prefer to encrypt the database password, then encrypt the passwords for the MS SQL 2005 databases inside `sandbox.cfg`, using the following procedure:
- a. Go to `\install_dir\bin`.
  - b. Run `enccfgs.cmd`.
  - c. Run `setupfiles.cmd`.
  - d. Run `deployer.cmd`.
5. Start Gentran Integration Suite 4.2 on MS SQL 2005.

For more information about this task, refer to the *Gentran Integration Suite 4.2 Installation Guide*.

## Upgrading from MS SQL 2000 to MS SQL 2005 in a UNIX/Linux Environment

The following instructions show how to upgrade Gentran Integration Suite 4.2 from MS SQL 2000 to MS SQL 2005 in a UNIX/Linux environment, using one of the following procedures:

- ◆ *Upgrading from MS SQL 2000 to MS SQL 2005 in a UNIX/Linux Clustered Environment* on page 6
- ◆ *Upgrading from MS SQL 2000 to MS SQL 2005 in a UNIX/Linux Non-Clustered Environment* on page 8

### Before Upgrading

This procedure is applicable to previously installed Gentran Integration Suite 4.2 (any patch level) configurations with MS SQL 2000 installed.

Installation of Gentran Integration Suite 4.2 patch 4209 is a prerequisite for upgrading from MS SQL 2000 to MS SQL 2005.

If you choose not to upgrade to MS SQL 2005 at this time, you can upgrade later with patch 4210 or higher.

### Upgrading from MS SQL 2000 to MS SQL 2005 in a UNIX/Linux Clustered Environment

The following instructions show how to use a script to upgrade Gentran Integration Suite 4.2 from MS SQL 2000 to MS SQL 2005 in a UNIX/Linux clustered environment.

All nodes in a cluster should be shut down before any upgrade is attempted, and should remain so until the upgrade is complete.

Except where noted, you must complete these steps on each node in your cluster, beginning with node 1.

1. To upgrade to MS SQL 2005 you must install Patch 4209 or higher, using the following command:
 

```
install_dir/bin/InstallService.sh patch_file
```

 For more information, refer to the *Gentran Integration Suite 4.2 Installation Guide*.
2. (Node 1 only) Perform the following tasks. For more information, refer to *Copying a Microsoft SQL Server 2000 Database to an SQL Server 2005 Database* on page 10.
  - a. Back up the MS SQL 2000 database.
  - b. Migrate the MS SQL 2000 backup to the MS SQL 2005 database server file system.
3. Modify the parameters in the `sandbox.cfg` file to point to the new MS SQL 2005 database server, by using the following command:

```
install_dir/bin/upgradetomssql2005.sh install_dir
```

This command prompts you for the following parameters. Use the values in the table that follows this list.

- a. Database user name
- b. Database password (DB\_PASS)
- c. Database catalog name
- d. Database host (DB\_HOST)
- e. Database port

- f. Location of database drivers
- g. Database driver version (DB\_DRIVERS\_VERSION)

Parameter	New Value
DB_DRIVERS	sqljdbc.jar
DB_DRIVERS_VERSION	1_1_1501_101
DB_HOST	(MS SQL 2005 database host)
DB_PASS	(MS SQL 2005 database password)
JDBC_DRIVER	sqljdbc.jar
JDBC_VER	1_1_1501_101

This script also automatically does the following, without any user actions:

- a. Makes a backup copy of the `sandbox.cfg` file. The backup file will be placed in the `install_dir/properties` directory and will be named `sandbox_cfg_UpgradeToMSSQL2005.Backup`.
  - b. Adds the following parameter to the `sandbox.cfg` file and changes other parameters. The complete list of changes is available in *Changes to sandbox.cfg File* on page 11.  

```
MSSQL2005=TRUE
```
  - c. Deletes the `mssql_all.jar` file from the `install_dir/dbjar/jdbc/MSSQL/operating_system` directory. The `operating_system` value is either `linux` (Linux), `hpux` (HP), `aix` (AIX), or `solaris` (Solaris).
  - d. Copies the `sqljdbc.jar` file to the `install_dir/jdk/jre/lib/ext` directory.
  - e. Runs the `setupfiles.sh` command in `install_dir/bin` directory.
  - f. Tests the new settings by performing a database connection test. If the database connection test fails, you should review your database connection parameter values, rename the backup file that the upgrade script created, and rerun the upgrade script.
4. (Optional) The script will place your database password into the `sandbox.cfg` file in clear text. If you prefer to encrypt the database password, then encrypt the passwords for the MS SQL 2005 databases inside `sandbox.cfg`, using the following procedure:
- a. Go to `/install_dir/bin/`.
  - b. Run `enccfgs.sh`.
  - c. Run `setupfiles.sh`.
  - d. Run `deployer.sh`.
5. You have upgraded from MS SQL 2000 to MS SQL 2005 on node 1. Repeat steps 1, 3, and 4 on each additional node in the cluster before going on to the next step.

