

# Deployment Part 1

Working with the Package Deployment Model

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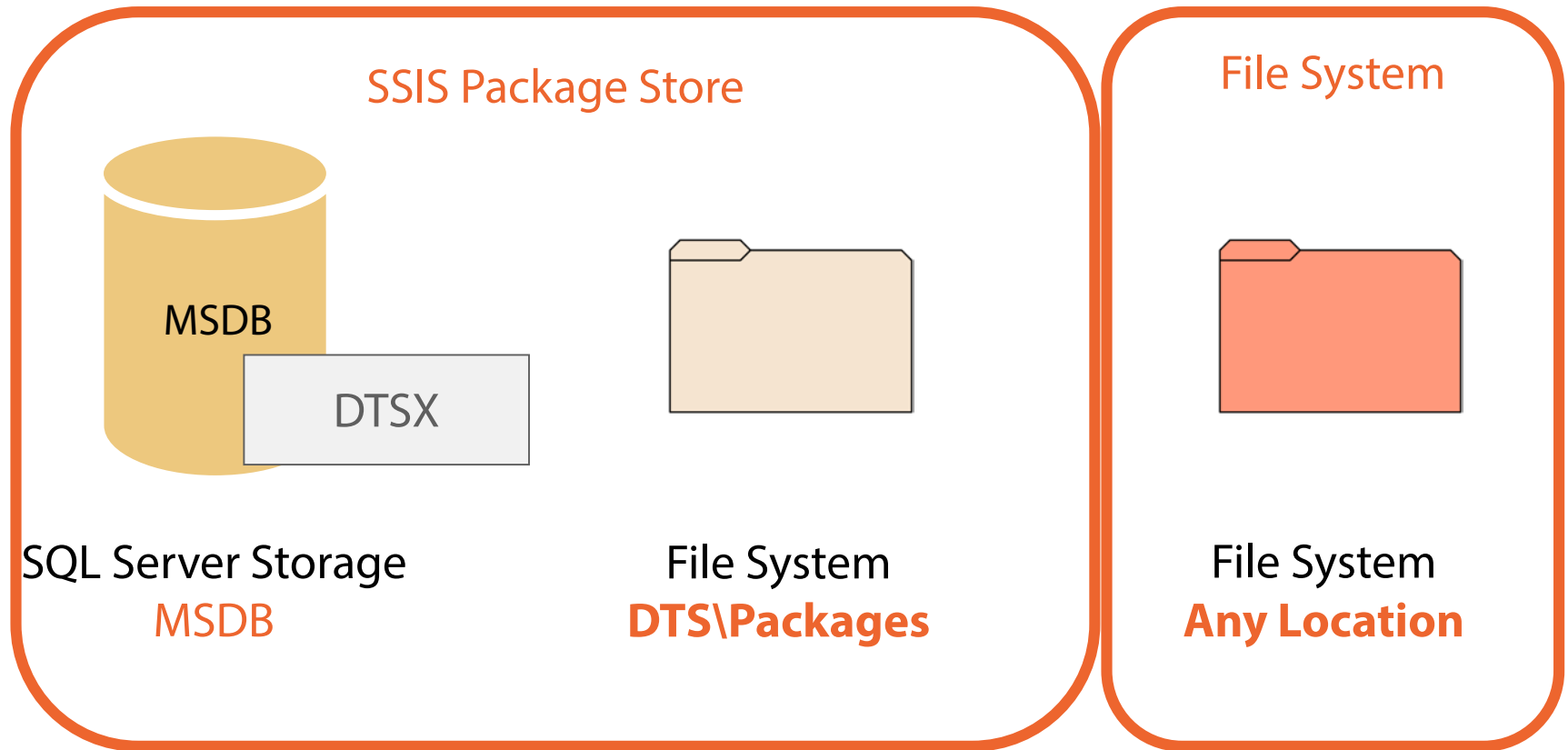
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# Overview

- **Deployment Target Options**
- **Deployment Utility and Other Tools**
- **Package Configuration**
- **Package Execution**

