

INTELIGENCIA DE NEGOCIO CON SQL SERVER

Este curso de Microsoft e-Learning está orientado a preparar a los alumnos en el desarrollo de soluciones de *Business Intelligence* con SQL Server.

El curso consta de diversos módulos que siguen la secuencia lógica de la creación de este tipo de soluciones:

- Diseño de Data Warehouse y estructuras de análisis de datos
- Carga, homogeneización y pre-procesado de datos desde los orígenes de información.
- Generación y distribución de informes y resultados de los análisis.



Los tres primeros módulos enseñan a poner en práctica con SQL Server 2005 estas tres grandes fases conceptuales, mediante *Analysis Services*, *Integration Services* y *Reporting Services* respectivamente.

Los dos siguientes módulos muestran las novedades y mejoras introducidas en esta materia por SQL Server 2008.

Finalmente se ha incluido un módulo que enseña a realizar todas estas operaciones cuando debemos trabajar también con bases de datos de Oracle.

Todos estos módulos incluyen **laboratorios prácticos** que permiten a los alumnos conectarse a Internet para trabajar con las herramientas en un entorno real sin necesidad de tener instalado el software en sus propios equipos. Además se pueden descargar para su visualización y **uso sin conexión a Internet**.

El curso incluye **un año de acceso** al material.

Duración estimada: Microsoft estipula el tiempo necesario para completar el curso en 22 horas. No obstante nuestra experiencia nos indica que en realidad suele llevar en torno a un 50% más de este tiempo, es decir, unas **30-33 horas aproximadamente**. Se trata de un curso muy completo.

Contenidos

1.- Microsoft® SQL Server™ 2005 Analysis Services (6h)

Exploring SSAS Core Concepts and Architecture

Module Introduction

SSAS Core Concepts

Lesson Introduction

Data Sources and Data Source Views
Dimensions
Measures and Measure Groups
Cubes
The Unified Dimensional Model (UDM)
Self Test
New Features in the SSAS Architecture
Lesson Introduction
New Server Features for Administrators
New Server Features for Developers
New Client Programmability Features
Self Test
Module Summary
Designing and Deploying a Unified Dimensional Model
Module Introduction
Creating an Analysis Services Project
Lesson Introduction
The Business Intelligence Development Studio
The Visual Studio Integrated Development Environment
Creating a Data Source
Creating a Data Source View
Modifying the Properties of a Data Source View
Self Test
Building a Cube
Lesson Introduction
Starting the Cube Wizard
Selecting the Build Method
Identifying Fact and Dimension Tables

Selecting Time Periods
Selecting Measures and Reviewing Dimension Hierarchies
Deploying a Cube
Self Test
Implementing Advanced Features of a Cube
Lesson Introduction
Adding Business Intelligence to a Cube
Adding Key Performance Indicators to a Cube
Adding Translations to a Cube
Adding Perspectives to a Cube
Adding Actions to a Cube
Adding User-Defined Functions to a Cube
Self Test
Lab: Building a Cube
Lesson Introduction
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Lab Review
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Administering SSAS
Module Introduction
Upgrading and Migrating to SSAS 2005
Lesson Introduction
Considerations for Upgrading to SSAS 2005
Migrating to SSAS 2005
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Configuring Roles, Groups, and Permissions
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User Authentication
Granting Administrative Access
Granting User Access
Granting Permissions to Roles
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Managing SSAS
Lesson Introduction
Configuring SSAS
Backing Up an SSAS Database
Restoring an SSAS Database
Processing a Cube
Optimizing SSAS Performance
Self Test
Managing Partitions and Real Time BI
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Managing Partitions
Creating a New Partition
Managing Proactive Caching
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Programming in SSAS 2005
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Exploring SQL Server Management Studio

Lesson Introduction
The Toolbar in SQL Server Management Studio
The MDX Query Editor
The Object Explorer
Self Test
New Features of MDX
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Attributes
Hierarchies
Subcubes
Named Sets
Calculated Members
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Scripting with MDX
Lesson Introduction
An Overview of MDX Scripts
Storing Calculations with a Cube
Scripting Scope and Context Elements
Scripting Variables and Parameters
Handling Exceptions in MDX Scripts
Self Test
New Programming Features
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XML for Analysis (XMLA)
ADOMD.NET
Analysis Management Objects (AMO)
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Working with Data Mining Solutions in SSAS
Module Introduction
Data Mining Concepts and New Features
Lesson Introduction
An Introduction to Data Mining
Using Data Mining to Enhance Business Solutions
Data Mining Algorithms
Self Test
Exploring Data Mining Models
Lesson Introduction
Data Mining Models
Considerations for Developing Data Mining Models
Self Test
Working with Data Mining Tools
Lesson Introduction
Creating a Data Mining Structure
The Data Mining Designer
Validating Data Mining Models
Data Mining Extensions (DMX)
Data Mining Using SQL Server Management Studio
Self Test
Lab: Working with Data Mining Solutions
Lesson Introduction

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2.- Data ETL with Microsoft® SQL Server™ 2005 Integration Services (6h)

Exploring SSIS Architecture and Core Concepts
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SSIS Architecture
Lesson Introduction
An Overview of SSIS
The Evolution from DTS to SSIS
The SSIS Development Environment
The SSIS Runtime
Self Test
SSIS Core Concepts
Lesson Introduction
Containers, Tasks, and Precedence Constraints
Data Flow Tasks
Connectivity
Variables and Package Configurations
Event Handlers and Log Providers
Self Test
Module Summary
Designing and Debugging SSIS Packages
Module Introduction
Creating Package Control Flow
Lesson Introduction

