



# Is it possible to export templates from one system and import them into another?

Yes, but care must be taken to ensure that the import is done in the correct order because of the referential integrity on the tables.

Warning: This procedure is intended for use with a completely new database.

You should not use this method to import table contents into a live system or a system that has already been configured. You may corrupt the database if you attempt this.

## Exporting table contents from SQL

Before you start you may need to create the location where you wish the output to go. For example, if you are dumping the contents out to Microsoft Excel, then you will need to create a .xls file first. You should delete all but one sheets as each database table will be dumped into its own sheet. You will be able to delete the final dummy sheet once the export has completed.

Select the Import and Export Data option from the Microsoft SQL Server program group from the Start menu to start the DTS Import/Export wizard.

On the second screen of the wizard - Choose A Data Source - select QConfig from the database drop down.

On the third screen - Choose A Destination - select the selected destination, for example Microsoft Excel 97-2000. The screen will then change to allow you to specify the actual destination. In the case of Excel, you should either enter the full path to the file or use the ... and browse for the file.

On the fourth screen - Specify Table Copy or Query - just click next to copy tables.

On the fifth screen - Select Source Tables and Views - select the required tables as follows:

AggregationPeriod



Required if custom aggregation periods have been configured

FBTagDefault

Required if function block templates are being exported

FBTemplateVersion

Required if function block templates are being exported

FunctionBlockTemplate

Required if function block templates are being exported

HistoryCatchup

Required if custom aggregation periods have been configured

TagTemplate

Always required

TagTemplateAggPeriod

Always required

TagTemplateVersion

Always required

On the sixth screen - Save, Schedule and Replicate Package - just click Next to run the job immediately.

On the seventh screen - Complete the DTS Import/Export Wizard - click Finish to commence the export.



Upon completion, click OK to close the notification dialogue and the the Done button to close the wizard.

There should now be eight tables created in your destination object. In the case of Excel, the export would have created eight sheets, one for each table.

If using Excel, delete the remaining dummy sheet - Sheet 1 - and re save the file.

Warning: We do not recommend editing the exported data.

Importing extracted data into a newly created database

Delete the contents of the tables to be imported. This is to ensure that there are no problems with duplicates etc. The best way of doing this is to use SQL Query Analyser. Ensure that the database is set to QConfig and then use the delete keyword followed by the table name. Repeat this for each table that you have exported. For example, if you cut the list below and paste it into SQL Query Analyser then click the run button, the contents of all the tables above will be cleared in one operation.

```
delete FBTagDefault;  
delete FBTemplateVersion;  
delete FunctionBlockTemplate;  
delete TagTemplateAggPeriod;  
delete HistoryCatchup;  
delete AggregationPeriod;  
delete TagTemplateVersion;  
delete TagTemplate;
```

Warning: The 'delete' Transact-SQL statement does not remove the actual table.

In Transact-SQL to remove a table is 'drop'. You should not 'drop' the tables as this will cause the database to lose the constraints and other table dependencies.

You must import the tables in the correct order otherwise the constraints will be violated and errors will result. The SQL Server Import wizard always imports in alphabetical order and therefore it will be necessary to run the import wizard up to four times depending on which tables have been exported. To run the import wizard perform the following steps:



Note: If you are importing from Excel, you need to set the following registry key to zero. If templates contain lengthy expressions, the default buffer size can be inadequate leading to a failure during the load process. Setting the registry key to zero ensures that the entire file is scanned before the buffer size is set.

```
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Jet\4.0\Engines\Excel
```

```
TypeGuessRow to 0 (Zero)
```

Select the Import and Export Data option from the Microsoft SQL Server program group from the Start menu to start the DTS Import/Export wizard.

On the second screen - Choose A Data Source - select the selected source, for example Microsoft Excel 97-2000. The screen will then change to allow you to specify the actual source. In the case of Excel you should either enter the full path to the file or use the ... and browse for the file.>

On the third screen of the wizard - Choose A Destination - select QConfig from the database drop down.