# Deployment Target Options

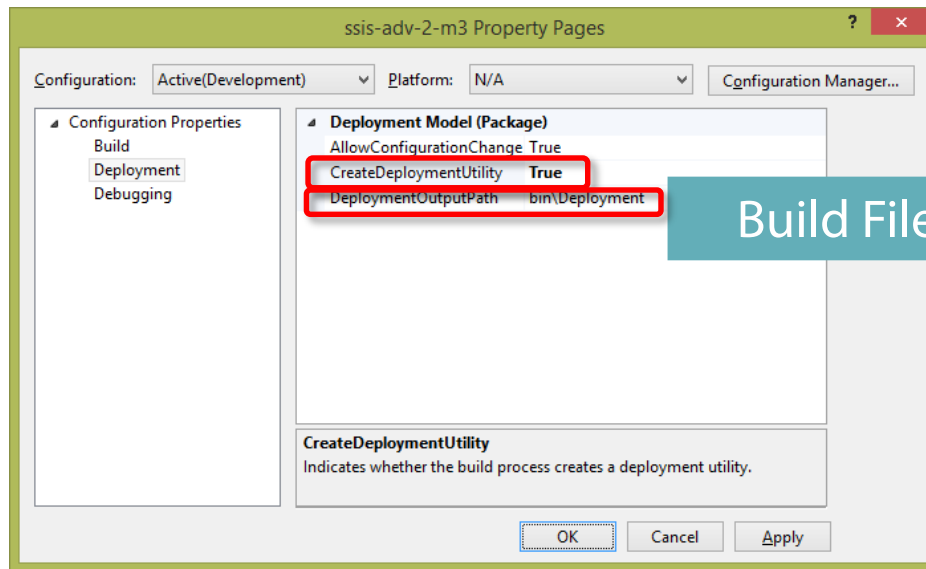


# Deployment Target Options

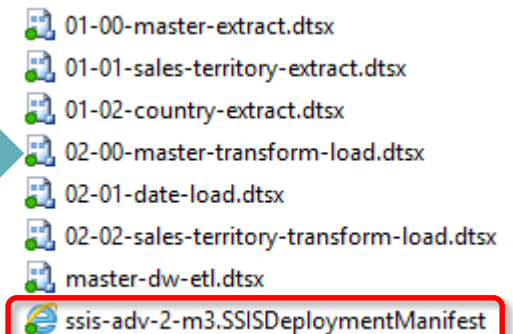
Function	MSDB	File System
Redeployment		✓
Backup and recovery	✓	
Differencing		✓
Security	✓	
Performance	✓	✓

