



performance management | consulting | technology

Comprehensive BI & DWH training programme

Knowledge delivered by Keyrus

Keyrus academy 2010



Keyrus academy

Keyrus regularly organizes comprehensive training programmes that give you a clear insight into the do's and don'ts for business intelligence and data warehousing initiatives in your organisation. We are pleased to offer you an elaborate programme of both introductory and advanced training modules, which will enhance your data warehousing and business intelligence skill proficiency and knowledge.

Through this programme you will be able to get the best out of your business intelligence and data warehousing solutions, and to obtain the required competence and knowledge to develop your business information environment successfully.

The below table lists the different modules that will be covered. When registering, you may pick and choose the modules particularly for your interest, at the time at your convenience. Should you be interested in organising a private (case-driven) workshop at Keyrus, or at your company's premises, please contact us for further details.

training programme

topic	March 2010	June 2010	September 2010	November 2010
part 1 - data warehousing concepts	15-16 March	14-15 June	13-14 September	15-16 November
module 1 - DWH from a business perspective				
module 2 - DWH architecture				
module 3 - BI reporting tools overview				
module 4 - DWH modelling concepts				
module 5 - data integration concepts				
part 2 - multi-dimensional modelling	22-23 March	21-22 June	20-21 September	22-23 November
part 3 - ETL - Extraction, Transformation & Load	29-30 March	28-29 June	27-28 September	29-30 November

The following pages give a more detailed overview for each module, listing the objectives, the targeted audience, the prerequisites and the actual content. For more details please visit us at www.keyrus.be. Reserve your seats today by returning us the enclosed registration form duly completed, or by registering via our website.

For any further queries, please do not hesitate to contact Keyrus:

tel: **+32 706 03 00**
mail to: events@keyrus.be

about the speakers

Keyrus workshops are brought by experienced principal consultants, who perfectly combine theory and practice into a compelling training course:

- > Principal consultant data warehousing & business intelligence
- > Experienced data warehouse architect and data modeller
- > Senior Project manager
- > Senior business analyst (finance, utilities)

They have a broad experience in implementing various IT projects, predominantly related to data warehousing & business intelligence, and the delivery of corporate performance management information in large organizations.



part 1 - data warehousing concepts

description

Business & ICT managers, as well as DWH project members need to be proficient in the set-up and correct use of an organizations' data warehouse, and preferable be proficient on all domains related thereto. Not all need to enter into the lowest level of detail of every aspect of data warehousing. However, they need to be sufficiently aware about the different domains touching the development, implementation and operation of a data warehouse environment, as well as to ensure a smooth business & IT alignment.

Keyrus' data warehousing concept course offers the participants a comprehensive introduction to and analysis of the different areas of data warehousing, with a direct insight into best practices at every level. Participants to this course will gain an overall insight into data warehousing that becomes directly applicable in their own data warehousing projects.

content

module 1- data warehousing from a business perspective

- > What is a data warehouse?
- > Why would you need a data warehouse?
- > Financial benefits of a data warehouse

module 2 - data warehousing architecture

- > Main components & data flow
- > System architecture
- > Multi-dimensional visualization & navigation
- > ROLAP & MOLAP architecture comparison

module 3 - BI reporting tools overview

- > Market segmentation & landscape
- > Product positioning

module 4 - data warehousing modelling concepts

- > Dimensions & hierarchies
- > Report granularity
- > Fact granularity
- > Report layout
- > Source to target mapping - cross reference list

module 5 - data integration concepts

- > ETL & data integration
 - > Data Transformation & Cleansing
 - > From Operational to Business View
 - > Aggregations & Hierarchies
 - > Long-Term perspective
 - > Preserving historical context
- > Master Data Management
 - > Issues, Causes, Consequences, Objectives, Benefits
 - > Different Solutions
 - > Project Approach
- > Data integration solutions
 - > 5 ways to data integration
 - > The fan story
 - > Cost saving opportunities

objectives

- > To introduce all areas related to data warehousing.
- > To demonstrate the importance of business & IT alignment when undertaking data warehousing projects.
- > To create awareness about the main issues and critical success factors related to data warehousing.
- > To provide guidance on the development and operation of data warehouses.
- > To share our lessons learnt through pragmatic concept courses.

duration: 2 days

type: basic

prerequisites: n/a

target audience: People who need sufficient basis to decide on possibilities and options when setting up a DWH, and people involved in DWH projects, who

need to become proficient in set-up and correct use of a DWH.

More specifically, ICT managers, business managers, project leaders, business analysts, data modellers, ETL designers & developers, report designers & developers.

part 2 - multi-dimensional modelling

description

One of the difficult phases in implementing solid BI solutions is designing a multi-dimensional storage model, the core of a data warehouse or a data mart. The translation of business requirements to a star or snowflake schema is not trivial, and comes with a number of options and possibilities to choose from:

- > Shall we store this information in the dimension or in a fact?
- > Do we need an extra dimension or shall we put it as fields in a fact table?
- > Can we use a fact as dimension table?
- > Do we pre-calculate in the fact, or do we calculate it on-the-fly?
- > Can't we do without technical keys?
- > Why and when do we need an ODS?
- > Which fields should trigger an SCD?
- > Can we automatically maintain summary tables?
- > Do we process complex algorithms in the source, in the semantic layer or in the report?
- > ...