6. On each node, starting with node 1, 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.

For example, use the following commands on the first two nodes:

- a. `startCluster.sh 1`
- b. `startCluster.sh 2`

7. Start Gentran Integration Suite 4.2 on MS SQL 2005, beginning with node 1.

For more information about this task, refer to the *Gentran Integration Suite 4.2 Installation Guide*.

## Upgrading from MS SQL 2000 to MS SQL 2005 in a UNIX/Linux Non-Clustered Environment

The following instructions show how to use a script to upgrade from MS SQL 2000 to MS SQL 2005 in a UNIX/Linux non-clustered environment.

1. To upgrade to MS SQL 2005 you must install Patch 4209 or higher, using the following command:

```
install_dir/bin/InstallService.sh patch_file
```

For more information, refer to the *Gentran Integration Suite 4.2 Installation Guide*.

2. Perform the following tasks. For more information, refer to *Copying a Microsoft SQL Server 2000 Database to an SQL Server 2005 Database* on page 10.

- a. Back up the MS SQL 2000 database.
- b. Migrate the MS SQL 2000 backup to the MS SQL 2005 database server file system.

3. Modify the parameters in the `sandbox.cfg` file to point to the new MS SQL 2005 database server, by using the following command:

```
install_dir/bin/upgradetomssql2005.sh install_dir
```

This command prompts you for the following parameters. Use the values in the table that follows this list.

- a. Database user name
- b. Database password (DB\_PASS)
- c. Database catalog name
- d. Database host (DB\_HOST)
- e. Database port
- f. Location of database drivers

## g. Database driver version (DB\_DRIVERS\_VERSION)

Parameter	New Value
DB_DRIVERS	sqljdbc.jar
DB_DRIVERS_VERSION	1_1_1501_101
DB_HOST	(MS SQL 2005 database host)
DB_PASS	(MS SQL 2005 database password)
JDBC_DRIVER	sqljdbc.jar
JDBC_VER	1_1_1501_101

This script also automatically does the following, without any user actions:

- a. Makes a backup copy of the `sandbox.cfg` file. The backup file will be placed in the `install_dir/properties` directory and will be named `sandbox_cfg_UpgradeToMSSQL2005.Backup`.
  - b. Adds the following parameter to the `sandbox.cfg` file and changes other parameters. The complete list of changes is available in *Changes to sandbox.cfg File* on page 11.  

```
MSSQL2005=TRUE
```
  - c. Deletes the `mssql_all.jar` file from the `install_dir/dbjar/jdbc/MSSQL/operating_system` directory. The `operating_system` value is either `linux` (Linux), `hpux` (HP), `aix` (AIX), or `solaris` (Solaris).
  - d. Copies the `sqljdbc.jar` file to the `install_dir/jdk/jre/lib/ext` directory.
  - e. Runs the `setupfiles.sh` command in `install_dir/bin` directory.
  - f. Tests the new settings by performing a database connection test. If the database connection test fails, you should review your database connection parameter values, rename the backup file that the upgrade script created, and rerun the upgrade script.
4. (Optional) The script will place your database password into the `sandbox.cfg` file in clear text. If you prefer to encrypt the database password, then encrypt the passwords for the MS SQL 2005 databases inside `sandbox.cfg`, using the following procedure:
    - a. Go to `/install_dir/bin/`.
    - b. Run `enccfgs.sh`.
    - c. Run `setupfiles.sh`.
    - d. Run `deployer.sh`.
  5. Start Gentran Integration Suite 4.2 on MS SQL 2005.

For more information about this task, refer to the *Gentran Integration Suite 4.2 Installation Guide*.

## Copying a Microsoft SQL Server 2000 Database to an SQL Server 2005 Database

Before upgrading, it is recommended that you first make a copy of your Microsoft SQL Server 2000 database. Use the following procedure to copy a Microsoft SQL Server 2000 database to a Microsoft SQL Server 2005 database.

**Caution:** It is the customer's responsibility to perform this procedure. Sterling Commerce Customer Support cannot help with this procedure.

**Caution:** Due to data inconsistencies found in certain database transfer procedures, this is the only database copy procedure recommended by Sterling Commerce. The SQL Server 2005 Import utility has been unreliable when transferring identity (auto-increment) column information from one database to the next database.

