

**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