

Create a csv extract from a sql query

Description

A csv extract file can be created using a SSIS package and a SQL Server Agent job which executes a query. The job can be scheduled to run regularly to produce a file at the desired interval. This document contains instructions on how to setup the SSIS package and schedule the SQL Server Agent job.

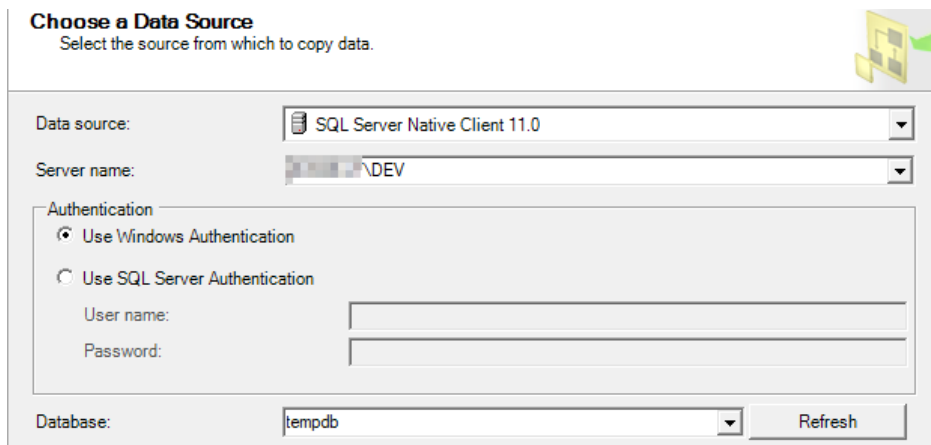
Query

Use the example SQL query below to create the csv extract file.

```
Select c.Column1, c.Column2, cid.Column3, aan.Column4
From table1 c
Join table2 cid
    On c.Column1 = cid.Column2
Left Join table3 aan
    On c.Column2 = aan.Column2
Where cid.Column5 = 0
Order by c.Column2, cid.Column3, aan.Column4
```

Create the SSIS Package

- In SQL Server Management Studio, right-click the database, choose **Tasks** then **Export Data**.
- Click Next to get to the **Data Source** menu.
- Data Source menu
 - Data Source: SQL Server Native Client.
 - Server Name: Choose the server that will execute the request.
 - Authentication: Windows Authentication
 - Database: The database housing the data for the csv extract.



Choose a Data Source
Select the source from which to copy data.

Data source: SQL Server Native Client 11.0

Server name: DEV

Authentication

☒ Use Windows Authentication

☐ Use SQL Server Authentication

User name:

Password:

Database: tempdb

Refresh

- Destination menu
 - Destination: Flat File Destination.
 - File Name: Name and path of the export file.
 - Format: Delimited.
 - Uncheck the box labeled, Column names in the first data row.

Choose a Destination
Specify where to copy data to.

Destination: Flat File Destination

Select a file and specify the file properties and the file format.

File name: C:\Temp\Extract.csv Browse...

Locale: English (United States) Unicode

Code page: 1252 (ANSI - Latin I)

Format: Delimited

Text qualifier: <none>

☐ Column names in the first data row

- Specify Table Copy or Query menu
 - Choose, Write a query to specify the data to transfer.

Specify Table Copy or Query
Specify whether to copy one or more tables and views or to copy the results of a query from the data source.

☐ **Copy data from one or more tables or views**
Use this option to copy all the data from the existing tables or views in the source database.

☒ **Write a query to specify the data to transfer**
Use this option to write an SQL query to manipulate or to restrict the source data for the copy operation.

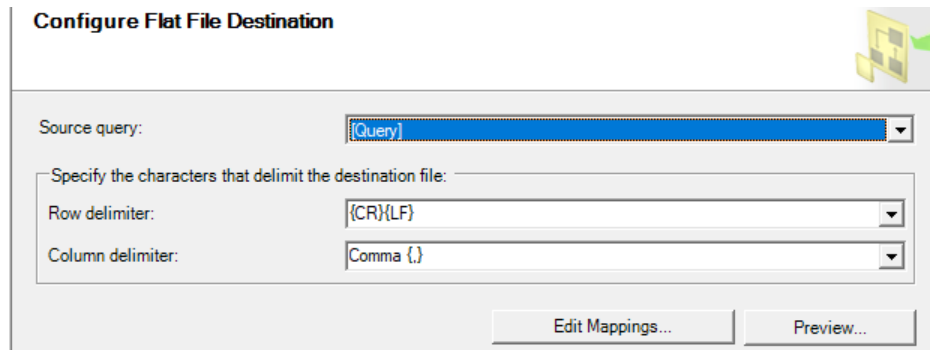
- Provide a Source Query menu.
 - Enter the query for the csv extract in the SQL statement window.