# Deployment Utility

## Step 1: Enable utility

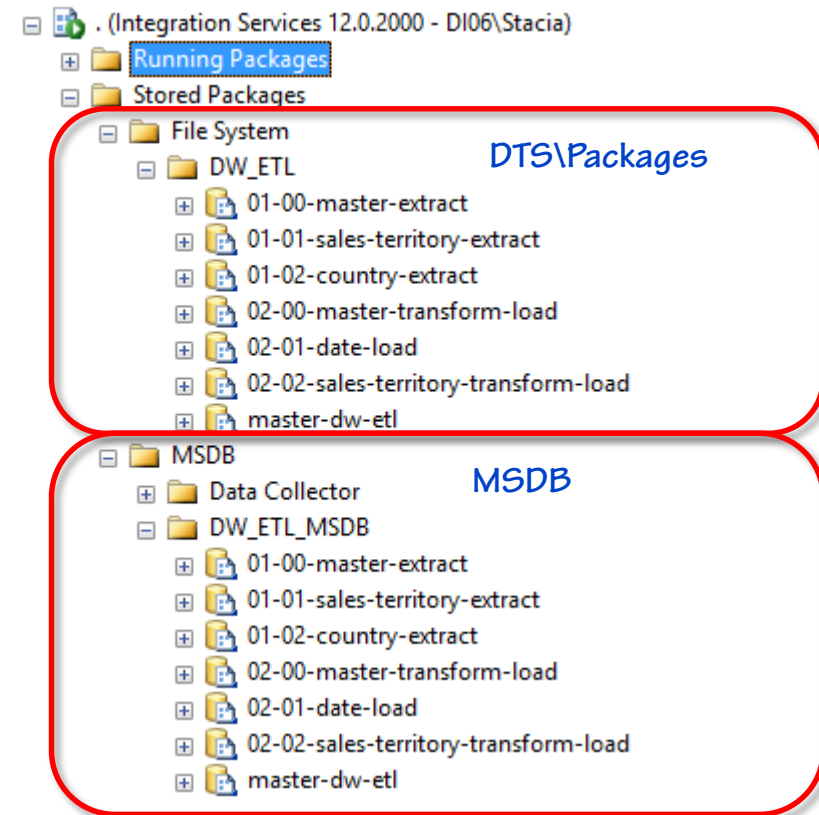
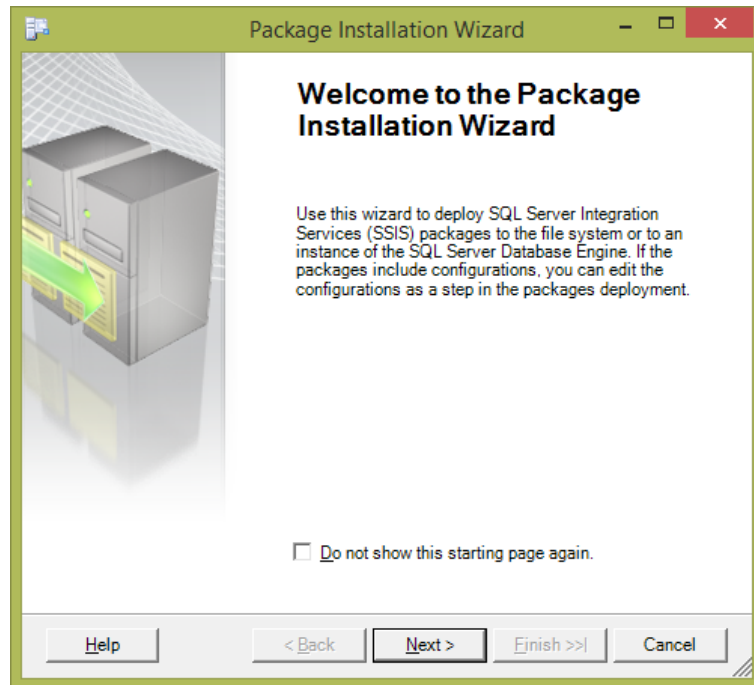


## Step 2: Build project



```
<?xml version="1.0"?>
<DTSDeploymentManifest GeneratedBy="DI06\Stacia" GeneratedFromProjectName="ssis-adv-2-m3"
  GeneratedDate="2014-06-03T21:12:04.4483951-07:00" AllowConfigurationChanges="true">
  <Package>01-00-master-extract.dtsx</Package>
  <Package>02-02-sales-territory-transform-load.dtsx</Package>
  <Package>01-02-country-extract.dtsx</Package>
  <Package>02-00-master-transform-load.dtsx</Package>
  <Package>01-01-sales-territory-extract.dtsx</Package>
  <Package>02-01-date-load.dtsx</Package>
  <Package>master-dw-etl.dtsx</Package>
</DTSDeploymentManifest>
```

