Oracle DWH 10g Data Warehousing Fundamentals

Course information

Days : 3
Total lessons : 13
Suggested Prerequisites :
- Knowledge of database technologies, client-server
- Knowledge relational server technology is suggested

Training includes :
- Experienced trainer(s)
- Pre-test and Post-test
- Practices and solutions
- Trainer Assistant(s)

In-house price for 3 days :
- 52,000 baht(THB) : Small Class : 1 - 10 persons
- 71,000 baht(THB) : Middle Class : 11 - 20 persons
- 90,000 baht(THB) : Large Class : 21 - 30 persons
  All prices exclude VAT 7 %

Course details

Day 1
Lesson 1 : Data Warehousing and Business Intelligence
Lesson 2 : Defining Data Warehouse Concepts and Terminology
Lesson 3 : Business, Logical, and Dimensional Modeling
Lesson 4 : Physical Modeling: Sizing, Storage, Performance, and Security Considerations

Day 2
Lesson 5 : The ETL Process: Extracting Data
Lesson 6 : The ETL Process: Transforming Data
Lesson 7 : The ETL Process: Loading Data
Lesson 8 : Refreshing Warehouse Data

Day 3
Lesson 9 : Summary Management
Lesson 10 :Leaving a Metadata Trail
Lesson 11 :OLAP and Data Mining
Lesson 12 :Data Warehouse Implementation Considerations
Lesson 13 :Workshop

Lesson details

Lesson 1 : Data Warehousing and Business Intelligence
- Describe the role of data warehousing and business intelligence (BI) in today's marketplace
- Define the terminology and explain the basic concepts of data warehousing
- Define the decision support purpose and end goal of a data warehouse
- Develop familiarity with the various technologies required to implement a data warehouse
- Identify the technology and tools from Oracle to implement a successful data warehouse
- Identify data warehouse modeling concepts
- Describe methods and tools for extracting, transforming, and loading data
- Identify the tools for accessing and analyzing warehouse data
- Identify the features of Oracle Database 10g that aid in implementing the data warehouse
- Describe the OLAP and data mining techniques and tools
- Explain the implementation and organizational issues surrounding a data warehouse project

Lesson 2 : Defining Data Warehouse Concepts and Terminology
- Identify a common, broadly accepted definition of a data warehouse
- Describe the differences of dependent and independent data marts
- Identify some of the main warehouse development approaches
- Define some of the operational properties and common terminology of a data warehouse
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Lesson 3 : Business, Logical, and Dimensional Modeling
- Discuss data warehouse environment data structures
- Discuss data warehouse database design phases:
  - Defining the business model
  - Defining the logical model
  - Defining the dimensional model

Lesson 4 : Physical Modeling: Sizing, Storage, Performance, and Security Considerations
- Describe how to translate the dimensional model to physical model
- Explain data warehouse sizing techniques and test load sampling
- Describe data warehouse partitioning methods
- Describe indexing types and strategies
- Explain parallelism in data warehouse operations
- Explain the importance of security in data warehouses
- Identify the tools and technologies provided by Oracle

Lesson 5 : The ETL Process: Extracting Data
- Outline the extraction, transformation, and loading (ETL) processes for building a data warehouse
- Identify the ETL tasks, importance, and cost
- Explain how to examine data sources
- Identify extraction techniques and methods
- Identify analysis issues and design options for extraction processes
- List the selection criteria for the ETL tools
- Identify Oracle's solution for the ETL process

Lesson 6 : The ETL Process: Transforming Data
- Define transformation
- Identify possible staging models
- Identify data anomalies and eliminate them
- Explain the importance of quality data
- Describe techniques for transforming data
- Design transformation process
- List Oracle's enhanced features and tools that can be used to transform data

Lesson 7 : The ETL Process: Loading Data
- Explain key concepts in loading warehouse data
- Outline how to build the loading process for the initial load
- Identify loading techniques
- Describe the loading techniques provided by Oracle
- Identify the tasks that take place after data is loaded
- Explain the issues involved in designing the transportation, loading, and scheduling processes

Lesson 8 : Refreshing Warehouse Data
- Describe methods for capturing changed data
- Explain techniques for applying the changes
- Describe refresh mechanisms supported in Oracle Database 10g

- Describe techniques for purging and archiving data and outline the techniques supported by Oracle
- Outline final tasks, such as publishing the data and automating processes

Lesson 9 : Summary Management
- Discuss summary management and Oracle implementation of summaries
- Describe materialized views
- Identify the types, build modes, and refresh methods for materialized views
- Explain the query rewrite mechanism in Oracle
- Describe the significance of Oracle dimensions
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Lesson 10 : Leaving a Metadata Trail
- Define warehouse metadata, its types, and its role in a warehouse environment
- Examine each type of warehouse metadata
- Develop a metadata strategy
- Outline the Common Warehouse Metamodel (CWM)
- Describe Oracle Warehouse Builder's compliance with Object Management Group's Common Warehouse Metamodel (OMG-CWM)

Lesson 11 : OLAP and Data Mining
- Define online analytical processing and the Oracle Database 10g OLAP option
- Compare ROLAP and MOLAP
- List the benefits of OLAP and RDBMS integration
- List the benefits of using OLAP for end users and IT
- Describe the data mining concepts
- Describe the tools and technology offered by Oracle for OLAP and data mining

Lesson 12 : Data Warehouse Implementation Considerations
- Describe the project management plan
- Specify the requirements for the implementation
- Describe the metadata repository, technical architecture, and other considerations
- Describe post implementation change management considerations

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