INTELLIGENT BUSINESS STRATEGIES PRESENTS

Mike **Ferguson**

Migrating your Data Warehouse to the Cloud

OVERVIEW

For most companies today the attraction of cloud computing is too tempting to ignore and one of the areas that is high priority is analytics. Many companies are looking take advantage of new technologies available on the cloud for real-time analytics, machine learning and analysis of huge volumes of multi-structured data, to add to what they already know. However, given that their core analytical systems are data warehouses and data marts sitting in their data centres, it's not surprising that migrating these systems to the cloud is high on the agenda.

This 1-day course details what is involved in migrating data warehouse and data marts to cloud based Analytical Relational DBMSs such as Amazon Redshift, Google Big Query, Microsoft Azure Synapse Analytics, IBM Db2 Warehouse on Cloud, Oracle Autonomous Data Warehouse, Snowflake and Teradata Vantage on Cloud.

WHAT YOU WILL LEARN

- What should be in a Data Warehouse migration plan
- Pre-migration preparation
- Defining a data warehouse migration strategy
- The risks that can threaten the chance of success and how-to de-risk a project
- How to migrate a data warehouse schema, data and ETL jobs and security while minimising impact on business users
- Understanding SQL differences
- Whether you should you migrate an existing data warehouse 'as is' or try to make changes during migration?
- Existing data warehouse DBMS specifics you need to know about in a migration
- Migration tools to help you

MODULE 1: THE DATA WAREHOUSE MIGRATION CHALLENGE

- Why Migrate Your Data Warehouse to the cloud?
  - Business Case
  - Technology
- Planning for Data Warehouse Migration
- Pre-Migration Preparation
  - Roles and responsibilities
  - Skills and training
  - Assessing your existing data warehouse
  - On-premises preparation
  - Cloud preparation
- Defining a migration strategy
- De-risking your data warehouse migration project

MODULE 2: DESIGN AND PERFORMANCE CONSIDERATIONS IN A DATA WAREHOUSE MIGRATION

- Defining schema migration scope
- Preparing for schema migration
  - Options for migrating existing data warehouse schema to the cloud
- Options for migrating existing data mart schema to a cloud-based data warehouse
- Performance options on your target cloud-based data warehouse
- Existing data warehouse database design migration specifics

MODULE 3: MIGRATING DATA, ETL PROCESSING AND LOADING

- Migrating your historical data to a cloud-based data warehouse
- Options to move your data to the cloud and tools to help you
- Ingesting your data warehouse data into the cloud
- Migrating your ETL jobs to a cloud-based data warehouse
- Migrating load processing to a cloud-based data warehouse
- ETL and loading migration specifics for your cloud-based data warehouse DBMS

MODULE 4: DATA WAREHOUSE SECURITY AND OPERATIONS MIGRATION

- Beyond SQL DDL and DML migration

- Azure, AWS and GCP security overview
- Database authorisation and access control
- Automating migration of privileges from an existing system
- Dynamic Data Masking
- Connecting to cloud-based data warehouses
- Data Encryption in cloud-based data warehouses
- High Availability (HA) and Disaster Recovery (DR) in cloud-based data warehouses
- Existing data warehouse database security migration specifics

MODULE 5: MIGRATING DATA VISUALISATION AND REPORTING

- Migrating reports and visualisations – the challenge
- Minimising the impact of DW migration on BI tools and reports using data virtualisation
- Identifying high priority reports to migrate first
- Migration incompatibility issues that can impact reports and visualisations
- Testing report and dashboard migration to your cloud-based data warehouse
- Migrating BI tool semantic layers to your cloud-based data warehouse
- Conclusions and recommendations

MODULE 6: MINIMISING SQL DIFFERENCES DURING MIGRATION

- SQL issues that can occur when migrating to a cloud-based data warehouse
- SQL Data Definition Language (DDL) differences and workarounds
- SQL Data Manipulation Language (DML) differences and workarounds
- SQL Data Control Language (DCL) differences and workarounds
- Extended SQL differences and workarounds

MODULE 7: CLOUD DATA WAREHOUSE VENDOR AND 3RD PARTY MIGRATION TOOLS

- Cloud Data Warehouse vendor migration tools

- Third party data warehouse migration tools
- Third party data warehouse automation tools

MODULE 8: BEYOND DATA WAREHOUSE MIGRATION – MOVING TO A MODERN DATA WAREHOUSE ON THE CLOUD
- Beyond data warehouse migration – new capabilities on cloud-based Data Warehouses
- Modernising your ETL processing in a cloud environment
- Integrating your cloud-based Data Warehouse with data science technologies on the cloud
- Integrating live streaming data into your cloud-based Data Warehouse
- Creating a logical data warehouse using data virtualisation

PRESENTER

Mike Ferguson is Managing Director of Intelligent Business Strategies Limited. As an independent IT industry analyst and consultant, he specialises in BI / analytics and data management. With over 40 years of IT experience, Mike has consulted for dozens of companies on BI/Analytics, data strategy, technology selection, data architecture, and data management. Mike is also conference chairman of Big Data LDN, the fastest growing data and analytics conference in Europe and a member of the EDM Council CDMC Executive Advisory Board. He has spoken at events all over the world and written numerous articles. Formerly he was a principal and co-founder of Codd and Date Europe Limited – the inventors of the Relational Model, a Chief Architect at Teradata on the Teradata DBMS. He teaches popular master classes in:

- Big Data Architecture & Technology
- Building a Competitive Data Strategy for A Data-Driven Enterprise
- Data Catalogs – Governing and Provisioning Data in a Data Driven Enterprise
- Data Virtualisation & the Logical Data Warehouse
- Data Warehouse Modernisation
- Embedded Analytics, Intelligent Apps & AI Automation
- How to Govern Data Across a Distributed Data Landscape
- Migrating your Data Warehouse to the Cloud
- Modern Data Architecture
- Practical Guidelines for Implementing a Data Mesh (Data Catalog, Data Fabric, Data Products, Data Marketplace)
- Real-Time Analytics

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