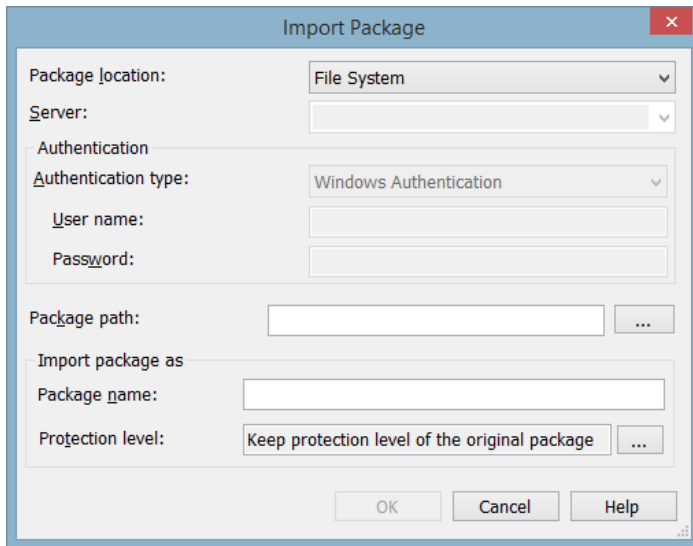
# Deployment Utility



**Important!**  
File system deployment  
requires write permissions

# Other Deployment Tools

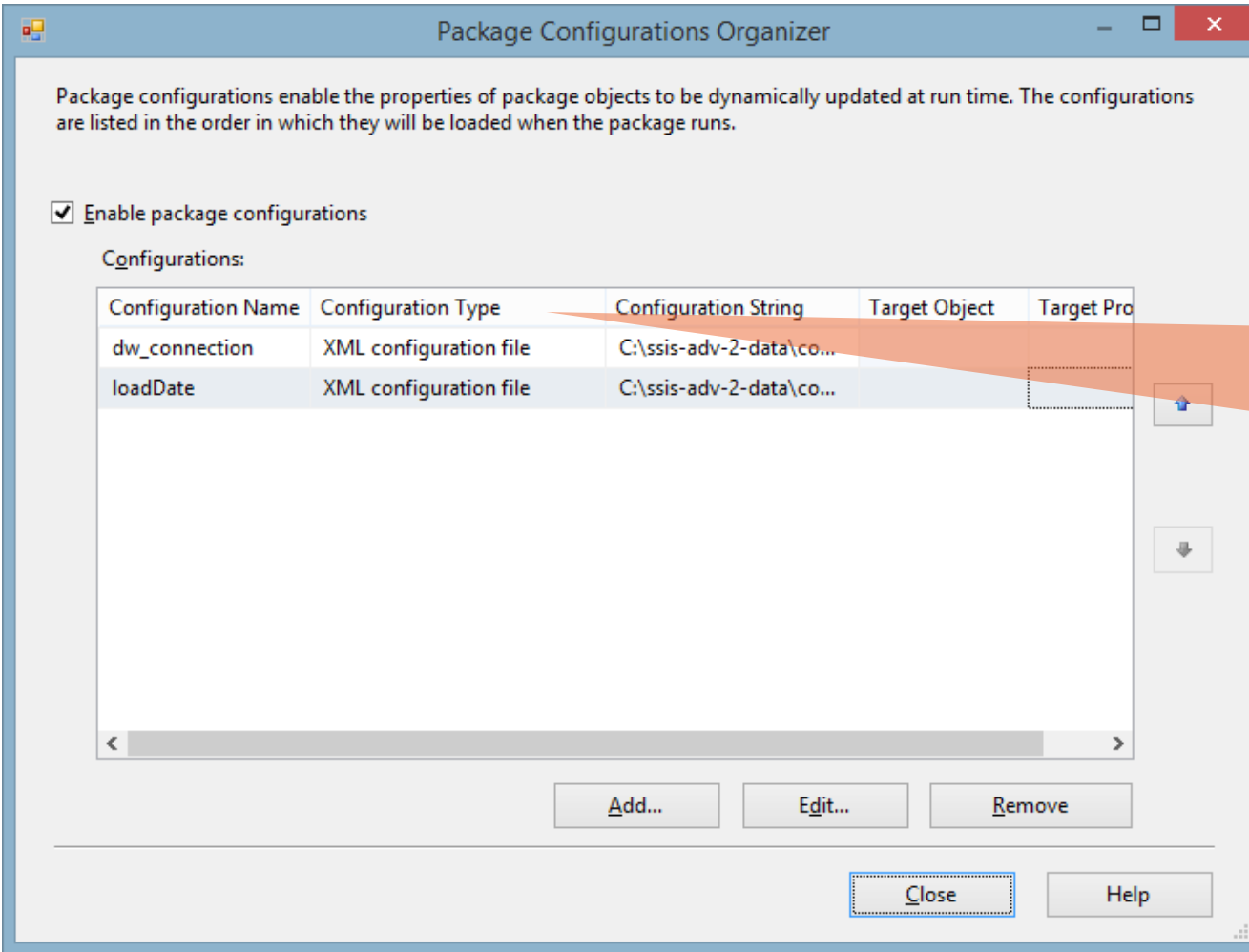
## Import Package (SSMS)



## DTUTIL.EXE (Command Line)

```
dtutil  
/FILE  
c:\ssis-adv-2-data\pkg\staging_pkg.dtsx  
/DestServer localhost /COPY  
SQL;staging_pkg
```

