

Data and the DBA



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Agenda

- Introduction
- Assumptions
- Research and History
- Current Culture
- Oracles Product Set
- The shameless advertising

Objective

- This presentation is to look at how the database administrators job is changing in relationship to Data Warehousing, Business Intelligence and Reporting.
- We will review the Oracle Products that support Data Warehousing and how DBA's support those products

Victoria Whitlock

- 23 years of IT experience
- Published Author – Periodicals/Books
- Recognized SME
 - Compliance
 - Business Integration
 - Data Warehousing
 - Business Intelligence
 - Data Base Administrator
 - Corporate Educator

Assumptions

- History tends to repeat itself...
....unless you learn from it...
- You are Oracle DBA
- You want to do a great job
- You want to continue to be a DBA

A Historical Perspective...

- My first DBA job –
 - RdB Reporting system DBA
 - 3 weeks to load data to a reporting system
- DBA's did not interact with Business Folks
- Purpose of DBA to give developers roots and wings

What is a DBA

■ Best Said

- Anne Kerven said in *Colorado Business Magazine*, "Database management means the transferring of file cabinet contents to an electronic file."
- We manage and protect Data

We have the keys...

- Data is the raw figures and facts
- Data can be used to get information
- Information can be used to get knowledge
- Knowledge can be used to get wisdom
- We are the keepers of Data
- How do we use our skills to help the company

Data and ETL: Why

- Disciplined approach, not an after-thought
- Performance: Improve the data as you move it
- Usability: One interface to design
- Maintenance: One interface to manage and audit
- Metadata management: Store Data Quality metrics in open repository

Definitions

Data Warehouse

- A large specialized database, holding perhaps hundreds of terabytes of data.
- A database specifically structured for information access and reporting

■ Business Intelligence

- a broad category of applications and technologies for gathering, providing access to, and analyzing data for the purpose of helping enterprise users make better business decisions.

Why Do you Care

- Vocabulary is critical to understanding
- Vocabulary is changing
- Oracle's use of reporting, data warehousing, data mining and business intelligence are interchangeable
- Change is the only consistent factor

Current Culture: What it takes to be successful



Business and IT

- Business Processes that need to be enabled
- Physical architectures to enable the Business Process
- Both Must work together for successful use of data
- Buying a product/tool does not give you a warehouse

Oracles Traditional Product Set:

A small Selection

- Oracle Warehouse Builder
- Oracle Partitioning
- Oracle Data Mining
- Oracle OLAP (On Line Analytical Processing)
- Discoverer

■ **In the next slides we will look at each one of these and ask the questions**

- Who is the user
- Who is responsible for management of the tool
- How does this relate to Data

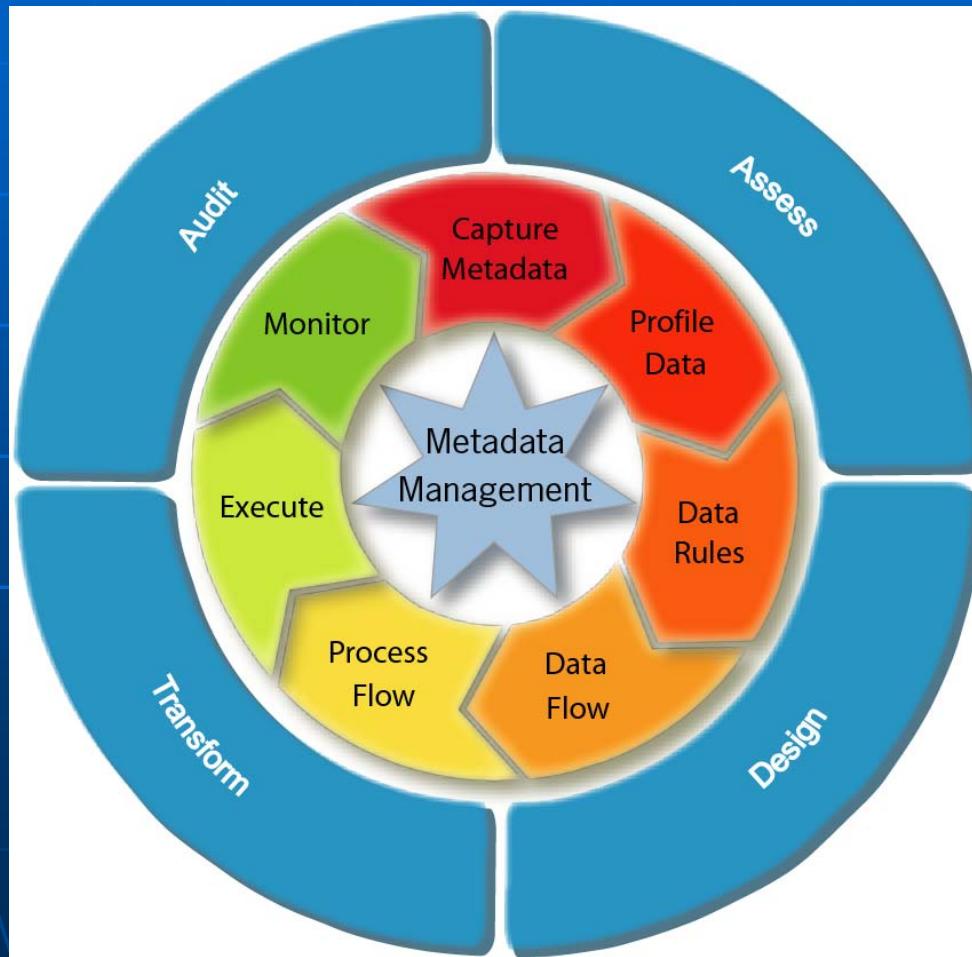
Oracle Warehouse Builder

- Easy to use, enterprise integration design tool that manages the full life-cycle of data and metadata for Oracle Database 10g
- Profile your data is built into the tool and no knowledge of SQL*Plus is required.
- Data profiles can be used to generate automatic corrections to your data. (Cleansing of Data)
- Also known as ETL

Features: Great...

