PURPLE GRIFFON
The IT Service Management Training & Consultancy Specialists

Course Title: SQL Server Integration Services For Business Intelligence	**Course Duration**: 4.0 Days
Exam: Not Included	**Exam Type**: Proctored Exam
Qualification: SQL Server Integration Services For Business Intelligence Certificate	

Course Syllabus

Our SQL Server Integration Services For Business Intelligence training course covers the following Modules:

Module 1: Introduction to Integration Services

- Defining SQL Server Integration Services (SSIS)
- Exploring the need for migrating diverse data
- The role of Business Intelligence (BI)

Module 2: SSIS Architecture and Tools

Managing heterogeneous data

- Leveraging the Extract, Transform and Load (ETL) capabilities of SSIS
- Running wisards for basic migrations
- Creating packages for complex tasks
- Explore other supported data sources, such as Hadoop and NoSQL

Illustrating SSIS architecture

- Distinguishing between data flow pipeline and package runtime
- Executing packages on the client side or hosted in the SSIS service
- Bullet-proofing a package with package environments
- Package restart ability with checkpoint files

Simplifying deployments

- Distinguishing between project and package deployment modes
- Deploying packages to the SSISDB
- Running packages from SQL Server
- Leveraging package parameters

Module 3: Implementing Tasks and Containers

Utilising basic SSIS objects

- Configuring connection managers
- Adding data flow tasks to packages
- Reviewing progress with data viewers
- Assembling tasks to perform complex data migrations

- Migrating multiple files with FOREACH container

Operating system-level tasks

- Copying, moving, and deleting files
- Transferring files with the FTP task
- Communicating with external sources
- Sending messages through mail

Processing XML

- Iterating XML nodes
- Writing XML files from databases

Module 4: Extending Capabilities with Scripting

Writing expressions

- Making properties dynamic with variables
- Utilising expressions in loop iterations

Script Task

- Extending functionality with the Script Task
- Debugging, breakpoints, and watches

Module 5: Transforming with the Data Flow Task

Performing transforms on columns

- Converting and calculating columns
- Transforming with Character Map

Profiling, combining, and splitting data

- Merge, Union, and Conditional Split
- Multicasting and converting data

Manipulating row sets and BLOB data

- Aggregate, sort, audit, and look up data
- Importing and exporting BLOB data
- Redirecting error rows

Performing database operations

- Executing a SQL task
- Bulk inserting data from text files

Module 6: Error Handling, Logging and Transactions

Organising package workflow

- Defining success, failure, completion, and expression precedence constraints
- Handling events and event bubbling

Designing robust packages

- Choosing log providers
- Adapting solutions with package configurations
- Auditing package execution results
- Accessing package data with ADO.NET

Course Overview

Our four-day SQL Server Integration Services For Business Intelligence training course will teach you the skills to improve business intelligence capabilities by automating complex migration tasks and auditing the success or failure of migration processes. In addition, you will learn to transform data among heterogeneous data sources — such as text files, Oracle, Access, XML, ODBC, and OLE DB — and effectively and securely manage data migration across various platforms.

Additionally, You will gain the skills to migrate and transform data with SQL Server Integration Services. You learn to solve data management problems by creating dynamic packages for migrating, processing, and reporting on data for business intelligence. Specifically, you learn to deploy packages to an SSIS server, assemble tasks to perform complex data migrations, and enhance package functionality with scripting.

Course Learning Outcomes

Our SQL Server Integration Services For Business Intelligence training course will teach you to become proficient in the following:

- Solve data management problems by migrating and processing data.
- Perform nonstandard imports and exports using the Script component.
- Assemble tasks to perform complex data migrations.
- Extract, Transform, and Load (ETL) data.
- Incrementally migrate data from SQL Server data sources using Change Data Capture (CDC).
- Deploy packages to an SSIS catalog.

Audience

Our SQL Server Integration Services For Business Intelligence training course will benefit several individuals and organisations including but not limited to:

- Data Engineers
- Business Intelligence Developers
- Data Analysts
- BI Architects
- Database Administrators
- IT Professionals and Developers
- Business Users

Entry-Level Requirements

Our SQL Server Integration Services For Business Intelligence training course requires attendees to have Familiarity with relational database management systems, programming concepts, and SQL language.

Recommended Reading

There is no recommended reading for our SQL Server Integration Services For Business Intelligence training course.

What's Included

Our SQL Server Integration Services For Business Intelligence training course contains the following:

- 4-day instructor-led training course
- One-on-one after-course instructor coaching
- After-course computing sandbox
- Pre-reading
- Course Manual
- Quizzes
- Exercises

Exam Information

Our SQL Server Integration Services For Business Intelligence Exam:

- Format: Multiple Choice
- Questions: 40
- Pass Mark: 70%

What's Next

Attendees may enjoy our two-day Querying SQL Databases Using T-SQL training course.

Our three-day Introduction to SQL training course is designed to provide an introduction to the SQL programming language, which is the standard language for relational database management systems. The course covers the basics of SQL, including creating tables, manipulating data, and querying databases. Students who complete the course will be equipped to write SQL queries, work with Microsoft SQL Server or PostgreSQL

Additional Information

Our SQL Server Integration Services For Business Intelligence training course offers several benefits to individuals and organisations including but not limited to:

- **Enhanced Data Integration**: SSIS provides a robust platform for integrating data from diverse sources.
- **Improved Data Quality**: SSIS offers features for data cleansing, validation, and error handling.
- **Efficient ETL Processes**: SSIS provides a visual design environment that allows you to create and manage ETL processes efficiently.
- **Scalability and Performance Optimisation**: SSIS offers features such as parallelism, data streaming, and bulk loading to optimise the performance of ETL operations.
- **Integration with Other BI Tools**: SSIS seamlessly integrates with other Microsoft BI tools, such as SQL Server Analysis Services (SSAS) and SQL Server Reporting Services (SSRS).
- **Career Advancement**: Knowledge of SSIS is highly valued in the job market, particularly in roles related to data engineering, business intelligence development, and data integration.
- **Cost Savings**: SSIS is a part of the Microsoft SQL Server suite, which means it is already included in the SQL Server licensing.