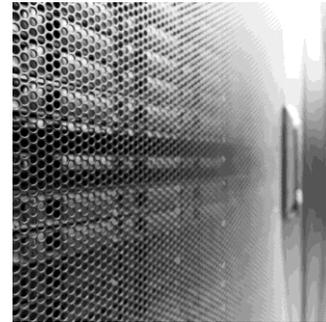# Significantly improve your delivery

Learn how model driven design and data integration (ETL) generation principles that can be applied for Data Warehouse (DWH) solutions. The techniques you will learn will reduce time to value, and rapidly deliver a tested business solution with a solid and flexible Data Vault foundation.

Leveraging ETL generation techniques greatly reduces time
spent on development by understanding patterns, concepts and architecture. Generation improves consistency and reduces the amount of customization, which enables you spend time adding value elsewhere or improving other components of the solution and data model.

Is this for me?

The training teaches how to generate ETL for a Data Vault implementation by discussing the Data Vault patterns and their various implementation nuances. These different scenarios are provided in the context of a sample case (model), where each scenario extends the metadata model by adding a new layer of functionality. At the end of the course you will understand how a metadata model can be defined and configured to suit specific needs, but also which exception cases need to be supported and how to value existing available metadata-driven approaches.

This course is relevant for anyone seeking to leverage 'model-driven-design' and pattern-based code-generation techniques to accelerate their Data Warehouse/ Business Intelligence programs. As advanced modelling and implementation techniques for Data Vault are also covered, this applies to a wide range of data professionals including BI and Data Warehouse professionals, data modelers and architects as well as DBAs and ETL specialists.

SQL is used as technique to generate ETL as it provides a flexible way to support the training concepts, and the concepts and approaches covered are directly applicable to other platforms as well. During the course other more proprietary techniques for specific technical environments will also be discussed

Prerequisites

- Familiarity with Data Vault modelling and architecture, e.g. following the CDVP2 and / or CDVDM training and certification
- Understanding of Data Warehouse and ETL development
- Some scripting / programming experience

Implementation and automation using Data Vault modelling

Data Vault has emerged as the leader of contemporary data modelling techniques specialized for Data Warehouse design. Even though many data professionals are familiar with the basic concepts, the intricacies of implementing this into a maintainable, scalable and consistent manner are largely unknown.

The intent of the training is to move to implementation and advanced techniques as quickly as possible, not go through basic Data Vault modeling concepts. Training will primarily focus on implementation techniques, options and considerations.

Pre-read materials covering the fundamentals of Data Vault modelling and development will be provided prior to the start of the course to make sure all participants commence the course with a solid understanding of the Data Vault foundational principles, and to be able to provide sufficient focus on development techniques.

These cover the main concepts around Data Vault components (Hubs, Links and Satellites), architecture considerations (source-to-staging, Business Data Vault versus Raw Data Vault) as well as tools and configurations you can adopt to get started automating your development.

Course Content

- Overarching principles: what concepts should a solution support?
- Data Vault implementation patterns, what kind of considerations are there?
- What prerequisites need to be in place? (ETL framework, conventions, patterns)
- How do database-level configurations support your Data Vault?
- Develop Business Data Vault components from the Raw Data Vault
- ETL generation - how does this fit in and how do I get started?
- How does model driven design work, and what does it do for testing?
- What metadata do you need and where do you store it?
- How to balance performance issues using helper constructs (e.g. PIT, Bridge)?
- How can information from a Data Vault be exposed through (virtual) Data Marts?

Schedule

Day 1:
- Modelling refresher, Data Vault architecture decisions
- Data Vault patterns (Hubs, Links) & metadata requirements

Day 2:
- Data Vault patterns (Satellites, Link-Satellites)
- Technical considerations, control framework & parallelism

Day 3:
- Delivery (information marts)
- Business Data Vault, PIT & Bridge tables

Course Structure

50% Classroom Lecture | 25% Group Workshops | 25% Discussion and Q&A

DataVault
Implementation and Automation