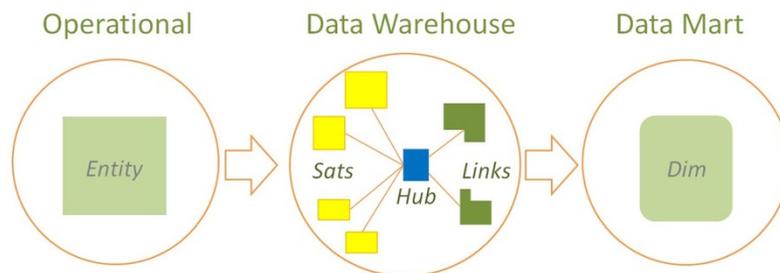


Course Description

DATA VAULT DAY

Data Vault Modeling in a Day



GENESEE ACADEMY, LLC

2013

Course Developed by: Hans Hultgren

DATA VAULT DAY

Data Vault Modeling in a Day

Overview

Data Vault modeling is quickly becoming the standard approach for modeling the data warehouse. Compared to other popular approaches, data vault modeling represents a paradigm shift – a new way of thinking. Realizing the full benefits of this approach means embracing this new paradigm in its entirety.

This course is intended to cover all of the key components that make up the data vault modeling paradigm - distilled into a single day. As such it goes beyond an introduction to arrive at a thorough and practical overview. Because there is a great deal to cover, this course includes a rich set of resources and materials. These are intended to support the learning process before and after the training day itself.

Course Description

This is a course on data vault modeling. It covers the complete scope of topics required to understand the data vault modeling approach and how this approach supports the goals of the data warehouse.

Topics covered include understanding the concept behind data vault, the data warehousing modeling requirements that drive this approach, how the data vault addresses these needs, the idea of the *core business concept* and the enterprise-wide business key, Hubs, Links, Satellites, backbone models, tracking history, modeling process, loading and sourcing the data vault model, comparing the pros, cons and fit of different modeling approaches, Link design topics, understanding Satellite attribution, source-driven versus business semantics, data integration around Hubs keys, dealing with hierarchies, and practical modeling topics.

This course consists of three (3) components: The one day classroom course, the online video lessons, and the course materials.

Classroom course day

- Lectures
- Case Lab
- Exercises

Online video lessons

- Data vault fundamentals
- Related data warehousing & Architecture topics

Course materials

- Class presentation deck
- Workbook
- Lab
- Guide
- Book

All components are designed to work together by communicating a consistent and clear message concerning the fundamentals of data vault modeling.

Classroom Course Day

The classroom day is scheduled in a location that includes table space for each student to work, break-out areas for small group learning exercises, white boards, flip charts, and a presentation projector used during the lectures. The classroom day is engaging and highly interactive with the students. The day includes lectures, case labs, and workbook exercises.

The classroom course runs 09:00 to 17:00. Students arrive for coffee and introductions beginning at 08:30. Class starts promptly at 09:00. The classroom course schedule:

- 08:30 Arrive, Coffee and Introductions
- 09:00 Lecture: Introduction to Data Vault
What is Data Vault? When to use it, how it differs from other approaches (pros and cons), why we need it, the benefits.
- 09:20 EDW Requirements & a new Paradigm
Modeling Agility, Unified Decomposition, Ensemble Modeling, the Core Business Concept, Modeling Process, Architecture overview.
- 09:45 Hubs, Links and Satellites
The foundation of Data Vault, Colors analysis, Forming the Backbone, Tracking History, Attributes, Review of a Sample DV Model.
- 10:30 BREAK
Workbook Exercise I Assigned
- 10:45 Workbook Exercise I
Complete first Workbook Exercise, Discuss, Q&A.
- 11:15 Hub Topics
Hub attributes and their purpose, identifying and modeling the business key, core concept versus abstraction, multiple keys, non-unique keys, dealing with duplicates.
- 12:15 LUNCH BREAK
Workbook Exercise II Assigned
- 13:00 Workbook Exercise II
Complete second Workbook Exercise, Discuss, Q&A.

