De-Mystifying OBIEE / Oracle Business Intelligent Applications

Shyam Varan Nath
OBIEE Architect, IBM
President BIWA SIG

Thanks: Rahul K, Mohit S, Rajan G, Erik L, Sateesh N, Mark R, Caryl F, Doug W
Agenda

• BI Reporting Landscape (Operational, Analytical)
• Oracle perspective (OBIEE, OBIA)
• DBI, Fusion Intelligence
• Discoverer Migration to OBIEE
• OBIA 7.9.6 – tips and tricks
• Real life issues
• Wrap Up
About Me!

- A Business Intelligence / Data Warehousing professional with IBM (Global Business Services) – Oracle Practice
- OCP since 1998 on 4 different database versions
- President/Founder of BIWA SIG – a Special Interest Group for BI, DW and Advanced Analytics professionals
- Regular speaker at NYOUG (since 2006), Oracle Open World, Collaborate, BIWA Summit and Regional User Groups
- Bachelor’s from IIT-India, MBA and MS from Florida Atlantic University, Boca Raton, FL
Enjoy lively discussions and expert insights. Collaborate and network with your peers. Join us for these thought-provoking sessions.

Every year Oracle OpenWorld offers a schedule that's bursting with sessions, demos, networking events and more—all geared to making your company work better. This year is no exception and IBM will be there to discuss the issues that are important to you. IBM will present on a range of topics from enabling technologies for business intelligence, optimizing your supply chain, evaluating CRM SaaS projects and leveraging Web 2.0. Take advantage of any or all of the following IBM sessions.

**How Smarter Financial Institutions Thrive with IBM** 10/14/2009 11:45 - 12:45
Presenters: Boxley Llewellyn, IBM; Patrick Boyle, Oracle; Senthil Kumar, Oracle; Steve Meadows, AIB
This session reviews how Allied Irish Bank shortened their time to market for new banking products and services, reduced the time and cost of compliance, and were able to offer targeted services through a portfolio view of the customer.

**How Oracle Business Accelerators Delivered a Complex Implementation in 20 Weeks** 10/12/2009 16:00 - 17:00
Presenters: Paul Parent, IBM GBS; Yves Nadon, FPM Innovations
This session explores how IBM Global Business Services used Oracle Business Accelerators to help FPM Innovations optimize their supply chain to increase efficiency, streamline processes, reduce costs and give local management faster access to data and information.

**IOUG BIWA SIG: Critical Success Factors for Business Intelligence/Data Warehousing Projects** 10/11/2009 15:30 - 17:00
Presenters: Shyam Varan Nath, BIWA SIG / IBM (GBS)
This panel discussion features customers, industry experts and Oracle business intelligence/data warehousing (BI/DW) staff to define a list of the critical success factors that should be identified and prioritized for BI/DW project success.

**Strategies for Controlling Costs and Improving the Performance of Your HCM Applications** 10/15/2009 13:30 - 14:30
Presenters: Steve Johnston, IBM
In this session, attendees will learn how effective data management strategies can help maximize the business value of their HCM applications, reduce costs, optimize application performance, enhance data security, improve storage utilization and increase efficiency.

**The Journey to a Successful Integrated Finance Organization: What Drives Change? What’s Next?** 10/12/2009 13:00 - 12:00
Presenters: Bill Fuesler, IBM GBS, Financial Management Global Leader; Carl Nordman, IBM GBS, Oracle Practice, Financial Management
This session details findings from a recent peer-to-peer exchange hosted by IBM for CFOs and senior finance professionals who have successfully become an integrated organization.

**Using Web 2.0 to Become a Recognized Oracle Expert: Customer Panel** 10/12/2009 13:00 - 14:00
Presenters: Shyam Varan Nath, IBM / BIWA SIG; Mohan Dutt, Verisign, Inc.; Debbie Kliaiina, Oracle; Rob Shapiro, Oracle
This panel discussion features Oracle customers, partners and employees who will address ways to take full advantage of the
Is Your Enterprise CRM SaaSy: Considerations for Successful CRM Transformation 10/15/2009 12:00 - 13:00
Presenters: Rick Gaetano, IBM GBS; David Lashar, IBM GBS
This session explores the benefits one company achieved through their Oracle CRM On Demand implementation and how the solution can fulfill its value proposition. The session also addresses leading practices for evaluating, delivering and deploying CRM SaaS projects.

