

Introduction to Integration Services

Learning about Integration Services Projects



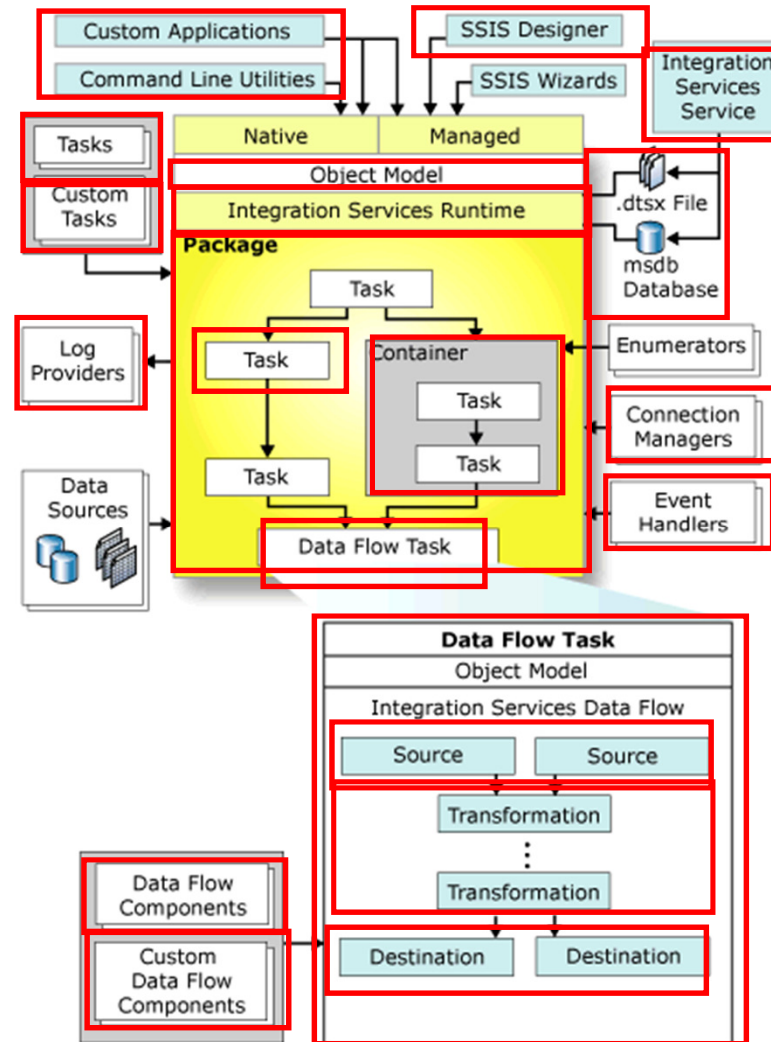
Overview

- Integration Services Uses
- Architecture
- Package Development
- Integration Services Projects in BIDS
- Package Designer

