

## SQL SERVER – IMPORTING AND EXPORTING DATA FROM CLI WITH BCP

The bulk copy (**bcp**) command of **Microsoft SQL Server** provides you with the ability to insert large numbers of records directly from the command line. In addition to being a great tool for command-line aficionados, **bcp** is a powerful tool for those seeking to insert data into a **SQL Server** database from within a batch file or other programmatic method.

### bcp Syntax

The basic syntax for using **bcp** is:

```
bcp <table_name> <direction> <file_name> <options>
```

Where the arguments take the following values:

- **table\_name** is the fully qualified name of the table. For example, you might use **inventory.dbo.fruits** to insert records into the fruits table, owned by the database owner, in the inventory database.
- **direction** indicates whether you want to import ("**in**" direction) or export ("**out**" direction) data.
- **file\_name** is the full path to the file. For example, you could import the file **C:\fruit\inventory.txt**.
- **options** allow you to specify parameters for the bulk operation. For example, you can specify the maximum number of errors allowed with the **-m** option. You may also use the **-x** option to specify an XML file format. Consult [Microsoft's bcp documentation](#) for a full list.

### bcp Import Example

Let's put it all together. Imagine that you have a fruits table in your inventory database and that you want to programmatically import all of the records from a text file stored on your hard drive into that database. You would use the following bcp command syntax:

```
bcp inventory.dbo.fruits in "C:\fruit\inventory.txt" -c -T
```

This would produce the following output:

```
C:\>bcp inventory.dbo.fruits in "C:\fruit\inventory.txt" -c -T
Starting copy...
36 rows copied.
Network packet size (bytes): 4096
Clock Time (ms.) Total : 16 Average : (2250.00 rows per sec.)
C:\>
```

If you're ***sharp-eyed***, you might have noticed that I slipped in two new options on that command line. The **-c** option specifies that the file format of the import file will be **tab-delimited** text with each record on a new line. The **-T** option specifies that bcp should use **Windows authentication** to connect to the database.

### **bcp Export Example**

As I mentioned earlier, you can export data from your database with bcp by changing the direction of the operation from ***"in"*** to ***"out"***. For example, we could dump the contents of the fruit table to a text file with the following command:

```
bcp inventory.dbo.fruits out "C:\fruit\inventory.txt" -c -T
```

Here's how that looks on the command line:

```
C:\>bcp inventory.dbo.fruits out "C:\fruit\inventory.txt" -c -T
Starting copy...
42 rows copied.
Network packet size (bytes): 4096
Clock Time (ms.) Total : 1 Average : (42000.00 rows per sec.)
C:\>
```

That's all there is to the **bcp** command.

You may use this command from within batch files or other programs with access to the **DOS** command line to automate the import and export of data from your **SQL Server** database.