Presenters: Shyam Varan Nath, BIWA SIG / IBM (GBS); Philip Stephenson, Oracle
In this joint session, IOUG’s Oracle Exadata SIG and Oracle product management discuss the impact of the Oracle Database Machine and Oracle Exadata Storage Server on the high-end data warehousing user community.

Demystifying the Oracle Database Platform and Oracle Exadata Server 10/11/2009 14:00 - 15:00
Presenters: Shyam Varan Nath, IBM Global Business Services
This session details the HP Oracle Database platform and Oracle Exadata Storage Server and how to tackle the challenges of getting information out of database environments that are approaching terabyte limits. The session will also examine the data warehousing server market as a whole.

Insights from the Trenches: Partners Speak Out on Delivering Real Value with AIA 10/12/2009 11:30 - 12:30
Presenter: Bob Devonshire, IBM Global Business Services
This session explores how Oracle and its partners can leverage their proven success in developing and implementing integrated enterprise solutions to help you control costs and minimize risk using the Oracle Application Integration Architecture framework.

Come with questions. Leave with answers.
Register NOW. Save NOW.
OCTOBER 11–15, 2009
MOSCONIC CENTER
SAN FRANCISCO
Blog

http://OracleBIWAAsig.blogspot.com

Smart Strategies for Uncertain Times

The Monday keynote by John Kopcke (happy the keynote is in the BI/EPM space, so the lanyard by RittmanMead and bags logo of Intere!!)

Do business executives really do not know what they want for BI/EPM is it simply the dashboard envy that drives the projects? John is highlighting the importance of economic downturn for new opportunities. Smuikers has grown in profits recently. So what are the high impact strategies:

- Cash conservation is a no-brainer here...
- Manage risk and performance
- Management Excellence (ability of business to be agile in changing
Acronyms

- OBIEE
- OBIA
- OLAP, OLTP, OBAW
- DAC
- EUL
- RPD, Webcat
- INFA, ETL / ELT, EAI
- SDE (source dependent executions)
- SIL (source independent loads)
- Fin, SCM, P&S, HR etc.
- DBI
Enterprise BI/Reporting Landscape

- Operational Reporting
  - Oracle Reports, BI Publisher
  - Discoverer EUL
- Operational Intelligence
  - Daily Business Intelligence
  - Neotix Views
  - Fusion Intelligence
- Data Warehouse (strategic)
  - EDW
  - OBIEE (Custom, Data Federation)
  - OBIA Apps
- SAP – BW (counterpart)
Daily Business Intelligence (DBI)

- Out-of-the-Box:
  - Predefined Roles
  - Predefined Key Performance Indicators (KPIs)
  - Drill-Down Reports
- Embedded EBS Role-based Security
- Data Synchronization
  - Summary Tables & Materialized Views
  - Refresh Daily or As Desired
- Runs Directly from Transactional System – No Separate Reporting Infrastructure Required
Fusion Intelligence - EBS Edition (Now Obsolete)

- Leverage Existing DBI Capabilities & Investment using OBIEE
- Greater Flexibility to meet Reporting Requirements (i.e. adhoc reporting)
- Greater Extensibility with Developing Custom KPIs
- Greater Personalization: Add, Rearrange, Hide or Rename Dashboards, Reports, Graphs etc.
- Integrate Information from 3rd-party Data Sources (i.e. unify DBI and Non-DBI information)
Oracle Business Intelligence Enterprise Edition

• Installation
  – JDK 5
  – Java Containers
  – Admin Tool in Windows only
  – BI Server in Windows / Linux