Integration Services Uses

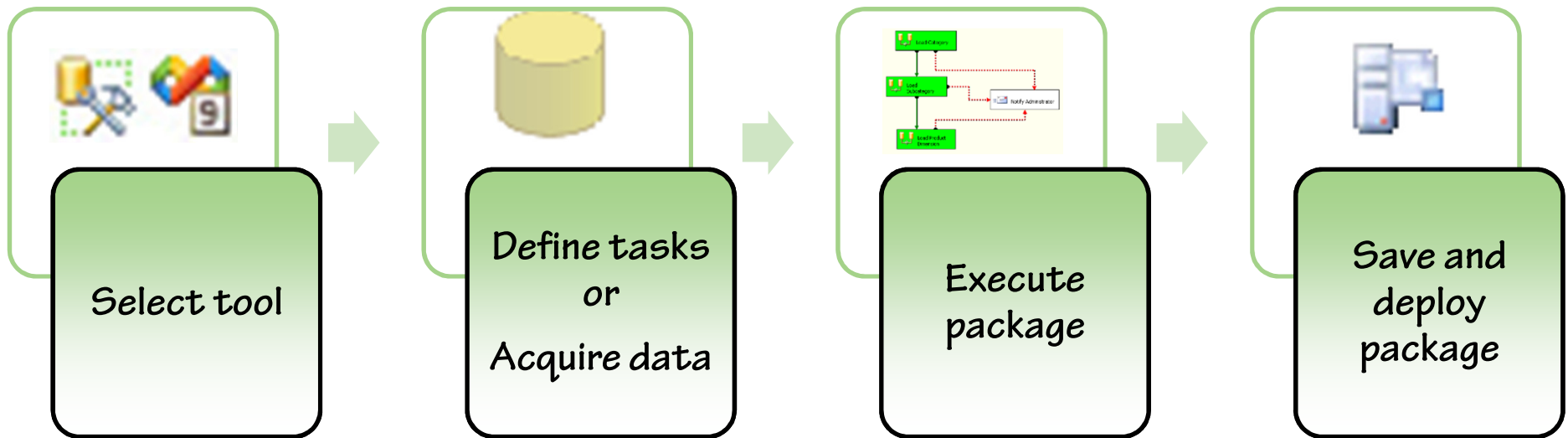
- Populating data warehouses (ETL)
- Cleaning and standardizing data
- Merging data from multiple data stores
- Automating administrative tasks

Architecture





Pipeline engine

Package Development






Integration Services Projects in BIDS

- Project types

-  Integration Services Connections Project Wizard
-  Integration Services Project