1. Perform a full database backup to the file system on the source SQL 2000 server of the source database.
2. Copy the resultant backup (.bak) file from the file system on the source server file system to the file system on the SQL 2005 server.
3. Connect to the SQL 2005 database server as a Windows authenticated user with administrative privileges on the database server using SQL Server Management Studio 2005.
4. Make sure that the destination database is not in use (disconnect any connected applications).
5. Restore the backup of the SQL 2000 database over the existing SQL 2005 database, using the Tasks|Restore|Database wizard. The restore will be from a "device," the file created above. Specify on the Options tab the correct locations for the data and log files (since the locations in the backup may not be the same as the correct locations for files on the on SQL 2005 database server); also check the box to specify that the existing database is to be overwritten. Confirm that the restore is reported successful.
6. Check to make sure that existing users in the database match existing users on the server using the command `sp_change_users_login 'report'`. If no rows are returned, go to step 8.
7. If rows are returned, execute the command `sp_change_users_login 'update_one', 'username', 'username'` substituting the unlinked login name in each execution to correct links between existing users in the restored database and existing logins on the server.
8. Examine the users of the database using the SQL Studio or `sp_helpuser`. If the login (existing on the server) who will be working with this database is not currently a user of the restored database, add that

login as a user of the database by executing the following commands (login\_name and user\_name should generally be the same):

```
USE database_name
Go
EXEC sp_grantdbaccess ' login_name ', ' user_name '
Go
EXEC sp_addrolemember 'db_owner', ' username '
Go
CHECKPOINT
Go
USE master
Go
EXEC sp_defaultdb ' username ', ' database_name '
Go
```

**Note:** The spaces in the quoted strings in the SQL commands should not be included in the final procedure, as spaces are significant to the proc and the commands will fail if they are there (i.e., EXEC sp\_grantdbaccess ' login\_name ', ' user\_name ' should be EXEC sp\_grantdbaccess 'login\_name', 'user\_name').

9. Examine the user tables in the SQL 2005 database to determine which schema they currently are in. Using the SQL Studio, the schema will be the prefix before each table listed in the Table tree.
10. Execute the following command in the SQL 2005 database to ensure that the default schema for the user who will interact with the database matches the schema containing the restored user objects. If the objects are in the dbo schema, use dbo as the schema\_name.

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

## Changes to sandbox.cfg File

The following table shows how properties in the Windows sandbox.cfg file can be changed when you run the UpgradeToMSSQL2005.cmd command. The command also adds a property (MSSQL2005=TRUE).

Property	Change
DB_DATA	(Changes if specified in .cmd script)
DB_DRIVERS	(Changes mssql_all.jar to sqljdbc.jar)
DB_DRIVERS_VERSION	(Changes old version to new version)
DB_HOST	(Changes if specified in .cmd script)
DB_JAR_DIR	(Changes if specified in .cmd script)
DB_PASS	(Changes if specified in .cmd script)

Property	Change
DB_PORT	(Changes if specified in .cmd script)
DB_USER	(Changes if specified in .cmd script)
JDBC_DRIVER	(Changes mssql_all.jar to sqljdbc.jar)
JDBC_VER	(Changes old version to new version)
MSSQL_DATA	(Changes if specified in .cmd script)
MSSQL_HOST	(Changes if specified in .cmd script)
MSSQL_PASS	(Changes if specified in .cmd script)
MSSQL_PORT	(Changes if specified in .cmd script)
MSSQL_USER	(Changes if specified in .cmd script)
YANTRA_DB_DATA	(Changes if specified in .cmd script)
YANTRA_DB_HOST	(Changes if specified in .cmd script)
YANTRA_DB_PASS	(Changes if specified in .cmd script)
YANTRA_DB_PORT	(Changes if specified in .cmd script)
YANTRA_DB_USER	(Changes if specified in .cmd script)
MSSQL2005 (added to the sandbox.cfg file)	TRUE

The following table shows how properties in the UNIX/LINUX sandbox.cfg file can be changed when you run the `upgradetomssql2005.sh` command. The command also adds a property (`MSSQL2005=TRUE`).

Property	Change
DB_DATA	(Changes if specified in .sh script)
DB_DRIVERS	(Changes mssql_all.jar to sqljdbc.jar)
DB_DRIVERS_VERSION	(Changes old version to new version)
DB_HOST	(Changes if specified in .sh script)
DB_JAR_DIR	(Changes if specified in .sh script)
DB_PASS	(Changes if specified in .sh script)
DB_PORT	(Changes if specified in .sh script)
DB_USER	(Changes if specified in .sh script)
JDBC_DRIVER	(Changes mssql_all.jar to sqljdbc.jar)
JDBC_VER	(Changes old version to new version)
MSSQL_DATA	(Changes if specified in .sh script)
MSSQL_HOST	(Changes if specified in .sh script)

<b>Property</b>	<b>Change</b>
MSSQL_PASS	(Changes if specified in .sh script)
MSSQL_PORT	(Changes if specified in .sh script)
MSSQL_USER	(Changes if specified in .sh script)
YANTRA_DB_DATA	(Changes if specified in .sh script)
YANTRA_DB_HOST	(Changes if specified in .sh script)
YANTRA_DB_PASS	(Changes if specified in .sh script)
YANTRA_DB_PORT	(Changes if specified in .sh script)
YANTRA_DB_USER	(Changes if specified in .sh script)
MSSQL2005 (added to the sandbox.cfg file)	TRUE