Provide a Source Query
Type the SQL statement that will select data from the source database.

SQL statement:

```
Select c.Column1, c.Column2, cid.Column3, aan.Column4
From table1 c
Join table2 cid
  On c.Column1 = cid.Column2
Left Join table3 aan
  On c.Column2 = aan.Column2
Where cid.Column5 = 0
Order by c.Column2, cid.Column3, aan.Column4
```

- Configure Flat File Destination menu.
 - Source Query: Query
 - Row delimiter: CR/LF
 - Column delimiter: Comma
 - Click Preview to check that query results display successfully.



Configure Flat File Destination

Source query: [Query]

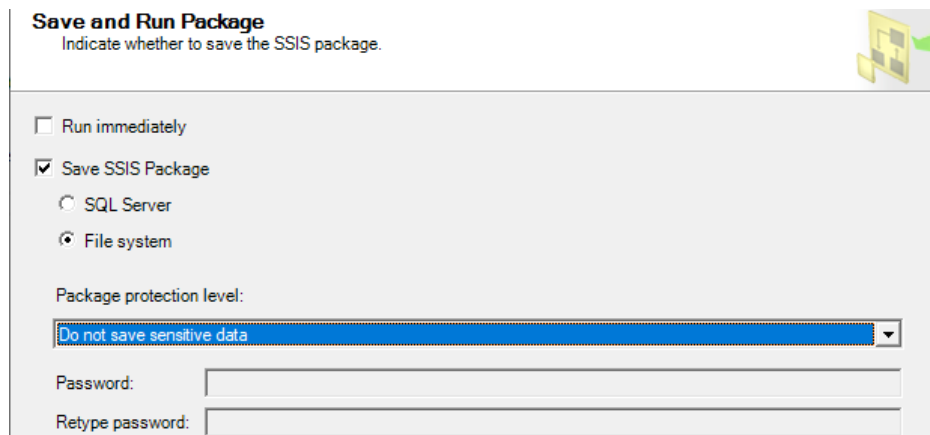
Specify the characters that delimit the destination file:

Row delimiter: {CR}{LF}

Column delimiter: Comma (,)

Edit Mappings... Preview...

- Save and Run Package menu
 - Check Save SSIS Package and select File System.
 - Package Protection Level: Do not save sensitive information.



Save and Run Package
Indicate whether to save the SSIS package.

☐ Run immediately

☒ Save SSIS Package

SQL Server

☒ File system

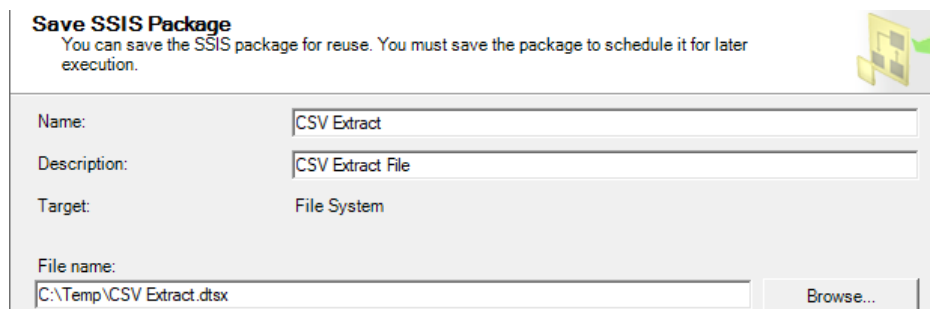
Package protection level:

Do not save sensitive data

Password:

Retype password:

- Save SSIS Package menu
 - Name: Choose a descriptive name for the SSIS Package.
 - Description: Enter a description for the SSIS package.
 - File Name: Choose a path and file name to save the SSIS package information.



Save SSIS Package
You can save the SSIS package for reuse. You must save the package to schedule it for later execution.

Name: CSV Extract

Description: CSV Extract File

Target: File System

File name: C:\Temp\CSV Extract.dtsx Browse...