# Package Configuration



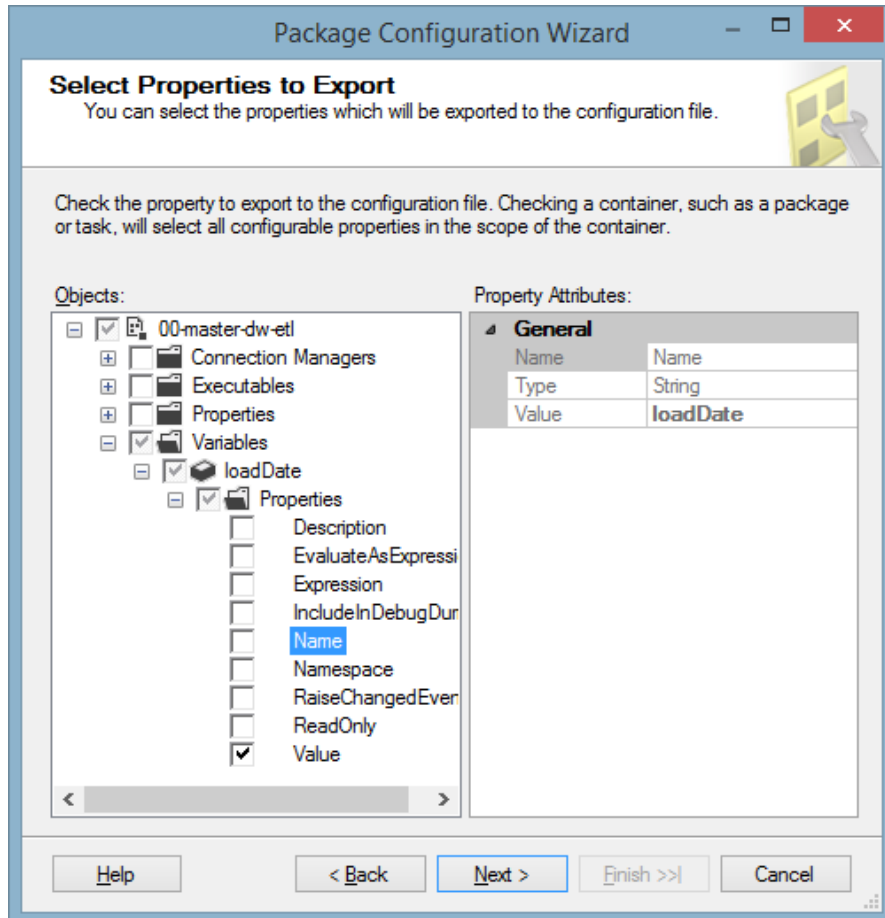
Configuration Types:

- XML
- SQL Server
- Registry
- Environment variable
- Parent package variable



# Package Configuration

## Variable Value



The screenshot shows the 'Package Configuration Wizard' window with the title 'Select Properties to Export'. Below the title is a subtitle: 'You can select the properties which will be exported to the configuration file.' A small icon of a yellow folder with a wrench is on the right. The main instruction reads: 'Check the property to export to the configuration file. Checking a container, such as a package or task, will select all configurable properties in the scope of the container.'

The 'Objects' pane on the left shows a tree structure with the following items checked:

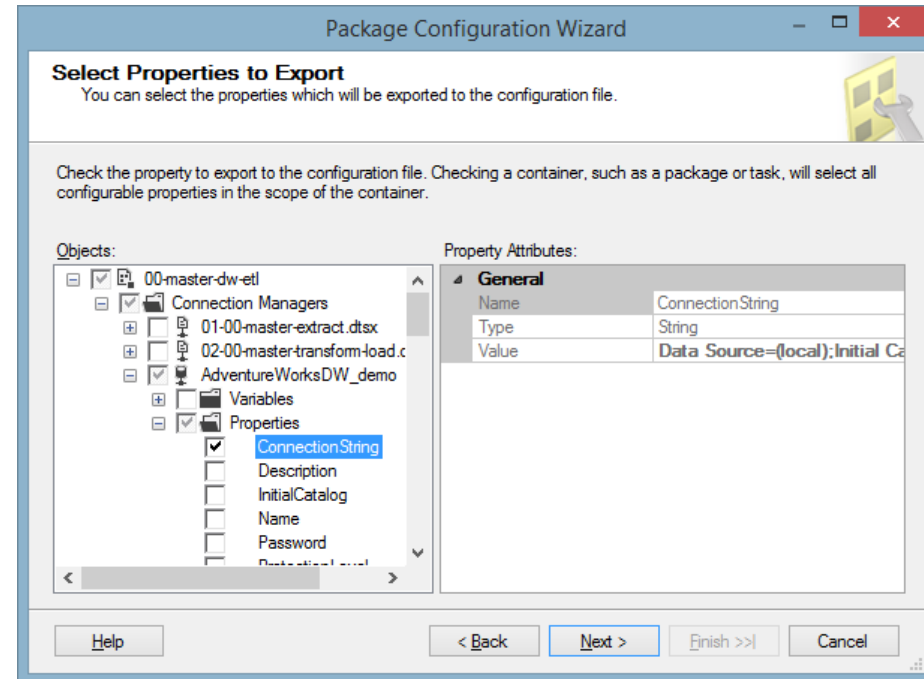
- ☒ 00-master-dw-etl
  - ☐ Connection Managers
  - ☐ Executables
  - ☐ Properties
  - ☒ Variables
    - ☒ loadDate
      - ☒ Properties
        - ☐ Description
        - ☐ EvaluateAsExpressi
        - ☐ Expression
        - ☐ IncludeInDebugDur
        - ☒ Name
        - ☐ Namespace
        - ☐ RaiseChangedEver
        - ☐ ReadOnly
        - ☒ Value

The 'Property Attributes' pane on the right shows a table with the following data:

General	
Name	Name
Type	String
Value	loadDate

At the bottom, there are buttons for 'Help', '< Back', 'Next >', 'Finish >>', and 'Cancel'.

## Connection String



The screenshot shows the 'Package Configuration Wizard' window with the title 'Select Properties to Export'. Below the title is a subtitle: 'You can select the properties which will be exported to the configuration file.' A small icon of a yellow folder with a wrench is on the right. The main instruction reads: 'Check the property to export to the configuration file. Checking a container, such as a package or task, will select all configurable properties in the scope of the container.'

The 'Objects' pane on the left shows a tree structure with the following items checked:

- ☒ 00-master-dw-etl
  - ☒ Connection Managers
    - ☐ 01-00-master-extract.dtsx
    - ☐ 02-00-master-transform-load.c
    - ☒ AdventureWorksDW\_demo
      - ☐ Variables
      - ☒ Properties
        - ☒ ConnectionString
        - ☐ Description
        - ☐ InitialCatalog
        - ☐ Name
        - ☐ Password
        - ☐ ProtectionLevel

The 'Property Attributes' pane on the right shows a table with the following data:

General	
Name	ConnectionString
Type	String
Value	Data Source=(local);Initial C

At the bottom, there are buttons for 'Help', '< Back', 'Next >', 'Finish >>', and 'Cancel'.

# Package Configuration

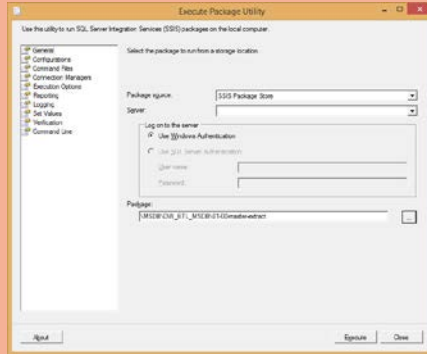
The screenshot shows the 'Package Configuration Wizard' window. The title bar says 'Package Configuration Wizard'. The main heading is 'Select Configuration Type' with a subtitle 'You can select the type of configuration to create.' Below this, it states 'SSIS supports a variety of sources to use for setting the properties of objects.' There are two radio buttons: 'Specify configuration settings directly' (which is selected) and 'Configuration location is stored in an environment variable'. Under the first option, there is a text box for 'Configuration file name:' containing the path 'C:\ssis-adv-2-data\config\dw\_connection.dtsConfig' and a 'Browse...' button. Under the second option, there is a text box for 'Environment variable:' which is currently empty. At the bottom, there are buttons for 'Help', '< Back', 'Next >' (which is highlighted with a dashed border), 'Finish >>', and 'Cancel'.