On the fourth screen - Specify Table Copy or Query - just click next.

On the fifth screen - Select Source Tables and Views - select the required tables as follows: Warning: It will however be necessary to run the import wizard more than once due to the table constraints. The reason for this is that the import wizard always lists the tables in alphabetical order, no matter what the order in the source is.

<Note: You will notice in some cases that each table appears twice in the list. The second one ends in a \$ symbol. You should ignore this.

First Import

Select the following tables if previously exported:

AggregationPeriod

Required if custom aggregation periods have been configured

HistoryCatchup



Required if custom aggregation periods have been configured

TagTemplate

Always required

TagTemplateVersion

Always required

Second Import

FunctionBlockTemplate

Required if function block templates are being exported

TagTemplateAggPeriod

Always required

Third Import

FBTemplateVersion

Required if function block templates are being exported

Fourth Import

FBTagDefault

Required if function block templates are being exported

On the sixth screen - Save, Schedule and Replicate Package - just click Next.



On the seventh screen - Complete the DTS Import/Export Wizard - click Finish to commence the import.

Upon completion click OK to close the notification dialogue and the the Done button to close the wizard.

Using the SQL Batch Copy Program (bcp) to automate the above process

The manual process above has many advantages, in particular you can output the data into a structured format or even directly export from one SQL server without going through an intermediate file process. However, there may be times when the user wishes to click on an icon and have the data transferred without further user invention. This can be achieved by creating Windows batch files, one to export the tables and the other to delete the existing contents and import the file contents.

This can be achieved by using the bcp and SQL script. The bcp however outputs its data to a tab separated ascii text file with no column headings. The following lines can be cut and pasted into a text file. Save the resultant file with a .bat extension.

#### Exporting

```
bcp QConfig..AggregationPeriod out AggregationPeriod.txt -S localhost -T -c
bcp QConfig..HistoryCatchup out HistoryCatchup.txt -S localhost -T -c
bcp QConfig..TagTemplate out TagTemplate.txt -S localhost -T -c
bcp QConfig..TagTemplateVersion out TagTemplateVersion.txt -S localhost -T -c
bcp QConfig..TagTemplateAggPeriod out TagTemplateAggPeriod.txt -S localhost -T -c
bcp QConfig..FunctionBlockTemplate out FunctionBlockTemplate.txt -S localhost -T -c
bcp QConfig..FBTemplateVersion out FBTemplateVersion.txt -S localhost -T -c
bcp QConfig..FBTagDefault out FBTagDefault.txt -S localhost -T -c
```

#### Importing

Creating a sql script for clearing the existing contents from the tables can be achieved by cutting and pasting the lines in step 1 above into a text file and saving it with a .sql extension.

The import batch file would be similar to the above with the addition of a use of the osql program to clear the contents. In the procedure below it is assumed that the delete instructions are saved in a file called delete.sql. Any problems with the delete will be logged into the file output.txt.



```
osql -S localhost -d QConfig -i delete.sql -o output.txt -E
```

```
bcp Qconfig..AggregationPeriod in AggregationPeriod.txt -S localhost -T -c -E
```

```
bcp Qconfig..HistoryCatchup in HistoryCatchup.txt -S localhost -T -c -E
```

```
bcp Qconfig..TagTemplate in TagTemplate.txt -S localhost -T -c -E
```

```
bcp Qconfig..TagTemplateVersion in TagTemplateVersion.txt -S localhost -T -c -E
```

```
bcp Qconfig..TagTemplateAggPeriod in TagTemplateAggPeriod.txt -S localhost -T -c -E
```

```
bcp Qconfig..FunctionBlockTemplate in FunctionBlockTemplate.txt -S localhost -T -c -E
```

```
bcp Qconfig..FBTemplateVersion in FBTemplateVersion.txt -S localhost -T -c -E
```

```
bcp Qconfig..FBTagDefault in FBTagDefault.txt -S localhost -T -c -E
```

The advantage of using the automated method is that you have control over the order in which you import the data.

You can also run it any number of times.