

# SQL Server: Integration Services

## WorkshopPLUS

**Focus Area:** Data Collection & Transformation

**Duration:** 3 days

**Difficulty:** 200 - Intermediate

### Overview

This course will provide you the knowledge of developing, troubleshooting, and managing SQL Server Integration Services (SSIS) packages for all Extract-Transform-Load (ETL) solutions.

### Objectives

After completing this training, students will be able to:

- Develop SSIS Packages
- Deploy SSIS Packages
- Troubleshoot SSIS Packages

### Key takeaways

#### Course material

- Understand the tools available to develop, troubleshoot, and manage SSIS packages.

#### Hands-on labs

- Most of the concepts covered above will be supported by hands-on labs and demos
- The lab material for this workshop will left with you to continue practicing after workshop.
- All content is provided as-is, without warranty and grantees.
- Client is expected to provide hardware resource for the workshop.

### Agenda

#### Day 1

- Module 1: Introduction & Architecture
- Module 2: Development Tools

#### Day 2

- Module 3: SSIS Development

#### Day 3

- Module 4: Error Handling
- Module 5: Deployment
- Module 6: Troubleshooting
- Module 7: Best Practices

Plan for 3 full days. Early departure on any day is not recommended.

## Course details

### Module 1: Introduction & Architecture

- What is SQL Server Integration Services (SSIS)?
- SSIS Architecture
- SSIS Components
- SSIS High Availability
- SSIS Usage Scenarios
- New to SSIS 2016, 2017, 2019, and 2022.

### Module 2: Development & Management Tools

- SQL Server Data Tools
- SQL Server Management Studio
- Command Line Tools for Management

### Module 3: Development

- Project vs Package
- Connection Manager
- Variable vs Parameters
- Expressions
- Connection Strings
- Control Flow
- Precedence Constraints
- Data Flow
- Event Handlers
- Control Flow Parts

### Module 4: Error Handling

- Error Output
- Event Handler
- Transactions
- Checkpoints

### Module 5: Deployment

- Deploy using SQL Server Data Tools (SSDT)
- ISPAC Deployment
- SSIS CatalogDB Deployment & Environment Management

### Module 6: Troubleshooting

- Troubleshooting with SQL Server Data Tools (Development)
- Integration Services Dashboard
- Logs

### Module 7: Best Practices

- SSIS Project Development Standards
- SSIS Design Strategies
- Logging Options
- SSIS Security Considerations
- Configuration & Deployment Review

## Recommended qualifications

- Target experience, expectations and qualifications, for example:
- IT staff who has experience with SQL Server, T-SQL Development, and Visual Studio.
- Familiarity is expected but not required.

## Hardware & Software Requirements

- An Intel Core-i5-based PC
- USB port
- 4 GB RAM
- 128 GB HDD
- Windows 7 SP1 or later
- Microsoft SQL Server Develop Edition
- Microsoft Visual Studio Community Edition
- SQL Server Data Tools
- SQL Server Management Studio

## For more information

Contact your Microsoft Account Representative for further details.