

Gentran Integration Suite™

Upgrade from MS SQL 2000 to MS SQL 2005

Version 4.3

Sterling Commerce
An IBM Company

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Upgrade Gentran Integration Suite 4.3 Database from MS SQL Server 2000 to MS SQL Server 2005

This documentation shows you how to upgrade your Gentran Integration Suite 4.3 database from Microsoft SQL Server 2000 to Microsoft SQL Server 2005 using one of the following procedures:

- ◆ *Upgrade to MS SQL Server 2005 in a Windows Environment* on page 1
- ◆ *Upgrade to MS SQL Server 2005 in a UNIX/Linux Environment* on page 4

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 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 on SQL Server 2000. This connection parameter may be defined in one of the following properties files:

- ◆ `jdbc.properties.in`
- ◆ `jdbc_customer.properties.in`
- ◆ `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 should be changed to:

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

Upgrade to MS SQL Server 2005 in a Windows Environment

The following instructions show how to upgrade Gentran Integration Suite 4.3 from SQL Server 2000 to SQL Server 2005 in a Windows environment, using one of the following procedures:

- ◆ *Upgrade to MS SQL Server 2005 in a Windows Cluster Environment* on page 1
- ◆ *Upgrade to MS SQL Server 2005 in a Windows Non-Cluster Environment* on page 3

Before Upgrading

This procedure is applicable to previously installed Gentran Integration Suite 4.3 (any patch level) configuration with SQL Server 2000 installed.

Upgrade to MS SQL Server 2005 in a Windows Cluster Environment

The following instructions show how to upgrade Gentran Integration Suite 4.3 database from SQL Server 2000 to SQL Server 2005 in a Windows cluster 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. (Node 1 only) Perform the following tasks. For more information, refer to *Copying an MS SQL Server 2000 Database to an MS SQL Server 2005 Database* on page 8.
 - a. Back up SQL Server 2000 database.
 - b. Migrate the SQL Server 2000 backup to the SQL Server 2005 database server file system.
2. Make a backup copy of the `sandbox.cfg` file. Rename the backup file as `sandbox_cfg_UpgradeToMSSQL2005.Backup` and place it in the `install_dir\properties` directory.
3. Modify the parameters in the `sandbox.cfg` file to point to the new SQL Server 2005 database server. 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_200
DB_HOST	(SQL Server 2005 database host)
DB_PASS	(SQL Server 2005 database password)
JDBC_DRIVER	sqljdbc.jar
JDBC_VER	1_1_1501_200

Perform the following actions:

- a. Add the following parameter to the `sandbox.cfg` file:


```
MSSQL2005=TRUE
```
- b. Copy the `sqljdbc.jar` file to the `install_dir\SI\jdk\jre\lib\ext` directory.
- c. Run the `setupfiles.cmd` command in the `install_dir\SI\bin` directory.
- d. Test 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 run the upgrade script again.

4. (Optional) You can 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 SQL Server 2005 database inside `sandbox.cfg` file, 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 SQL Server 2000 to SQL Server 2005 on node 1. Repeat steps 1, 3, and 4 on each additional node in the cluster before proceeding 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, run the following commands on the first two nodes:
 - a. `startCluster.cmd 1`
 - b. `startCluster.cmd 2`
7. Start Gentran Integration Suite 4.3 beginning with node 1. For more information about this task, refer to *Gentran Integration Suite 4.3 Installation* documentation, which can be accessed from:
<http://www.sterlingcommerce.com/Documentation/GIS43/InstallPage.htm>

Upgrade to MS SQL Server 2005 in a Windows Non-Cluster Environment

The following instructions show how to run a script to upgrade Gentran Integration Suite 4.3 from SQL Server 2000 to SQL Server 2005 in a Windows non-cluster environment.

1. Perform the following tasks. For more information, refer to *Copying an MS SQL Server 2000 Database to an MS SQL Server 2005 Database* on page 8.
 - a. Back up the SQL Server 2000 database.
 - b. Migrate the SQL Server 2000 backup to the SQL Server 2005 database server file system.
2. Make a backup copy of the `sandbox.cfg` file. Rename the backup file as `sandbox_cfg_UpgradeToMSSQL2005.Backup` and place it in the `install_dir\properties` directory.
3. Modify the parameters in the `sandbox.cfg` file to point to the new SQL Server 2005 database server.
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_200
DB_HOST	(SQL Server 2005 database host)
DB_PASS	(SQL Server 2005 database password)
JDBC_DRIVER	sqljdbc.jar
JDBC_VER	1_1_1501_200

Perform the following actions:

- a. Add the following parameter to the sandbox.cfg file:
MSSQL2005=TRUE
 - b. Copy the sqljdbc.jar file to the `install_dir\SI\jdk\jre\lib\ext` directory.
 - c. Run the `setupfiles.cmd` command in the `install_dir\SI\bin` directory.
 - d. Test 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 run the upgrade script again.
4. (Optional) You can 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 SQL Server 2005 database inside sandbox.cfg file, 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 4.3 on SQL Server 2005. For more information about this task, refer to *Gentran Integration Suite 4.3 Installation* documentation, which can be accessed from:
<http://www.sterlingcommerce.com/Documentation/GIS43/InstallPage.htm>

Upgrade to MS SQL Server 2005 in a UNIX/Linux Environment

The following instructions show how to upgrade Gentran Integration Suite 4.3 from SQL Server 2000 to SQL Server 2005 in a UNIX/Linux environment, using one of the following procedures:

- ◆ *Upgrade to MS SQL Server 2005 in a UNIX/Linux Cluster Environment* on page 5
- ◆ *Upgrade to MS SQL Server 2005 in a UNIX/Linux Non-Cluster Environment* on page 6

Before Upgrading

This procedure is applicable to previously installed Gentran Integration Suite 4.3 (any patch level) configuration with SQL Server 2000 installed.

Upgrade to MS SQL Server 2005 in a UNIX/Linux Cluster Environment

The following instructions show how to run a script to upgrade Gentran Integration Suite 4.3 from SQL Server 2000 to SQL Server 2005 in a UNIX/Linux cluster 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. (Node 1 only) Perform the following tasks. For more information, refer to *Copying an MS SQL Server 2000 Database to an MS SQL Server 2005 Database* on page 8.
 - a. Back up the SQL Server 2000 database.
 - b. Migrate the SQL Server 2000 backup to the SQL Server 2005 database server file system.
2. Make a backup copy of the `sandbox.cfg` file. Rename the backup file as `sandbox_cfg_UpgradeToMSSQL2005.Backup` and place it in the `install_dir/properties` directory.
3. Modify the parameters in the `sandbox.cfg` file to point to the new SQL Server 2005 database server.

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_200
DB_HOST	(SQL Server 2005 database host)
DB_PASS	(SQL Server 2005 database password)
JDBC_DRIVER	sqljdbc.jar
JDBC_VER	1_1_1501_200

Perform the following actions:

- a. Add the following parameter to the `sandbox.cfg` file:

```
MSSQL2005=TRUE
```

- b. Copy the `sqljdbc.jar` file to the `install_dir/jdk/jre/lib/ext` directory.
 - c. Run the `setupfiles.sh` command in the `install_dir/bin` directory.
 - d. Test 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 run the upgrade script again.
4. (Optional) You can 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 SQL Server 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 SQL Server 2000 to SQL Server 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, run the following commands on the first two nodes:
 - a. `startCluster.sh 1`
 - b. `startCluster.sh 2`
 7. Start Gentran Integration Suite 4.3 on SQL Server 2005, beginning with node 1. For more information about this task, refer to *Gentran Integration Suite 4.3 Installation* documentation, which can be accessed from:

<http://www.sterlingcommerce.com/Documentation/GIS43/InstallPage.htm>

Upgrade to MS SQL Server 2005 in a UNIX/Linux Non-Cluster Environment

The following instructions show how to run a script to upgrade from SQL Server 2000 to SQL Server 2005 in a UNIX/Linux non-cluster environment.

1. Perform the following tasks. For more information, refer to *Copying an MS SQL Server 2000 Database to an MS SQL Server 2005 Database* on page 8.
 - a. Back up the SQL Server 2000 database.
 - b. Migrate the SQL Server 2000 backup to the SQL Server 2005 database server file system.
2. Make a backup copy of the `sandbox.cfg` file. Rename the backup file as `sandbox_cfg_UpgradeToMSSQL2005.Backup` and place it in the `install_dir/properties` directory.
3. Modify the parameters in the `sandbox.cfg` file to point to the new SQL Server 2005 database server.

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_200
DB_HOST	(SQL Server 2005 database host)
DB_PASS	(SQL Server 2005 database password)
JDBC_DRIVER	sqljdbc.jar
JDBC_VER	1_1_1501_200

Perform the following actions:

- a. Add the following parameter to the sandbox.cfg file:
MSSQL2005=TRUE
 - b. Copy the sqljdbc.jar file to the *install_dir/jdk/jre/lib/ext* directory.
 - c. Run the `setupfiles.sh` command in the *install_dir/bin* directory.
 - d. Test 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 run the upgrade script again.
4. (Optional) You can 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 SQL Server 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 4.3 on SQL Server 2005. For more information about this task, refer to *Gentran Integration Suite 4.3 Installation* documentation, which can be accessed from:
<http://www.sterlingcommerce.com/Documentation/GIS43/InstallPage.htm>

Copying an MS SQL Server 2000 Database to an MS 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
```