- 13:30 Link Topics
- Natural Business Relationship, Business versus Source driven, Transactions, Hierarchies, when a Link grows a Hub, Unique relationships, Circular not an issue, the Fly, Unit of Work.*
- 14:15 Workbook Exercise III
- Complete third Workbook Exercise, Discuss, Q&A.*
- 14:30 BREAK
- Group Case Exercise Assigned*
- 14:45 Group Case Work
- Groups complete the Case Exercise.*
- 15:15 Group Case Discussions
- Present, review, analyze, and discuss the Group Case. Q&A.*
- 15:45 Satellite Topics
- Context for the Key, Designing Satellites, Splitting and Merging, Rates of Change, Types of Data, Source of Data, Codes and Reference Tables versus Linked Core Concepts, Multi-Valued, Folding to 3NF, History.*
- 16:15 Process for modeling and deploying the Data Vault EDW
- Business driven modeling, applying an agile modeling methodology, loading the EDW, designing and loading data marts sourced from data vault models, detailed architectural flow of data in the new EDW.*
- 16:45 Advanced topics Q&A and leveraging the materials beyond after class
- Advanced topic questions. Lastly provide guidance on how to use the course materials, book, and online resources after class.*
- 17:00 Class is Completed.

Online Video Lessons

As part of the Genesee Academy hybrid learning approach, this course includes on-demand video lessons. These are delivered online through DataVaultAcademy.com. The courses are produced in a studio classroom at the Genesee Academy training center in Colorado, USA.

The purpose of these videos is to provide all students a basic introduction to data vault core concepts prior to arriving to the classroom course. This levels the playing field by allowing all students to enter the class with the same consistent benchmark understanding of data vault. Because the videos are available online 24/7, all students will have the time and opportunity to follow these lessons. There is no limit in frequency of access, so students can view the lessons as often as they wish prior to the classroom course.

There are twelve (12) online Lessons for the Data Vault Day class:

- What is Data Vault (5min)
- Data Vault Modeling Core Constructs (6min)
- High Level Colors of the Data Vault (12min)
- Data Vault Overview Benefits (2min)
- Data Vault Overview: Introduction Architecture (6min)
- Data Vault Modeling Approach & Methodology (6min)
- The Hub (11min)
- The Link (11min)
- The Satellite (13min)
- Applying Data Modeling approaches to EDW (19min)
- Steps to Modeling the EDW (12min)
- Business Keys in EDW (8min)

Course Materials

This course includes detailed course materials to help support the learning process. Beyond the classroom, several of the items are intended to be used as references and guides to support your ongoing data vault efforts. Materials for this course include:

Class Presentation Deck	Printed and bound 60 pages.
Workbook	Printed packet 12 pages.
Lab	Printed packet 2 X 5 pages.
Guide	Electronic PDF.
Book	Published book 434 pages.

Target Audience

This course is intended for business intelligence and data warehousing professionals. The class is perfect for those who are just beginning to work with data vault. In addition, the course is well suited for those who have heard about data vault and are interested in learning what it really means.

Data Modelers, Information Modelers, Data Architects, Information Architects, Business Analysts, Business Intelligence and Data Warehousing managers, designers, project leads and project owners, DW DBAs, Data Mart designers, Integration Experts, ETL Developers, and Functional Area Representatives.

Because the data vault concepts are closely aligned to the business, those working DWBI from both business and technical perspectives will benefit equally from this course.

Logistics and Fees

All students should be enrolled at least one (1) week before the classroom course day. Please plan for this lead time in your schedule when you register for the course.

Online accounts are activated for all students one (1) week in advance of the classroom course. Students should plan to dedicate 5-8 hours of time for the online video lessons. For the best results these hours are spread over several days. Note that the included 2 hours of actual streaming video have a classroom equivalent time of over half a day.

Plan to arrive to the training location by 08:30 for the classroom course day. For planning purposes the end of class is 17:00 however it is typical that students have questions after the end of class. The instructor is available until 18:00 to discuss questions.

Location specific logistics and course fees for your class can be found here:

www.GeneseeAcademy.com/course-schedule