The SSIS Package Designer
An Overview of Control Flow
Adding and Configuring Containers
Adding and Configuring Tasks
Using Precedence Constraints
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Creating Package Data Flow
Lesson Introduction
An Overview of Data Flow
Adding Data Sources
Adding Transformations
Adding Destinations
Connecting Data Flow Components
Self Test
Designing for Scalability and Performance
Lesson Introduction
The OVAL Design Strategy
Operations and Volume
Application and Location
Performance Monitoring of SSIS Packages
Self Test
Debugging SSIS Packages
Lesson Introduction
Executing a Package
Setting Breakpoints
Adding a Data Viewer
Monitoring Data Flow Progress
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Lab: Creating and Debugging a Package
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Rich Functionality in SSIS
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Configuring and Deploying SSIS Packages
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An Overview of Package Deployment
Creating Package Configurations
Deploying a Package
Self Test
Enhancing ETL Operations
Lesson Introduction
Adding Logging to a Package
Parallel Operations
Sequence Containers
Lookup Caching
Using Checkpoints to Restart After Failure
Self Test
Working with Transformations
Lesson Introduction
Derived Column Transformation
Slowly Changing Dimension Transformation
Fuzzy Lookup Transformation
Fuzzy Grouping Transformation

Data Mining Query Transformation
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Programmability
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Programming SSIS Tasks and Packages
Using the Script Task
Using the Script Component Transformation
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Beyond ETL
Lesson Introduction
Non-Traditional Data Sources
Alternative Transformations
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Lesson Introduction
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3.- Reporting Skills in Microsoft® SQL Server™ 2005 Reporting Services (6h)

Exploring the Features and Core Concepts of SSRS
Module Introduction
Features of SSRS
Lesson Introduction
An Overview of SSRS
Authoring Reports
Publishing and Managing Reports
Accessing Reports
Designing Ad Hoc Report Models
Building Ad Hoc Reports
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SSRS Core Concepts
Lesson Introduction
Data Sources, Datasets, Fields, and Filters
Report Items
Data Regions
Parameters
Document Maps
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Designing Reports Using Report Designer
Module Introduction
Designing Reports Using the Report Wizard
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Creating a Data Source
Creating a Report Using the Report Wizard

Designing a Table Report
Designing a Matrix Report
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Working with Data Regions
Lesson Introduction
Creating a Dataset
Creating a Chart Data Region
Creating a List Data Region
Interactive Sorting
Nested Data Regions and Subreports
The NoRows Property
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Lab: Designing a Report
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Deploying and Managing Reports
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Deploying Reports
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Deploying a Report from Visual Studio
Deploying a Report Using Scripts
Deploying a Report Using Report Manager
Self Test
Managing Reports
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Configuring Shared Data Sources
Configuring Report Properties
Configuring Subscriptions
Scheduling Report Subscriptions and Processing
Configuring Security Settings
Rendering and Viewing Reports
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Working with Ad Hoc Reports
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Using Report Model Designer
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An Overview of Report Models
Creating a Report Model Project
Entities, Source Fields, and Expressions
Roles, Folders, and Perspectives
Creating a Report Model
Publishing a Report Model
Self Test
Using Report Builder
Lesson Introduction
An Overview of Report Builder
Creating an Ad Hoc Report Using Report Builder

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Lab: Creating an Ad Hoc Report
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4.- What's New in Microsoft SQL Server 2008 for Business Intelligence (1h)

What's New in SQL Server 2008 for Business Intelligence
Module Introduction
Integration Services in SQL Server 2008
Reporting Services in SQL Server 2008
Analysis Services in SQL Server 2008
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5.- New Features Of Microsoft SQL Server 2008 Reporting Services (1 h)

New Features Of Reporting Services 2008
Module Overview
Key Benefits of Microsoft SQL Server 2008 Reporting Services
Features of Microsoft SQL Server 2008 Reporting Services Authoring
Features Of Microsoft SQL Server 2008 Reporting Services Management and Delivery
Installing Microsoft SQL Server 2008 Reporting Services
Clinic Summary
Glossary

6.- Building Interoperable Solutions with Microsoft® SQL Server™ 2005 and Oracle Databases (2h)

Building Interoperable Solutions with Microsoft SQL Server 2005 and Oracle Databases
Module Introduction
Connecting SQL Server 2005 to Oracle
Lesson Introduction
Methods for Integrating SQL Server 2005 and Oracle
What Are Distributed Queries?
What Is Replication?
SQL Server Replication Architecture
How Snapshot Replication Works in Oracle Databases
How Transactional Replication Works in Oracle Databases
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Implementing ETL Through SSIS
Lesson Introduction
What Is SSIS?
The SSIS Package Designer Interface
Data Flow In SSIS
Data Transformation in SSIS
Control Flow in SSIS
SSIS Package Execution
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Building Analytical Solutions by Using SSAS
Lesson Introduction
OLAP in SQL Server 2005 Analysis Services
Design Considerations for Dimensional Schemas
What Are Measures and Measure Groups?
What Are Dimensions?

Cube Storage Types
Data Mining in SQL Server 2005
Self Test
Analyzing Data
Lesson Introduction
OLAP Cube Querying Operations
User OLAP Reporting Tools and Applications
Cube Driven Excel Analysis
What Are KPIs?
Self Test
Creating Reports by Using SSRS
Lesson Introduction
Architecture of Reporting Services
Reporting Services Tools
The Process for Creating Reports in SSRS
Report Deployment in SSRS
Report Subscriptions in SSRS
Report Models in SSRS
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Lab: Building Interoperable Solutions with Microsoft SQL Server 2005 and Oracle
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Exercise Information
Launch the Lab
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