Direct reference

Indirect reference

Applies to all  
configuration types  
EXCEPT environment  
variable

# Package Execution



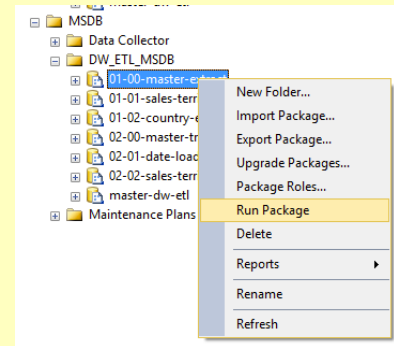
Execute Package Utility

```
DTEXEC /DTS  
"\"MSDB\DW_ETL_MSDB\01-00-  
master-extract\"" /SERVER  
"\".\\"" /CHECKPOINTING OFF  
/REPORTING EW
```

DTEXec

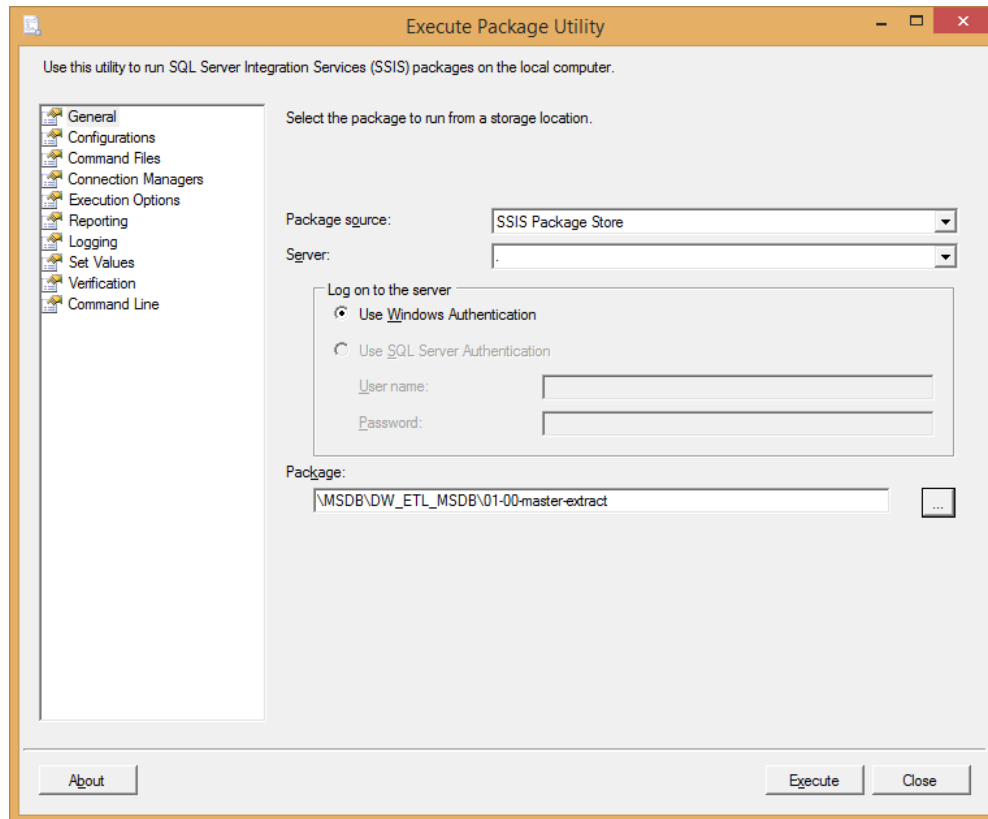


Scheduled Job



Management Studio

# Execute Package Utility



- Package location and name
- Package configuration files
- Command files
- Connection string
- Package properties
- Console reporting
- Logging
- Property values
- Verification
- Command line

# DTEXec

Location ID:  
/SQL  
/FILE

Path and package name

```
DTEXEC /DTS "\"\MSDB\DW_ETL_MSDB\01-00-master-extract\""  
/SERVER "\".\"" /CHECKPOINTING OFF /REPORTING EW
```

