Migrating halFILE databases from Microsoft Access to Microsoft SQL Server

Note: halFILE 1.1 databases have a different format than halFILE 1.2 databases. Therefore this procedure will not work when performing this type of conversion. Contact hal Systems Technical Support to help you convert database from 1.1 to 1.2.

Migration Overview

The steps involved with migrating an halFILE database from Microsoft Access to Microsoft SQL Server are as follows:

Step 1: At the SQL Server:

a. Create the SQL Server Database Device that will hold your database.
b. Create the SQL Server Database log.
c. Create the SQL Server Database.

Step 2: At a Windows Workstation:

a. Run the halFILE SQL Migrate utility.
b. Move the files created by the utility to the SQL Server hard disk drive.

Step 3: At the SQL Server:

a. Run an SQL Statement to create the tables in the SQL Server database.
b. Turn database ‘bulk copy’ mode on to increase performance of the data import.
c. Run the ‘bulk copy’ to import the data.
d. Run an SQL Statement to create the indexes for the SQL Server tables.
e. Turn database ‘bulk copy’ mode off.

MIGRATION DETAILS

The following provides a detail description of each of the above steps.

Step1a through 1c.

1a. Create the SQL Server Database Device.
1b. Create the SQL Server Database log.
1c. Create the SQL Server Database.

Note: When the database is created, the SQL Server will initialize the disk area for the database. This can take a long time on large capacity databases.

These 3 steps can be accomplished at the same time using the following instructions:

1. Go into the SQL Server Enterprise Manager.
2. Double click on the server to connect to it.
3. Click the + next to your server to drop down a list of objects that are a part of the server (deveices, databases, tables, etc.)
3. Right Click on ‘databases’ and select ‘new database’. Fill out the form to create a new device which will hold the database, create the database and create the log file for the database. Refer to your SQL Server manual to help you compute the device and database sizes. It is recommended that the database log size be 20 percent of the size of the database.

Step 2a. Running the halFILE SQL Migrate utility.

1. Run the SQL Migrate icon in the HalFILE 1.2 program group.
2. Select the Source database. After the database is selected, the tables that are within that database should be listed.
3. Highlight the tables that should be migrated. Typically, this is every table. You can multi-select the tables by holding down the shift key and clicking the left mouse button.
4. Enter the destination data source. This is the ODBC data source that is set up to point to database on the SQL Server. It is recommended that the data source name be the same as the database name (example: XYZHFWAA).
5. Enter the destination database. This is the database that exists (or will exist) on the SQL Server.
6. Enter the user id. This is the user that is set up on the SQL Server database (normally ‘sa’).
7. Enter the password for the user id.
8. Check the build index box.
9. Click migrate. A counter is displayed showing progress on each table.

The SQL Migrate utility builds the following files.

xxBUILD.SQL - Creates the tables in the SQL Database.
xxBCP.SQL - ‘Bulk copy’ batch file that imports the data from the TABLEx.001 files into SQL Server tables that were built by BUILDDB.SQL.
xxINDEX.SQL - SQL Script that creates the indexes for the SQL Server tables.
TABLEx.001 where x is a number corresponding to the table list. These files contain the data that will be imported into SQL Server tables.

Step 2b. Moving the migration files to the SQL Server.

Copy the files listed above into the \migrate directory on the SQL Server’s hard disk drive. Typically this is done from Windows File Manager on the workstation using the Disk_Connect Network Drive selection.

Step 3a. Run an SQL Statement to create the database tables.

The BUILDDB.SQL file contains the SQL commands that create the halFILE tables. You can run this as follows:

1. On the SQL Server, go into ISQL/W.
2. Open your newly created halFILE database.
3. Run File_Open and select the BUILDDB.SQL file.
4. Process the SQL Statement by pressing the ‘play’ button.

Step 3b. Turn database ‘bulk copy’ mode on to increase performance of the data import.

The ‘bulk copy’ option can be found as follows:

1. Go into SQL Entrprise Manager.
2. Select Manage_Databases.
3. From the databases shown, double click on the halFILE database.
4. Go to the Options tab.
5. Check the ‘Bulk Copy’ option.

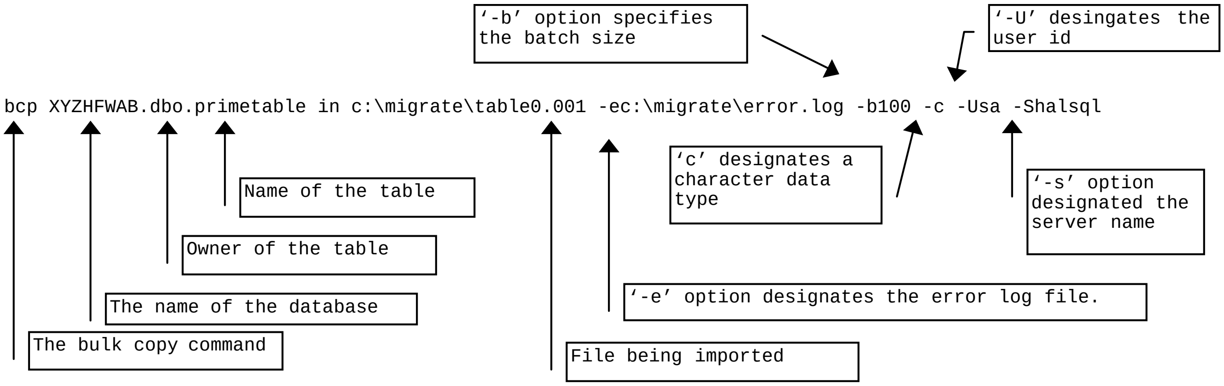
Step3c. Run the ‘bulk copy’ to import the data.

Note: The data import step can take a long time, depending on the size of the original database and the speed of your SQL Server.

To import the data, perform the following steps:

1. From the SQL Server, run the MS-DOS prompt.
2. Go to the \migrate directory where the files built by the SQL Migrate Utility were copied.
3. Rename the BUILDBCP.SQL to BUILDBCP.BAT.
4. Type in ‘BUILDBCP’ to run the bulk copy batch file.

If you have problems with this batch file, you can examine its contents to determine what is wrong. The bulk copy command line syntax that is used in this batch is as follows:



```
bcp XYZHFWAB.dbo.primetable in c:\migrate\table0.001 -ec:\migrate\error.log -b100 -c -Usa -Shalsql
```

‘-b’ option specifies the batch size
‘-U’ desingates the user id
Name of the table
Owner of the table
The name of the database
The bulk copy command
‘c’ designates a character data type
‘-s’ option designated the server name
‘-e’ option designates the error log file.
File being imported

Also, review the error.log file to see if any import errors occurred.

Step 3d. Run an SQL Statement to create the indexes for the SQL Server tables.

The INDEX.SQL file contains the SQL commands that create the HalFILE indexes. You can run this as follows:

1. On the SQL Server, go into ISQL/W.
2. Open your newly created halFILE database.
3. Run File_Open and select the INDEX.SQL file.
4. Process the SQL Statement by pressing the ‘play’ button.

Step 3e. Turn database ‘bulk copy’ mode off.

Uncheck the bulk copy option that was checked in Step 3b above.