

**Introduction to SQL Server Integration Services (SSIS)**

**Course Number:** SQL-524  
**Duration:** 4 days

**Overview**

Accelebrate's 4-day Introduction to SQL Server Integration Services (SSIS) training teaches attendees how to use SSIS to build high-performance ETL (Extract, Transform, and Load) and workflow packages and projects.

We also offer a [5-day class](file:////training/developing-administering-sql-server-ssis) that adds coverage of **administrative topics,** such as project deployment, managing packages in an SSIS catalog, securing the SSIS catalog, and more.

**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 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**

* 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
* Incrementally load data into a data warehouse
* Deploy and execute packages
* Successfully troubleshoot packages
* Configure package reliability

**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
* Conclusion