- Data profiling.
- Relational and dimensional data object designer.
- Complete slowly changing dimensions (Types I, II, III)
- Oracle OLAP integration.
- Transportable Modules.
- Transportable Tablespace in 9i and 10g or
- Datapump in 10g only
- Pluggable mappings.
- Built-in scheduling
- Experts.
- User-defined objects and icons.
- ERP Integration.

Data Again: Life Cycle



Oracle Partitioning

- Allows a data to be divided into distinct independent parts
- Faster Performance—Lowers query times from minutes to seconds
- Increases Availability—24 by 7 access to critical information
- Improves Manageability—Manage smaller 'chunks' of data
- DBA managed – however must have understanding of data in order to choose correct partitioning key and units

Oracle Data Mining

- An option to Oracle Database 10g Enterprise Edition
- Oracle Data Miner—A graphical user interface that helps customers mine their Oracle database to find valuable hidden information, patterns, and new insights
- Oracle Spreadsheet Add-In for Predictive Analytics—Enables Excel users to mine their Oracle Database using simple, 'one click' Predict and Explain analytics features
- Oracle Data Mining JDeveloper and SQL Developer Extensions—Allows Java and database developers to easily integrate advanced analytics into their applications
- ODM Connector for mySAP BW—The ODM Connector Enables SAP Business Warehouse 3.5 users to seamlessly mine data using Oracle Data Mining within the SAP Data Mining framework

Oracle OLAP (On Line Analytical Processing)

- **Reduced Data Movement and Latency**, multi-dimensional data is stored directly into the Oracle Database relational engine.
- **Lower IT Costs and Complexity**—Oracle OLAP supports SQL access to multi-dimensional data types, so you can leverage your existing investment SQL tools, applications, and skills.
- **Enterprise-Scale Analytics with Grid Computing**. Oracle OLAP and Oracle Real Applications Clusters together provide the foundation of Very Large Multi-dimensional Databases (VLDM) which can provide thousands of concurrent users with continuous access to information.

Discoverer

- Discoverer is an intuitive ad-hoc query, reporting, analysis, and Web-publishing tool that empowers business users at all levels of the organization to gain immediate access to information from data marts, data warehouses, online transaction processing systems and Oracle E-Business Suite.
- Oracle Fusion Middleware

Oracles New Product Set:

- Siebel Business Analytics Applications
- Oracle Daily Business Intelligence
- Oracle Corporate Performance Management
- Peoplesoft Enterprise Performance Mgmt

Siebel Business Analytics Applications

- Complete, pre-built business intelligence solutions
- Provide insight into business processes
- Emphasizing
 - Efficiency
 - Revenue
 - Improve business results
- Siebel Business Analytics applications are part of the Oracle BI Suite Enterprise Edition.

Oracle Daily Business Intelligence (DBI)

- Track enterprise wide capital investments
- Monitor cash flows, positions, and net positions from a Web browser
- Manage projects with crucial cost revenue, budget and margin data
- Easy-to-use pre-built intelligence reports and Oracle discover workbooks
- DBI for Financials is part of the Oracle E-Business Suite.

DBI -

- Issues –

- No Ad Hoc reporting
- Limited to customize dashboards and metrics
- Integrated reporting system
 - No need of a BI platform
 - Could be used with Times Ten
- Lower TCO due to predefined metrics
- Well defined adaptors for PeopleSoft, SAP....
- Easy to Implement – weeks to months not years

Gartner Group: DBI

*In comparison to SAP BW, Oracle DBI can be implemented: For between 33 and 80% of the cost
In less than half the time.*

UNIFIED SEMANTIC MODEL (USM)

Side Note:

- So what part of the Oracle Product set do they fall into ?
 - Usually under Fusion Middle Ware
- Who needs to manage the access, the performance, the security and business issues ?
 - DBA and Business specialist

Thinking outside the box

- Data is critical to making good business decisions
- Bad data is a virus that only gets worse
- Bad data will help you make bad decisions faster
- Timing is critical
- And the next step in real time intelligence is

Times Ten Features

- Full featured RDBMS optimized for main memory data access
- Commonly used Oracle data types
- Row level event notification via proprietary C and Java JMS APIs
- Oracle RDBMS data caching and transparency
- Synchronous and asynchronous replication

What Times Ten is Missing: what I want next ...

- Materialized views
- Analytic functions
- Bitmap indexes
- Sophisticated cost based optimization
- Table and index partitioning
- Parallel query/insert/update/delete

Who is Enpria

■ Business Consulting

- Corporate Governance
- Data
- Infrastructure
- Project/Program Management
- Software Engineering

■ Recruiting

- Focused, targeted full-time employee recruiting
- Deep network of talent
- Staff augmentation

