

TDWI Data Virtualization: Solving Complex Data Integration Challenges (NEW)

Eğitim Tipi: **Classroom**

Süre: **1 Day**

Eğitim Hakkında

The data integration landscape has changed radically the past few years. What was once a relatively manageable problem of blending and unifying data from enterprise transaction systems has grown to encompass external data, Web data, clickstream data, end-user data, big data, cloud data, and more. New expectations for information-driven business agility further compound the complexities of modern data integration. The ETL-based data warehouse is no longer enough. Data virtualization is a core component of next-generation data integration architectures, techniques, and technology.

Get ready to expand your data integration capabilities, deliver business-speed information, and make the most of recent advances in data integration technology. Through a combination of lecture, exercises, and case study review you will learn how data virtualization works and how to position it in your data integration architecture and processes.

Önkoşullar

There are no prerequisites for this course.

Kimler Katılmalı

- BI, MDM, and data warehousing program and project managers
- Data integration architects, designers, and developers
- Data and technology architects

Neler Öğreneceksiniz

- Data virtualization definitions and terminology
- Business case and technical rationale for data virtualization
- Key concepts and foundational principles of virtualization--views, services, etc.
- Data virtualization lifecycle, capabilities, and processes
- How to extend the data warehouse with virtualization
- How virtualization enables federation and enterprise data integration
- How virtualization is applied for big data and cloud data challenges
- How companies use virtualization to solve business problems and drive business agility

Eğitim İçeriği

Data Virtualization Module 1. Data Virtualization Concepts and Principles

Data Virtualization Basics

- Data Virtualization Defined
- Virtualization vs. Materialization
- Virtualization vs. Synchronization
- Virtualization vs. Federation
- History and Evolution

Why Data Virtualization?

- Business Agility
- The Data Virtualization Business Case
- The Data Virtualization Technical Case

The Data Virtualization Foundation

- Views
- Query Optimization
- Data Services
- A "Bird's-Eye" View

Virtualize or Materialize?

- Decision Factors
- Business Considerations Discussion

Module 2. Data Integration Architecture

Integration Architecture Concepts

- Integration Architecture Defined
- Data Sources, Middleware, and Data Consumers
- You Have It (Whether Defined or Not)

Reference Architectures

- Forrester's Data Architecture Reference Model
- Forrester's IaaS Architecture
- Gartner's Data Services Layer Architecture
- IBM's BI Reference Architecture

Integration Architecture Examples

- Example 1 – Ministry Social Services Logical Architecture
- Example 2 – Energy Industry Logical Architecture
- Example 3 – Energy Industry Technical Architecture
- Example 4 – Financial Services Logical Architecture

Virtualize or Materialize?

- Data Source Considerations Discussion

Module 3. Data Virtualization in Integration Architecture

Virtualization in Data Integration Projects

- Data Virtualization Use Cases

Data Warehousing Use Cases

- Data Warehouse Augmentation
- Data Warehouse Federation
- Hub and Virtual Spoke
- Complement ETL
- Data Warehouse Prototyping
- Data Warehouse Migration

Data Federation Use Cases

- Federated Views
- Data Services
- Data Mashups
- Caches
- Virtual Data Marts
- Virtual Operational Data Store (ODS)

MDM and EIM Use Cases

- Master Data Hub Extension
- Master Data Services
- Virtual Data Layer
- Enterprise Data Services

More Data Virtualization Applications

- Virtualization and Big Data
- Virtualization and Cloud Data

Virtualize or Materialize?

- Data Consumer Considerations Discussion

Module 4. Data Virtualization Platforms

Platform Requirements

- Data and Information Services
- Development Environment
- Management Functions

Platform Capabilities

- Access
- Delivery
- Transformation
- Abstraction
- Federation
- Query Optimization
- Caching
- Security
- Quality
- Governance

Platform Variations

- Stand-Alone Data Virtualization
- Extension of BI or Data Warehousing Platform
- Embedded and Appliances
- Some Vendors

Module 5. Implementing Data Virtualization

Analysis

- Goals and Purpose
- Scoping
- Data Source Discovery
- Source Data Analysis

Design and Modeling

- Data Source Layer
- Data Integration Layer
- Publish and Access Layer

Development

- Connect to Data Sources
- Build the Views
- Test and Validate
- Publish and Connect Applications

Deployment

- Acceptance Testing and Production

Operation

- Runtime Operations
- Management and Governance

Virtualize or Materialize?

- A Decision Tool

Module 6. Getting Started with Data Virtualization

Skills and Competencies

- Capabilities and Expertise

Human Factors

- People and Data Virtualization

Goals and Expectations

- DV Readiness
- Choosing a First DV Project
- Planning a DV Roadmap

Best Practices

- What Works in DV
- Mistakes to Avoid