• On-going
  – Users and Security
  – Cache

• Advanced
  – High Availability
  – Clustering
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<th>Name</th>
<th>Status</th>
<th>Start Mode</th>
<th>Security Zone</th>
</tr>
</thead>
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<td>Started</td>
<td>Manual</td>
<td>Local System</td>
</tr>
<tr>
<td>Oracle BI Java Host</td>
<td>Started</td>
<td>Automatic</td>
<td>Local System</td>
</tr>
<tr>
<td>Oracle BI Presentation Server</td>
<td>Started</td>
<td>Automatic</td>
<td>Local System</td>
</tr>
<tr>
<td>Oracle BI Scheduler</td>
<td>Started</td>
<td>Manual</td>
<td>Local System</td>
</tr>
<tr>
<td>Oracle BI Server</td>
<td>Started</td>
<td>Manual</td>
<td>Local System</td>
</tr>
<tr>
<td>Oracle DB Consolem1</td>
<td>Started</td>
<td>Automatic</td>
<td>Local System</td>
</tr>
<tr>
<td>OracleJobSchedulerIBM1</td>
<td>Started</td>
<td>Automatic</td>
<td>Local System</td>
</tr>
<tr>
<td>OracleCrDb10g_home1SQL*Plus</td>
<td>Started</td>
<td>Automatic</td>
<td>Local System</td>
</tr>
<tr>
<td>OracleCrDb10g_home1TNSListener</td>
<td>Started</td>
<td>Automatic</td>
<td>Local System</td>
</tr>
<tr>
<td>OracleServiceIBM1</td>
<td>Started</td>
<td>Manual</td>
<td>Local System</td>
</tr>
<tr>
<td>Performance Logs and Alerts</td>
<td>Collects</td>
<td>Manual</td>
<td>Network S...</td>
</tr>
</tbody>
</table>
OBIEE – Three Layers

**PRESENTATION LAYER**
- User Roles, Preferences
- Simplified View
- Logical SQL Interface

**SEMANTIC OBJECT LAYER**
- Dimensions
- Hierarchies
- Measures
- Calculations
- Aggregation Rules
- Time Series

**PHYSICAL LAYER**
- Map Physical Data
- Connections
- Schema

Role-Based Views of the Information Relevant to the User

Consistent Definition of Business Measures, Metrics, Calculations

Model Once, Deploy Everywhere

Across Any Data Sources
Logs for OBIEE

- BI server
- Presentation Server
OBIEE – Configuration Files

- Server Repository
- Presentation Catalog
  (init.ora analogy)
Discoverer (OBISE) to OBIEE

Migration Utility
Export Discoverer EUL Metadata to EEX file

Modify Source Metadata

Evaluate RPD Evaluate Logfiles

Modify Conversion Assistant Properties and Re-Run

Edit Metadata in Oracle BI EE Admin

Run Consistency Checks

DEPLOY TO BI SERVER

Source: Mike Durran, Oracle
Metadata Conversion Assistant

- Available with Oracle BI EE 10.1.3.4 and higher
- Free download and easy to use – command line
- Generates OBIEE repository .rpd file from Discoverer End User Layer (EUL) or .eex file
- Snowflake data models in Discoverer >Collapsed into a star schema
- Circular or multiple join paths in Discoverer
  - Alias folders used to satisfy multiple join paths
  - Utility generates list of folders that have multiple join paths
  - User can then optionally choose which alias folders to create
- The Workbook Migration utility is in progress
Metadata Conversion Assistant

• Suitability of Discoverer metadata for automated conversion

- Data Warehouse
- Custom 3NF
- Unsuitable for Prebuilt Oracle BIS
- Increasing manual effort required
Oracle Discoverer – Oracle BI EE

Analogous Components

• Discoverer Administrator <> BI EE Administration Tool
Oracle Discoverer – Oracle BI EE

Analogous Components

• Discoverer Plus/Viewer <> BI EE Answers
Oracle Discoverer – Oracle BI EE

Analogous Components

• Discoverer Portlet Provider <> BI EE Dashboards
Migration Approach (1 => 3?)

- Map objects with similar metadata concepts.....
  