- Integration Services Project Items

-  Package *DTSX file*
-  Data Source *DS file*
-  Data Source View *DSV file*

Package Designer

Package Designer Tabs

Toolbox

Solution Explorer

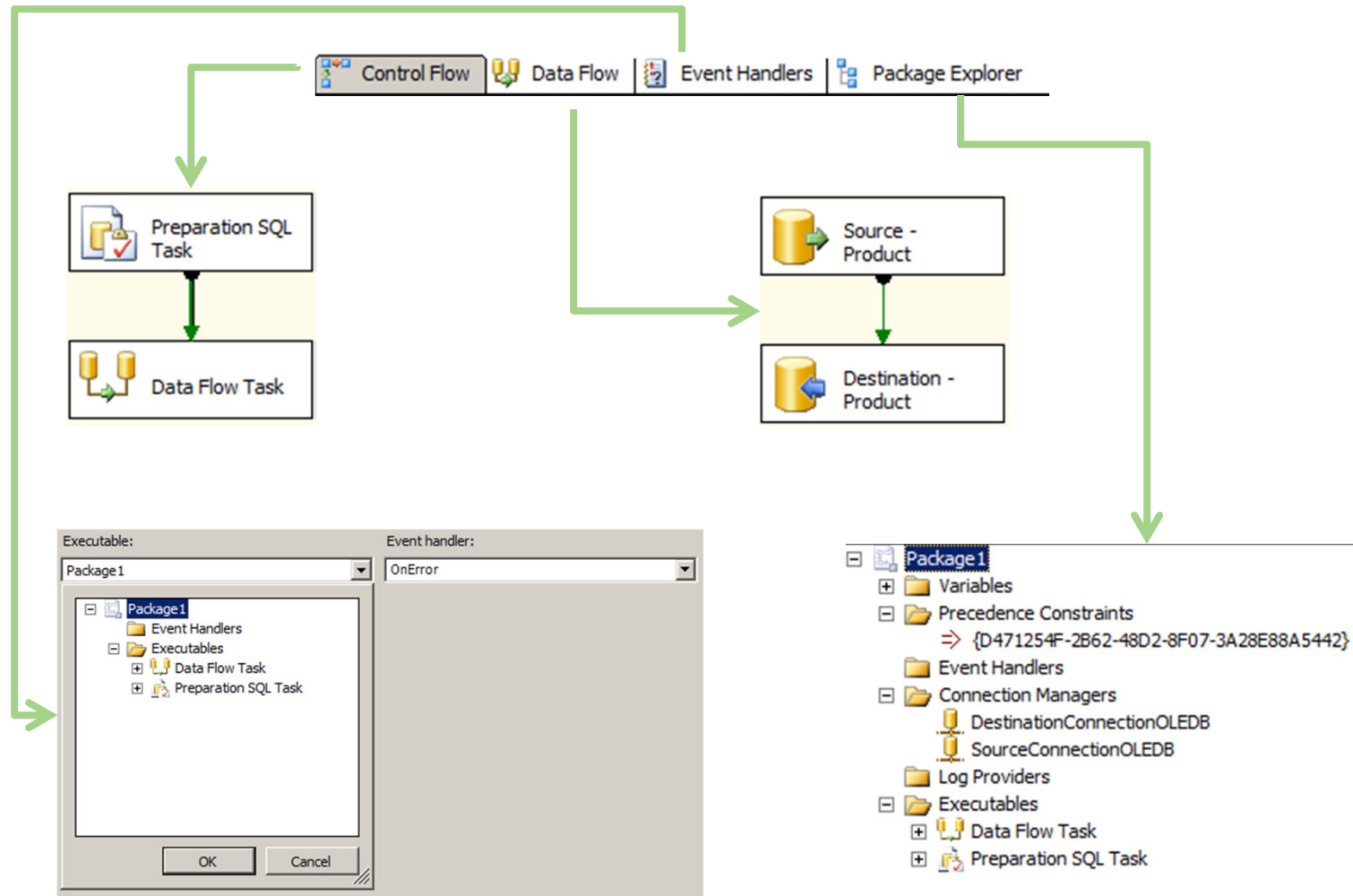
Connection Mgrs

Properties

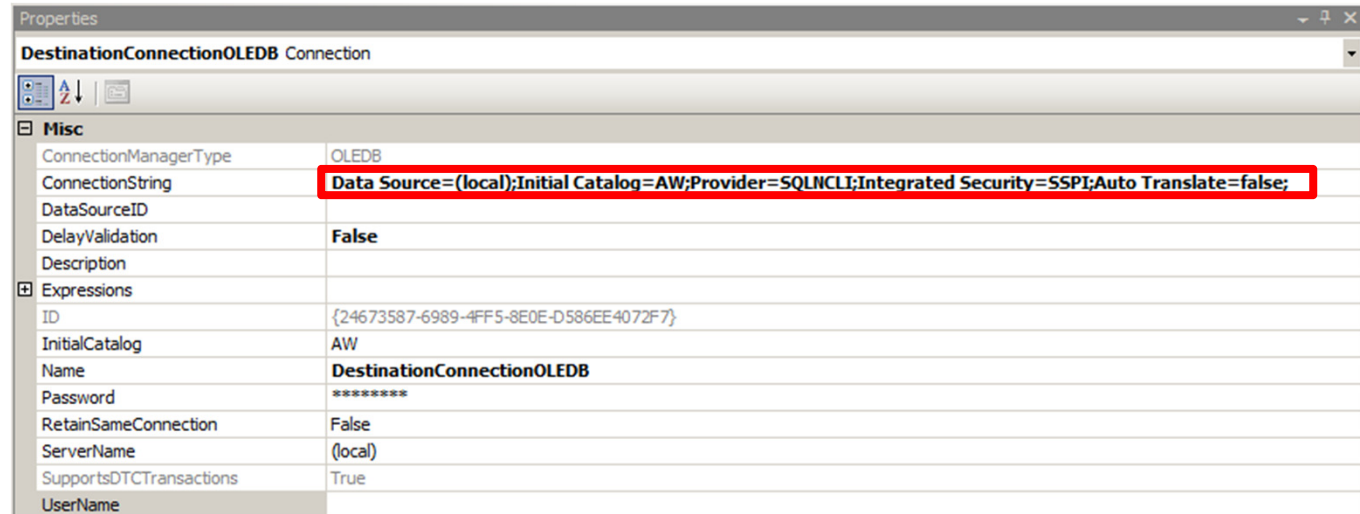
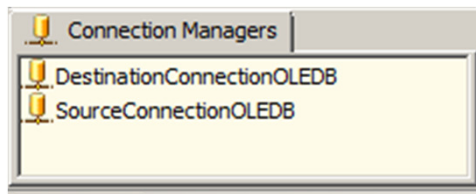
The screenshot displays the SSIS Package Designer within the Microsoft Visual Studio (Administrator) environment. The interface is organized into several key sections:

- Toolbox:** Located on the left, it contains two main categories of tasks: 'Control Flow Items' (e.g., Pointer, For Loop Container, Sequence Container) and 'Maintenance Plan Tasks' (e.g., Back Up Database Task, Check Database Integrity Task).
- Design Surface:** The central area where the package logic is built. It shows a 'Preparation SQL Task' connected to a 'Data Flow Task'.
- Connection Managers:** A pane at the bottom showing the configured connection managers, including 'DestinationConnectionOLEDB' and 'SourceConnectionOLEDB'.
- Solution Explorer:** A pane on the right showing the project structure, including 'Data Sources', 'Data Source Views', 'SSIS Packages', and 'Miscellaneous'.
- Properties Window:** A pane on the right showing the properties for the selected package ('Package1'). It includes fields for ID, Name, Package Type, and various configuration options like 'ForceExecutionResult', 'LocaleID', 'LoggingMode', 'OfflineMode', 'SuppressConfigurationWarnings', 'UpdateObjects', 'Security', 'PackagePassword', 'ProtectionLevel', 'IsolationLevel', 'TransactionOption', and 'Version'.

Package Designer Tabs

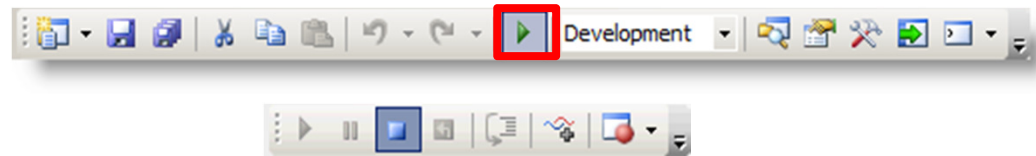


Connection Managers

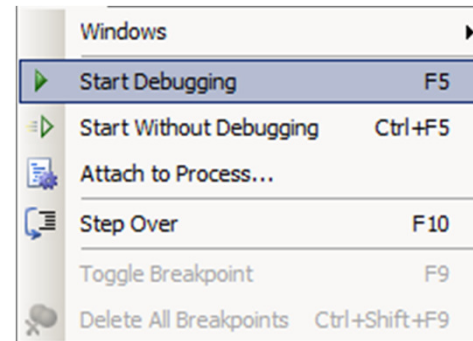


Package Execution

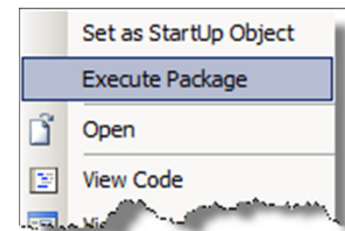
- Toolbar



- Debug Menu



- Package Context Menu



Summary

- **Integration Services Uses**
 - Data warehousing ETL, data cleansing, merging data, maintenance tasks
- **Architecture**
 - Control flow engine, data flow engine, package executables
- **Package Development**
 - Tool selection, task definition, package execution, deployment
- **Integration Services Projects in BIDS**
 - Package, data source, data source view
- **Package Designer**
 - Control flow, data flow, event handlers, package explorer
 - Connection managers
 - Package execution

References

- **Architecture of Integration Services**
 - <http://msdn.microsoft.com/en-us/library/bb522498.aspx>
- **Understanding the Components of an Integration Services Package**
 - <http://msdn.microsoft.com/en-us/library/ms139914.aspx>