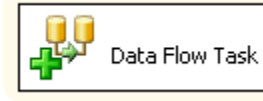


Data Flow Task Plus

Overview



Data Flow Task Plus is an SSIS control flow task and it is an extension of the standard Microsoft Data Flow Task.

Data Flow Task Plus allows setup of dynamic data flows. The dynamic setup options can be controlled with parameters from outside. This feature lessens the need to manually open and modify the data flow design when new source and destination columns have to be accommodated.

Data Flow Task Plus also supports features similar to the features implemented for **Script Task Plus**. **Data Flow Task Plus** allows exporting of data flow logic and reuse in other packages. Keeping your SSIS data flow logic separate from your package helps you keep track of the changes independently in your source control system. **Data Flow Task Plus** also provides a customizable user interface for setup of your data flow. You customize the data flow setup dialog by implementing an SSIS script, which is part of the data flow task.

These features will help you be more productive and allow you to componentize your common data flow logic.

Setup 1.4

The task setup is similar to the **Script Task Plus** dialog. It has the following user interface elements:

- Setup** tab - select data flow initialization parameters. These data flow parameters will be initialized before the data flow is executed. The page configuration is prepared with .NET attributes in the **initialization script**.
- Dynamic** tab - specifies dynamic data flow options. For details check below.
- Advanced** tab - specifies advanced task options.
 - General** page - specifies the data flow task name and description.
 - Script** page - specifies the data flow task script, which is used for **Setup** tab customization.
 - Expressions** page - specifies standard SSIS expressions.
- exports the SSIS data flow to an external file (.dfx).
- links to the SSIS data flow from an external file (.dfx). The link can be removed by pressing the button again.

Setup (1.3 and older)

The task setup is similar to the **Script Task Plus** dialog. It has the following user interface elements:

- General** page - specifies the data flow task name and description.
- Initialize** page - selects the data flow initialization parameters. These data flow parameters will be initialized before the data flow is executed. The page configuration is prepared with .NET attributes in the **initialization script**.
- Script** page - specifies the data flow task script, which is used for **Initialize** page customization.
- Expressions** page - specifies standard SSIS expressions.
- exports the SSIS data flow to an external file (.dfx).
- links to the SSIS data flow from an external file (.dfx). The link can be removed by pressing the button again.

Dynamic Data Flow 1.4

The dynamic data flow technical documentation is published [here](#).

Use Cases

In many integration scenarios ETL developers may find it challenging to automate their SSIS data flows with statically-defined metadata. COZYROC **Data Flow Task Plus** provides the ability to acquire the metadata and map the columns at runtime, enabling the development of much more elegant solutions.

Here are several common use cases for using dynamic data flows created with **Data Flow Task Plus (DFT+)**:

- If you are performing the same ETL operations for a lot of files, tables, entities, etc., DFT+ can be used in a loop to process any number of sources and destinations. Variables and expressions can be used to dynamically update names of tables, files, entities, sheet names, etc. each time through the loop. The column metadata will be updated and the columns will be mapped each time through the loop. Example scenarios are when, on a regular basis, you need to back up multiple files or need to generate multiple files from database tables or other types of sources.
- Another use case for DFT+ within a loop would be for migrating data from an on premises version of an application to the cloud-based version of an application. An example of this would be migrating from Dynamics CRM on premises to Dynamics 365 in the cloud. Variables and expressions would be used to loop through each entity to copy the data from on premises to the cloud. Tip: you will need to set the proper order to migrate the entities so that there are no failures due to prerequisites not being in place.
- Dynamic data flows can be useful even without a loop, e.g. in situations where the metadata changes frequently and its inconvenient to rework and redeploy an SSIS package that often. This use case does not require setting up variables and expressions, DFT+ would simply pick up the new or changed metadata when the package is executed.
- Another use case that does not require a loop would be to configure a somewhat generic package that can be used for any source/destination pair. For instance, you might want to have a generic package that copies data between tables. You would use variables and expressions to set up the specific table to copy data from and the specific table to copy data to.

Demonstration



Now Playing

Basics

3:06

UP NEXT

Tracing and analyzing dynamic data flow

5:12

Setup shortcut

13:51

Excel import

13:08

Quick Start

[Step-by-Step Guide to Creating an SSIS Data Flow Task Plus Package](#)

[Step-by-Step Guide to Creating an SSIS Package using Data Flow Task Plus, Variables, and Expressions](#)



Case Study

[Case study by Pharmacy Quality Solutions, Inc](#)

Knowledge Base

- [Warning Message: No Dynamic Columns](#)
- [Where can I find the documentation for the Data Flow Task Plus?](#)
- [Implement data flow connection setup when there is an associated script](#)
- [How to build the data flow setup](#)
- [Sample script to set up the CommandTimeout property of the DataReader Source component](#)

[See more...](#)

