

**Developing and Administering SQL Server Integration Services (SSIS)**

**Course Number:** SQL-526  
**Duration:** 5 days

**Overview**

Accelebrate's 5-day Developing and Administering SQL Server Integration Services (SSIS) class teaches attendees how to use SSIS to build, deploy, maintain, and secure Integration Services projects and packages. SSIS is used to extract, transform, and load data to and from SQL Server.

We also offer a [4-day class](file:////training/sql-server-ssis) to cover package development and the basics of deploying packages if your group does not wish to include **administrative** topics.

**Note:** This class is appropriate for SQL Server 2012 through 2019.

**Prerequisites**

Students should be comfortable with SQL Server Management Studio and writing basic queries.

**Materials**

All SSIS students receive comprehensive courseware.

**Software Needed on Each Student PC**

Attendees will not need to install any software on their computers for this class. The class will be conducted in a remote environment that Accelebrate will provide; students will only need a local computer with a web browser and a stable Internet connection. Any recent version of Microsoft Edge, Mozilla Firefox, or Google Chrome will work well.

**Objectives**

All attendees will:

* Create sophisticated SSIS packages for extracting, transforming, and loading data
* Use containers to efficiently control repetitive tasks and transactions
* Configure packages to dynamically adapt to environment changes
* Use Data Quality Services to cleanse data
* Successfully troubleshoot packages
* Create and Manage the SSIS Catalog
* Deploy, configure, and schedule packages
* Secure the SSIS Catalog

**Outline**

* Introduction
* SSIS Overview
  + SSIS Overview
  + Import/Export Wizard
  + Exporting Data with the Wizard
  + Common Import Concerns
  + Quality Checking Imported/Exported Data
* Working with Solutions and Projects
  + Working with SQL Server Data Tools
  + Understanding Solutions and Projects
  + Working with the Visual Studio Interface
* Basic Control Flow
  + Introduction to the Control Flow
  + Working with Tasks
  + Understanding Precedence Constraints
  + Annotating Packages
  + Grouping Tasks
  + Package and Task Properties
  + Connection Managers
  + Favorite Tasks
* Common Tasks
  + SSIS Tasks in the Common Section
  + Analysis Services Processing
  + Bulk Insert Task
  + Data Profiling Task
  + Execute Package Task
  + Execute Process Task
  + Expression Task
  + File System Task
  + FTP Task
  + Hadoop Tasks
  + Script Task Introduction
  + Send Mail Task
  + Web Service Task
  + XML Task
* Data Flow Sources and Destinations
  + The Data Flow Task
  + The Data Flow SSIS Toolbox
  + Working with Data Sources
  + SSIS Data Sources
  + Working with Data Destinations
  + SSIS Data Destinations
  + Chapter 5 Lab
  + Answers to Exercises
* Data Flow Transformations
  + Transformations Overview
  + Transformations
  + Configuring Transformations
* Making Packages Dynamic
  + Features for Making Packages Dynamic
  + Package Parameters
  + Project Parameters
  + Variables
  + SQL Parameters
  + Expressions in Tasks
  + Expressions in Connection Managers
  + After Deployment
  + How it all fits together
* Containers
  + Sequence Containers
  + For Loop Containers
  + Foreach Loop Containers
* Troubleshooting and Package Reliability
  + Understanding MaximumErrorCount
  + Breakpoints
  + Redirecting Error Rows
  + Logging
  + Event Handlers
  + Using Checkpoints
  + Transactions
* Deploying to the SSIS Catalog
  + SSIS Deployment Overview
  + The SSIS Catalog
  + Deploying Projects
  + Working with Environments
  + Executing Packages in SSMS
  + Executing packages from the command line
  + Deployment Model Differences
* Installing and Administering SSIS
  + Installing SSIS
  + Upgrading SSIS
  + Managing the SSIS Catalog
  + Viewing Built-in SSIS Reports
  + Managing SSIS Logging and Operation Histories
  + Automating Package Execution
* Securing the SSIS Catalog
  + Principals
  + Securables
  + Grantable Permissions
  + Granting Permissions
  + Configuring Proxy Accounts
* Conclusion