  - End User Layer
  - Business Areas
  - Folders and Items
  - Joins
  - Hierarchies
Migration Approach

- **End User Layer (EUL)**
  - Discoverer metadata repository
  - Schema in a database

- **BI Enterprise Edition RPD file**
  - Metadata repository file
Folder Properties

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
<td>products</td>
</tr>
<tr>
<td>Description</td>
<td>Information about products</td>
</tr>
<tr>
<td>Available to all users</td>
<td>Yes</td>
</tr>
<tr>
<td>Database</td>
<td>&lt;Default Database&gt;</td>
</tr>
<tr>
<td>Owner</td>
<td>VIDEOS</td>
</tr>
<tr>
<td>Object</td>
<td>PRODUCT</td>
</tr>
<tr>
<td>Optimizer hints</td>
<td></td>
</tr>
<tr>
<td>Identifier</td>
<td>DC_PRODUCT</td>
</tr>
</tbody>
</table>

The name that users will see to identify this object. Use mixed case text and spaces to give a meaningful name.
Workbook Migration

(to be released)
Workbook Migration

- Discoverer Worksheets → Answers Requests
Workbook Migration

- No direct equivalent to workbook in BI EE
- Dashboards can be used to group functionally related requests
Workbook Migration

- Same ability to conditionally format results
  - Extra capability in BI EE e.g. icons

- Extra visualizations in BI EE – e.g. Gauges
Migration Considerations

• What type of system do you wish to migrate?
  • Data warehouse
  • Custom built solution – 3NF
  • Oracle Applications reporting (e.g. BIS)

• What aspects of the system need to be migrated?
  • Metadata
  • Workbooks and worksheets

Goal: To introduce OBIEE as we talk about Discoverer
Discoverer – Circular Join
OBIEE – Logical Star

Shipments

Facts

Inventory

Time
In Review - Applications

<table>
<thead>
<tr>
<th>Description</th>
<th>DBI</th>
<th>Fusion Intelligence</th>
<th>Oracle BI Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platform</td>
<td>DBI: Integrated reporting tool fully contained on the EBS platform, no separate tools (licensing) required.</td>
<td>DBI Licensing + OBI EE: Standardize enterprise wide on a single BI Platform</td>
<td>Application Intelligence + OBI EE: Standardize enterprise wide on a single BI Platform</td>
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<td>Heterogeneity</td>
<td>EBS Only</td>
<td>EBS + External Data Sources</td>
<td>Support for data from any Source (Oracle, DB2, SQL, etc)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Support for data from multiple ERP instances (SAP, EBS, PS, JDE)</td>
</tr>
<tr>
<td>Ad Hoc</td>
<td>None</td>
<td>Full Ad hoc capabilities</td>
<td>Full Ad hoc capabilities</td>
</tr>
<tr>
<td>Extensibility</td>
<td>Limited capabilities</td>
<td>Full capability to customize metrics and dashboards</td>
<td>Full capability to customize metrics, dashboards, and extend data model</td>
</tr>
<tr>
<td>Data Layer</td>
<td>Data resides in transactional DB</td>
<td>Data resides in transactional DB</td>
<td>Data resides in separate instance</td>
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</table>
Custom OBIEE Development

- Example of EBS as source of data
- Knowledge of different Schemas
- Naming conventions
- Security of Objects
## EBS Object Names

<table>
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<tr>
<th>Object Name</th>
<th>Function of the object</th>
<th>E.g.</th>
</tr>
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<tbody>
<tr>
<td>_ALL</td>
<td>Underlying table with all the values</td>
<td>PO_DISTRIBUTIONS_ALL</td>
</tr>
<tr>
<td>_B</td>
<td>Base of underlying table, same as _ALL</td>
<td></td>
</tr>
<tr>
<td>_TL</td>
<td>Language translation table with translation of descriptive fields in different languages</td>
<td></td>
</tr>
<tr>
<td>_VL</td>
<td>View based on translation table</td>
<td>OKE_K_Deliverables_VL</td>
</tr>
<tr>
<td>_BASIC_V</td>
<td>View on top of the Basic table</td>
<td></td>
</tr>
<tr>
<td>_DFV</td>
<td>Descriptive Flex Field related view, it will have the defined values as Column names instead of generic attribute 1, ..2</td>
<td></td>
</tr>
<tr>
<td>_KFV</td>
<td>Key Flex Field views contain the concatenated fields as it would be displayed to the user. For e.g. A field may consist of Division, Department and Account fields and the KFV will have the concatenated values.</td>
<td></td>
</tr>
</tbody>
</table>
EBS Naming Conventions

• All objects accessed by EBS application have synonym in APPS schema, e.g. OKE.OKE_K_LINES has synonym APPS.OKE_K_LINES

• EBS Forms fetch data from a “user friendly” view with name ending is _V or _VL (e.g. OKE_K_Deliverables_VL).