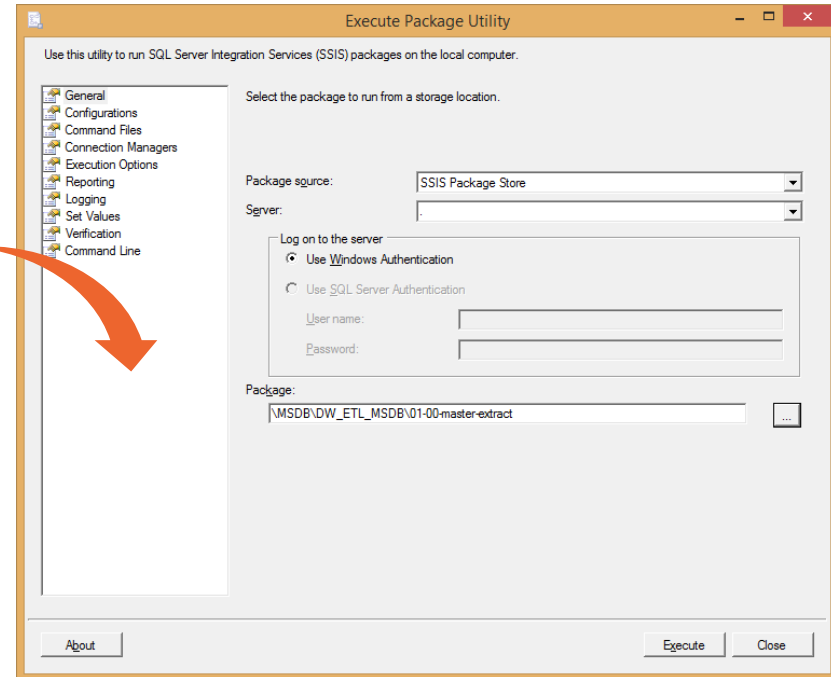
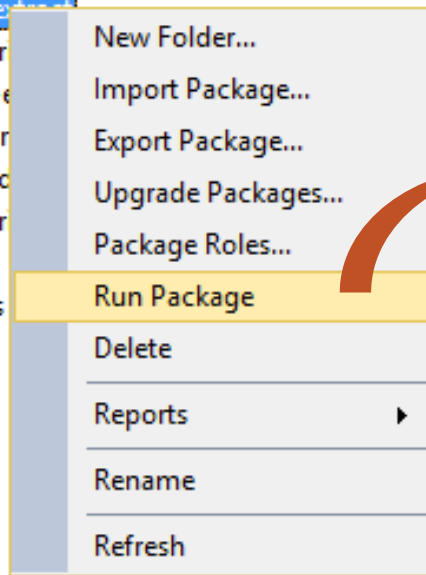
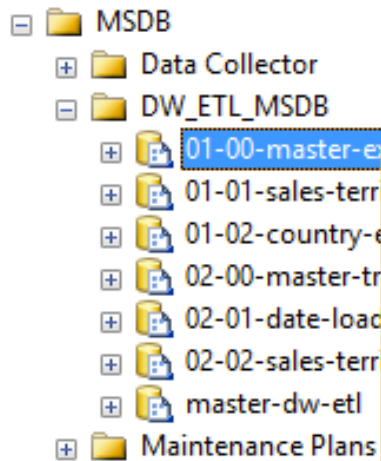
Server name

Optional parameters

Other options:

/CommandFile	/Connection
/ConfigFile	/Logger
	/Set and more...

# SQL Server Management Studio



# SQL Server Agent

**New Job Step**

Select a page

- General
- Advanced

Script Help

Step name: DW\_ETL

Type: SQL Server Integration Services Package

Run as: SQL Server Agent Service Account

Set values Verification Command line

Package Configurations Command files Data sources Execution options Logging

Package source: SSIS Package Store

Server: .

Log on to the server

- ☒ Use Windows Authentication
- ☐ Use SQL Server Authentication

User name: Password:

Package: \MSDB\DW\_ETL\_MSDB\01-00-master-extract

Next Previous OK Cancel

Connection

Server: DI06\Stacia

View connection properties

Progress

Ready

Interface similar to  
Execute Package  
Utility



# Summary

- **Deployment Target Options**

- SSIS Package Store (MSDB, File System) or general file system

- **Deployment Utility and Other Tools**

- Project properties for deployment, import in SSMS, and DTUTIL

- **Package Configuration**

- Override package executable properties, connections, variables
- XML, environment variable, registry, SQL Server table, parent package variable

- **Package Execution**

- Execute Package Utility, DTEXEC, Run Package command (SSMS), SQL Server Agent job