Samples

- [Getting Started with COZYROC Data Flow Task Plus](#)
- [The sample package \(for SQL Server 2008\) used from the demonstration video by Jamie Thomson](#)
- [Sample package \(for SQL Server 2008\) contributed by Paul McMillan, demonstrating dynamic data flow from the source to the destination database and driven by metadata](#)
- [Introducing ETL Assistant – A Dynamic, Templated Approach to SSIS by Eric Whitley \(for SQL Server 2008\)](#)
- [Dynamic Data Flows with the Cozyroc Toolset by Jeff "The Prince" Holloway](#)
- [Dynamic data flow using COZYROC component by Régis Baccaro Part I](#)
- [Dynamic data flow using COZYROC component by Régis Baccaro Part II](#)

What's New

- 2.0 SR-2
 - Fixed: Validation failed when Error Output was used in destination components processing multiple inputs (composites).
- 2.0 SR-1
 - New: 'OLE DB Command' transformation can now reference static columns in a dynamic flow.
 - Fixed: Failed with error "Object reference not set to an instance of an object" under specific conditions (Thank you, Ryan).
- 2.0
 - New: Support for Azure Flexible File Source and Destination components.
 - New: Context menu item "Remove Static Columns" when right-clicking on a component.
 - New: SSDT installation is no longer required during runtime.
- 1.9 SR-2
 - Fixed: Failed with error "A truncation error occurred on the specified object of the specified component." when using COZYROC **Excel Source** component (Thank you, Jason).
- 1.9 SR-1
 - New: Flat File Source component will now use configured THUNK_COLUMN column length as default for all dynamic columns.
 - New: Improved handling of dynamic columns in the [JavaScript component](#).
 - New: Support for Oracle Source component in SQL Server 2019.
- 1.9
 - New: Support for ODBC Source and Oracle Source components.
- 1.8 SR-2
 - New: Support for **ODBC Destination** component.
 - Fixed: Failed to copy task.
- 1.8 SR-1
 - Fixed: Failed with error "Field 'CozyRoc.SqlServer.SSIS.DataFlowSource.m_destination' not found." when using COZYROC Data Flow Source component (Thank you, Arun).
 - Fixed: Output column error and truncation row disposition were not configured for most source components (Thank you, Dan).
- 1.8
 - New: Support for Azure Feature Pack adapters.
- 1.7 SR-2
 - Fixed: Unable to override input column error/truncation row disposition when using "Derived Column" transformation (Thank you, Damian).
 - Fixed: Empty column mapping use may fail with error "Unable to cast object of type 'System.DBNull' to type 'System.String'" (Thank you, Brant).
- 1.7 SR-1
 - Fixed: Fixes for handling incorrect metadata setup by ADO.NET Destination component.
 - Fixed: **AutoAdjustBufferSize** property was not available for SQL Server 2016 (Thank you, Adam).
 - Fixed: Failed to process destination tables with columns having greater than 4000 characters but less than 8000 (Thank you, Matt).
 - Fixed: Failed to process when using Fuzzy Lookup component (Thank you, Matt).
- 1.6 SR-4
 - New: New parameters for error and truncation rows disposition for dynamic source components.
 - Fixed: Various fixes and improvements (Thank you, Ankit).
 - Fixed: Failed to process the standard Aggregate Transformation properly when the input data was floating and the used aggregation was: Sum, Average, Min or Max (Thank you, Parag).
 - New: A new parameter **MandatoryMapping** for dynamic destinations with four options: None, Source, Destination and List.
- 1.6 SR-3
 - Fixed: Task used in combination with **Parallel Loop Task** failed when used with Flat File Source or Destination components (Thank you, Dan Palazotto).
 - Fixed: Failed when using Fuzzy Lookup transformation (Thank you, Matt).
 - Fixed: Failed when **Lookup Plus** transformation had more than one lookup definition against same input column (Thank you, Fabien).
- 1.6 SR-2
 - Fixed: Derived or Conditional Split transformations failed when used with flat file input data without headers.
- 1.6 SR-1
 - Fixed: Numerous fixes and enhancements (Thank you, Rushabh).
 - Fixed: **Table Difference** component was not working properly with arbitrary input columns order. The task will now order the input columns (Thank you, Jasmin).
 - Fixed: Error output directed toward flat file failed to process (Thank you, Leona).
- 1.5 SR-4
 - Fixed: Failed to process Recordset mappings after the first iteration (Thank you, Joe).
- 1.5 SR-3
 - Fixed: Numerous fixes and enhancements (Thank you, Eric).
- 1.5 SR-2
 - New: Task now includes more options for processing flat files.
 - New: A new parameter **MissingColumnFail** for dynamic destination components. When set, the task will fail if source column is missing in destination.
 - Fixed: Setup dialog was not opening properly, when package was in a solution with multiple SSIS projects (Thank you, Anthony).
- 1.4 SR-3
 - New: Task no longer requires at least one common column between different dynamic iterations.
 - New: Support for handling of dynamically added columns in the data flow script. This feature permits further customization of columns.
- 1.3 SR-5
 - Fixed: Task didn't show component properties with CPET_NOTIFY flag set.
- 1.3 SR-4
 - Fixed: Task was not installed properly on 64bit systems.
- 1.2
 - New: Introduced task.



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