• Views have descriptive value as opposed to the numeric id’s fields stored in the base table making it “human-readable” for reports.

• Views also implement security and restrictions to the data in various forms such as restrict values by language, org_id etc.

• These variables are set by EBS (session context) when the user accesses data via the EBS application.
Some EBS Schema Names

AP - Oracle Payables
AR - Oracle Receivables
GL - Oracle General Ledger
INV - Oracle Inventory
MRP - Oracle Master Scheduling/MRP
PA - Oracle Projects
PAY - Oracle Payroll
PER - Oracle Human Resources
PJM - Oracle Project Manufacturing
WIP - Oracle Work in Process
WMS - Oracle Warehouse Management System
WSH - Oracle Shipping
WSM - Shop Floor Management
Some Tips and Tricks

• Take help from EBS users
  – Help > Record History (table, views)
  – Help > Examine (column)
  – Involve the users to develop MD50, MD70

• Sometimes users can point to an Oracle Report that has similar data source
  – The SQL from Oracle Report can help to jumpstart
  – Create views that OBIEE can use
Custom OBIEE - Summary

• Directly from Source System (e.g. EBS)
  – RICE development like skills needed
  – “Load” on the operation system
  – Good for stop gap arrangement, give users the Top-Ten reports to go-live
  – E.g. Gallup case study of Project Analytics

• From custom Data Warehouse
  – Big upfront effort / investment
  – Custom ETL, DW design etc
Getting Started  OBIA

- Lookup what solutions exist EBS v.s Apps v.s. versions
- What to download – edelivery (http://edelivery.oracle.com)
- What to install - BI server and names of Analytic Apps
- Informatica (changes in Informatica)
- DAC
- Configuring Dashboard
- Domain Value files
<table>
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<th>Vendor and Product</th>
<th>Version</th>
<th>Oracle Business Intelligence Application</th>
<th>Associated Source Application or Module</th>
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<td>Oracle Purchasing/Procurement</td>
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<td></td>
<td>Oracle iProcurement</td>
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<td>Oracle Financials (Payables)</td>
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<td>Oracle iExpenses</td>
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<td>Oracle Human Resources Analytics Fusion Edition</td>
<td>Oracle Human Resources</td>
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<td>Oracle Payroll</td>
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<td>Oracle iRecruitment</td>
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<td>Oracle Project Analytics Fusion Edition⁴</td>
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<td>Oracle Project Billing</td>
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<td>Oracle Service Analytics Fusion Edition</td>
<td>Oracle Teleservice⁵</td>
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<td>Oracle iSupport⁵</td>
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<tr>
<td>Oracle’s PeopleSoft Enterprise</td>
<td>8.9, 9.0</td>
<td>Oracle Financial Analytics Fusion Edition</td>
<td>Oracle’s PeopleSoft Financials (GL, Accounts Payable, Accounts)</td>
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# Software Components

**Select a Product Pack:** Oracle Business Intelligence  
**Platform:** Microsoft Windows (32-bit)

## Results

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**Download**

- Oracle Business Intelligence Applications 7.9.6  
  - V16390-01  
  - 319M

- Oracle Business Intelligence Data Warehouse Administration Console 10.1.3.4.1 for Microsoft Windows  
  - V16377-01  
  - 181M

- Informatica PowerCenter and PowerConnect Adapters 8.6.0 for Windows x86 (32-bit) (Part 1 of 2)  
  - V16329-01  
  - 1.1G

- Informatica PowerCenter and PowerConnect Adapters 8.6.0 for Windows x86 (32-bit) (Part 2 of 2)  
  - V16329-01  
  - 977M
OBIA Block Diagram
High Level Data Flow

- Source – eBS (Raw Data)
- ETL – Extraction Transform and Load (Informatica – PowerCenter or ODI)
- OBAW - Business Analytics Warehouse
- OBIEE Metadata
- OBIEE Content – Reports and Dashboards
Modular Design of ETL

SDE: Source Dependent Extract
SIL: Source Independent Load
PLP: Post load Process
What’s Below the Surface?
Installation / Post Installation Configuration

