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Sign up

Data Vault 2.0 training: Data modeling

4 days (28 hours)

Presentation

Data Vault is a new data warehouse modeling technique. Created to simplify the integration of data from different sources.

Data Vault offers design flexibility that enables companies to manage data from heterogeneous information systems.

Data Vault lets you manage multi-platform data persistence, multilateral and multi-structured data, as well as massively parallel platforms.

This approach provides a data analysis service to meet your business intelligence, analytics and data science needs.

In our Data Vault: Data Modeling course, you'll learn how to design your data warehouse and simplify the data ingestion process. You'll also discover how to design raw data and create a modern data platform.

We'll teach you the latest version of the tool, Data Vault 2.0

Objectives

- Understanding the Data Vault approach and concept
- Master the Data Vault architecture and its interaction with Big Data, AI and NoSQL
- Build, automate and deploy Data Vault systems
- Establish audits and guarantee data traceability
- Understanding the Design Data Vault

Target audience

- Data analysts
- Data scientists
- Data engineers
- Data miners

Prerequisites

- Knowledge of SQL and database management
- Experience in data warehousing or BI
- Star Schema or 3NF experience

Note: Ambient IT is not the owner of Data Vault, this method belongs to DataVaultAlliance Holdings LLC.

Our Data Vault 2 training program: Data modeling

Introduction to Data Vault

- What is Data Vault?
- Basic Data Vault features
- Data Vault modeling steps
- Benefits of Data Vault modeling

Data Vault 2.0 update

- New methods for covering the data warehouse
- Reference architecture
- Development and operating processes
- Agile projects
- Continuous automation

Hub

- Structural entities or hubs
- Create hubs
- List of business keys
- Separate business keys in different tables
- Substitution key
- Entities
  - Parking and Employee
  - Position
  - Display
  - Application

Links

- Linking hubs
- Hierarchical links
- Exploration links
- Alternative transaction model methods
- Establish relationships between business objects
- Manage changes in data granularity
- Reduce the impact of adding a new business key

Satellite

- Keeping changes
- Relationships between hubs and links
- Temporal and descriptive attributes
- DV data model structure

Data Vault architecture

- Robust architecture standards
- Definition methods
- Essential architectural layers
  - Transit zone
  - Corporate data warehouse
  - Information layer
- Implementing the rules

Process integration and ingestion

- Data integration process
- Process simplification
- Separation of structural data
- Creating an efficient Data Vault model
- Link-Satellite tables
- ETL data integration
- Fill ETL data

Data Vault data warehouse

- Easy to expand thanks to agile approach
- Create highly scalable models
- Model audit
- Data safe
- Aspects of 3NF (3? normal form)

Traceability principles

- Data storage techniques
- Audit activation
- Data audibility
- Data traceability
- Monitoring and inspection of historical data
- EDW/BI systems
- Data cleansing

Data Vault application

- Dynamic data warehouse
- Operating warehouse
- Extracting data from databases
- Linking external information

Companies concerned

This course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Sanction

A certificate will be issued to each trainee who completes the course.