Create a Credential and Proxy to Execute the Job

- In SQL Server Management Studio, under the Security menu, create a new credential.
 - Credential Name: A descriptive name
 - Identity: The user account that will execute the ssis package. Please note, the user will need datareader permissions to the database and the sysadmin server role.
 - Password: The password for the account that will execute the ssis package.

The screenshot shows the 'Create New Credential' dialog box. On the left, a tree view shows 'General' selected under 'Select a page'. The main area has fields for 'Credential name' (CSV Extract Credential), 'Identity' (User), 'Password' (masked with asterisks), and 'Confirm password' (masked with asterisks). There is an unchecked checkbox for 'Use Encryption Provider' and a 'Provider' dropdown menu at the bottom.

- Next, under SQL Server Agent create a new Proxy.
 - Proxy Name: A descriptive name.
 - Credential name: Browse and choose the credential created above.
 - Activate to the following subsystems: SQL Server Integration Services Package.

The screenshot shows the 'New Proxy' dialog box. On the left, a tree view shows 'Principals' selected under 'Select a page'. The main area has fields for 'Proxy name' (CSV Extract File), 'Credential name' (User Credential), and a 'Description' text box. Below these is a section 'Active to the following subsystems:' with a list of subsystems: 'Subsystem' (checked), 'Operating system (CmdExec)', 'SQL Server Analysis Services Query', 'SQL Server Analysis Services Command', 'SQL Server Integration Services Package' (checked), and 'PowerShell'.

Schedule the Job

- In SQL Server Management Studio, expand SQL Server Agent, right-click Jobs and choose New Job.
- General Page
 - Name: Choose a descriptive name for the Agent job.
 - User: the SQL user who owns the job setup.

The screenshot shows the 'New Job' dialog box in SQL Server Agent. The left pane shows the 'Select a page' list with 'General' selected. The right pane contains the following fields:

- Name: CSV Extract
- Owner: User
- Category: [Uncategorized (Local)]
- Description: (Empty text area)
- Enabled: ☒ Enabled

The 'Connection' pane on the left shows the server as 'DEV' and the connection as 'DEV'.

- Steps page.
 - Click New to create a new Job Step.
 - Choose a descriptive name.
 - Type: SQL Server Integration Services Package
 - Run as: The Proxy setup in the previous step.
 - Package Source: File System
 - Package: Browse to the package file created in a previous step.

The screenshot shows the 'New Job Step' dialog box in SQL Server Agent. The left pane shows the 'Connection' pane with the server as 'DEV' and the connection as 'DEV'. The right pane contains the following fields:

- Step name: CSV Extract
- Type: SQL Server Integration Services Package
- Run as: User Proxy
- Package source: File system
- Server: (Empty dropdown)
- Log on to the server:
 - ☒ Use Windows Authentication
 - ☐ Use SQL Server Authentication
 - User name: (Empty text box)
 - Password: (Empty text box)
- Package: C:\Temp\CSV Extract.dtsx

The 'Package' tab is selected in the bottom pane.

- Advanced Page
 - On success action: Quit the job reporting success.

On success action: Quit the job reporting success

Retry attempts: 0 Retry interval (minutes): 0

On failure action: Quit the job reporting failure

SQL Server Integration Services Package _____

Output file: ... View

- Job Schedule
 - Create and configure a new job schedule for the desired time frame.

Name: CSV Extract Jobs in Schedule

Schedule type: Recurring ☒ Enabled

One-time occurrence

Date: 3/23/2021 Time: 9:53:04 AM

Frequency

Occurs: Weekly

Recurs every: 1 week(s) on

☒ Monday ☒ Wednesday ☒ Friday ☐ Saturday

☒ Tuesday ☒ Thursday ☐ Sunday

Daily frequency

☒ Occurs once at: 12:00:00 AM

☐ Occurs every: 1 hour(s)

Starting at: 12:00:00 AM

Ending at: 11:59:59 PM

Duration

Start date: 3/23/2021 ☐ End date: 3/23/2021

☒ No end date:

- Notifications
 - If desired, email notifications can be sent upon job failures.

Schedules Alerts Notifications Targets

Actions to perform when the job completes:

☒ E-mail: When the job fails

☐ Page: When the job fails

☐ Write to the Windows Application event log: When the job fails

☐ Automatically delete job: When the job succeeds

- Test the job.
 - Right-click the SQL Server agent job and choose Start Job at Step...
 - Verify the file created in the specified location.