

Loading a Data Warehouse with SSIS



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Overview



Design data flow elements

Organize control flow tasks in containers

Add package parameters

Change the properties of a task using expressions

Deploy and execute the SSIS project in SQL Server

The result is a project that:

- Loads the data warehouse (full or incremental load)
- Can be customized for different customers with parameters
- Can be executed automatically, from a SQL Agent job



Demo



Designing data flow elements



Demo



Organizing data with containers



What Are Containers?



SSIS components that organize tasks into units

Three types of containers:

- For loop
- Foreach loop
- Sequence container

Description of Each Container Type



For loop

- The tasks are executed repeatedly, based on an expression

Foreach loop

- Iterate through a collection of objects

Sequence container

- Treats the elements as a whole
- If a task fails, the entire container fails
- You cannot add a precedence constraint between a task from the container and a task outside of it
- “All for one and one for all” behavior

Demo



Working with package parameters

- What are parameters?
- Types of parameters
- How to create parameters?
- The difference between parameters and variables



SSIS Parameters



Assign values to properties at package execution

Can be set:

- At package level
- At project level

Choosing what type to use depends on the deployment strategy for the project

Create the link between the outside world and the content within SSIS

Examples:

- Database server name
- Type of load (full or incremental)

Demo



Adding expressions to tasks



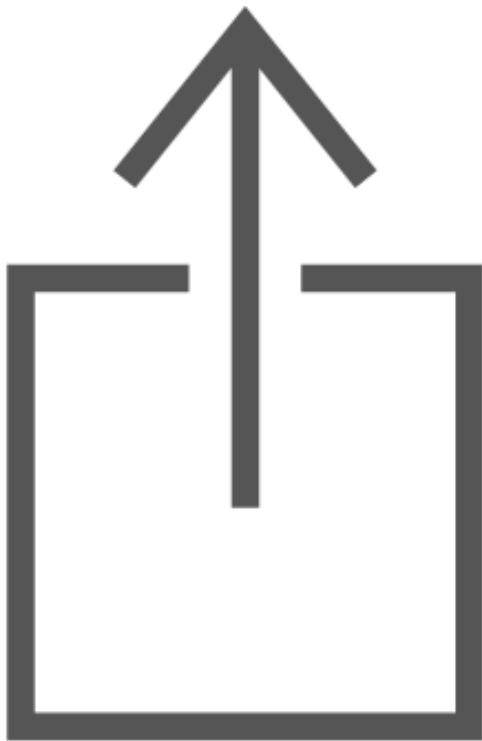
Demo



Deploying and configuring a SSIS project



SSIS Deployment Model



The current deployment model is available starting with SQL Server 2012

Everything SSIS-related is centralized in one place

- Project and package parameters
- Execution runtime values
- Execution status and other troubleshooting information
- General information about SSIS

The centralized location is called SSISDB catalog

Summary



Understand the difference between control flow and data flow

Created data flow components

Created tasks to load all the dimensions and fact tables

Organized tasks in containers

Added package parameters

Used expressions to change the properties of a task at package execution

Deployed an SSIS project in SQL Server