content

- > Introduction – DWH & DM definitions & concepts and OLAP multi-dimensional visualisation
- > Modelling of dimensions & hierarchies
- > Modelling of facts, stars, summaries and snowflakes
- > Staging area modelling considerations
- > Design a star schema based on information analysis, based on
 - > OLTP schema,
 - > a business data model, or
 - > report definitions
- > Graphical modelling of dimensions & associated hierarchies

- > Graphical modelling of facts, based on existing reports
- > Graphical report layout definition, and validation of dimensions & hierarchies
- > DWH cross reference mapping

Hands-on exercises

- > Modelling dimensions & hierarchies
 - > Interview with client
 - > Determine business requirements
 - > Define dimensions & hierarchies (use of Keyrus templates)
- > Report & fact granularity (use of Keyrus templates) - determine fact tables
- > Report layout & modelling (use of Keyrus templates)
- > Cross reference list
 - > Objectives
 - > Complete the cross-reference sheet

objectives

This training session is set up as a highly interactive workshop, where a major part of the time is spent on practical application of the techniques in consistently developed exercises. By the end of the workshop all participants will be able to:

- > capture business requirements
- > apply multi-dimensional modelling principles,
- > define required fact granularity
- > produce dimensional models
- > Learn how to use cross-reference lists

duration: 1.5 days

type: advanced

prerequisites: Participants should best have followed module 1 - DWH from a business perspective. Participants should be skilled users of Microsoft PowerPoint and Excel.

target audience: Business managers and people involved in modelling projects, who need to become proficient in the set-up and correct use of multi-dimensional modelling.

More specifically, business managers, project leaders, business analysts, ETL designers & developers, and consultants.

part 3 - ETL - Extraction, Transformation & Load

description

When building a Data Warehouse, the ETL (Extraction Transformation and Loading) phase is a broad-spectrum area, possibly needing data migration from very heterogeneous source systems. This requires the ETL developer to know a number of tricks and techniques and leaves him with a number of questions:

- > What exactly do we need as ETL specifications?
- > What are the 5 possible ways of data integration?
- > If we go for ETL, do we prefer custom programming or do we need a software tool? In that case, do we invest in an expensive tool, or shall we go for a low-cost product?
- > Do we need all stages of a staging area? Why and when do we need an ODS?
- > We have some manually entered data to feed into the data warehouse, where and how can we best do that?
- > How much effort do we need for metadata?
- > How do we tackle data quality issues? How about address cleaning?
- > Can't we do without technical keys in the facts?
- > Which processes can we run at the command prompt, which need automation?
- > How do we set up an ETL process-control dashboard?

- > Methods of data extraction
- > Middleware solutions
- > Staging area
 - > Landing zone
 - > ODS and referential integrity
 - > 9-stages
 - > Conformed dimensions
 - > SCD
- > Data quality
 - > Business quality, statistical checks
 - > Technical quality, integrity
- > DWH initial load
- > DWH incremental load
- > Data mart and aggregate table load
 - > Aggregate tables
 - > Cubes & roll-ups
 - > Financial models
- > Metadata
 - > ETL metadata
 - > Storage metadata
 - > Reporting metadata
- > ETL process automation
- > Real time data warehousing
- > Data warehouse management & versioning

content

- > Starting points
 - > Business requirements
 - > Staff skills
 - > ETL tools characteristics
- > Source data analysis
 - > Inventory of legacy systems
 - > Legacy: connectors to ERP systems / gateways to databases
 - > CDC (Change Data Capture)

objectives

Keyrus offers this 1.5-day condensed training course about all aspects of ETL design. This training is not set-up as a specific product training, but stays generic, discussing different approaches and enabling to make the best choice for specific situations.

duration: 1.5 days

type: advanced

prerequisites: Participants should have a basic understanding of ETL.

target audience: DWH project members who need a detailed insight in the processes, options, possibilities, do's and don'ts of ETL.

More specifically, data modellers, ETL designers & developers.

Keyrus academy terms & conditions

Registration

You can register directly through our website www.keyrus.be or you can send us the standard booking form duly completed to fax n° +32 2 706 03 09.

A course booking is official upon receipt of your written reservation. Please note that upon receipt of an electronic course registration, we will acknowledge the receipt. For your convenience, we also send you a confirmation of your participation via e-mail at the latest 5 working days before the scheduled course start.

Date & time

Unless otherwise noted in the workshop confirmation letter, we welcome all participants as of 09:30. Every workshop day starts at 10 a.m., continues at 1:30 p.m. and finishes around 5 p.m.

Location

Keyrus nv - Nijverheidslaan 3/2, B-1853 Strombeek-Bever

Should you be interested in organising a private (case-driven) workshop at Keyrus, or at your company's premises, please contact us for further details.

Language

All public workshops are generally presented in English, unless indicated otherwise.

Pricing

Listed prices include participation to the workshop, training documentation, lunch and drinks, but do not include VAT (21%). For every participant registering at once for the full training programme, i.e. 3 modules DWH concepts, multi-dimensional modelling and ETL (i.e. same invoice), Keyrus allows a 10% discount on the total cost.

Payment

Keyrus will invoice the training session at the end of that month. Invoices are due net thirty (30) days. Applicable taxes are additional.

Cancellation

You may cancel your registration up to 2 weeks before the date of the workshop in writing; an administration cost of 20% of the total amount will be charged. After that, or without a cancellation notice in writing, the full course fee will be charged.

Replacements of the initial participant(s) are accepted at any time prior to the course, without additional costs.

Keyrus reserves the right to cancel or reschedule any course at its discretion. Should a course have to be re-scheduled, we will endeavour to provide a written notification at least five days before the course start date.

Property rights

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