• Install OBIEE
• Install OBIA (e.g. 7.9.6)
• Create Target Database (e.g. 10.2.x or 11g)
• Install Informatica (e.g. 8.6, SP4)
  – Client
  – Server (Server / Repository)
  – Integration Service and Repository Service
• Install DAC (e.g. 10g)
  – Install DAC client
  – Install DAC Server
• Restore Informatica Repository
• Restore DAC Repository
• Register Informatica Repository services with DAC
• Connect DAC to DW
• Create Custom Container in Informatica for ETL loads
Supporting Infrastructure – Informatica and DAC
Install Process

- End user machines require no software, browser-based access.
- Windows boxes are required for client software and for transferring some server software (A and B).
- Co-location of Informatica PowerCenter Services and DAC Server – C.
- Clients can be installed on multiple Windows boxes.
OTN BI Apps Forum

Welcome, shyamvaran

Search Category

Top Users in Category
- shyamvaran (170)
  - Christian Berg (120)
  - Rick (95)
  - Mike (95)
  - indvaxr (92)
  - user631111 (80)
  - user743402 (60)
  - Nathan Moor (50)
  - Donn A. Rutins (43)
  - rm1918 (35)

Popular Threads
- One Data warehouse and two independent BI Apps datasources (HR and Finance)
- BI security
- Looking for the data loaded by ETL in Dashboard
- Building Hierarchies
- How to configure, Full Load and Incremental Load in DAC for customized data
- ORA-Fin Link between W. GL BALANCE F and W. GL SEGMENT D

Forum / Category
Business Intelligence Applications
Covers all Oracle Operational Business Intelligence Applications

Views: 88,183
Threads / Messages: 1,007 / 3,968
Last Post: Sep 3, 2009 7:51 AM

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- Informatica Powercenter download
  - Author: user5413638
  - Forum: Business Intel...
  - Views: 157
  - Replies: 6
  - Last Post: Sep 3, 2009 7:51 AM
- EBS FSG report in BI Apps ?
  - Author: user996192
  - Forum: Business Intel...
  - Views: 85
  - Replies: 6
  - Last Post: Sep 3, 2009 4:25 AM
- List of Dimensions by Subject Area
  - Author: user2518425
  - Forum: Business Intel...
  - Views: 49
  - Replies: 3
  - Last Post: Sep 3, 2009 4:09 AM
- One Data warehouse and two independent BI Apps datasources (HR and Finance)
  - Author: user638529
  - Forum: Business Intel...
  - Views: 35
  - Replies: 3
  - Last Post: Sep 3, 2009 3:02 PM
- BI security
  - Author: user634293
  - Forum: Business Intel...
  - Views: 22
  - Replies: 0
  - Last Post: Sep 2, 2009 2:24 PM
- Looking for the data loaded by ETL in Dashboard
  - Author: user2518425
  - Forum: Business Intel...
  - Views: 208
  - Replies: 8
  - Last Post: Sep 2, 2009 2:10 PM
- Building Hierarchies
  - Author: user2518425
  - Forum: Business Intel...
  - Views: 14
  - Replies: 0
  - Last Post: Sep 2, 2009 2:17 PM
- How to configure, Full Load and Incremental Load in DAC for customized data
  - Author: user2518425
  - Forum: Business Intel...
  - Views: 25
  - Replies: 1
  - Last Post: Sep 2, 2009 9:35 AM
- ORA-Fin Link between W. GL BALANCE F and W. GL SEGMENT D
  - Author: shyamvaran
  - Forum: Business Intel...
  - Views: 44
  - Replies: 3
  - Last Post: Sep 2, 2009 9:32 AM
Value Added to the Layered Architecture

- Metrics in Physical Warehouse
- Metrics in Logical Layer
- Metrics in Subject Areas
- Metrics used in Reports & Dashboards

- Not all measures in presentation layer used in reports & dashboards
- Subset of logical measures are exposed in presentation layer
- Aggregations, time series calculations and derived calculated measures extend physical measures
- Measures from physical columns in data warehouse
Effort v/s Customization Balance

- **Easy**
  - Additional dashboards and reports, guided and conditional navigations, iBots, etc.

- **Moderate**
  - Additional derived metrics, custom drill paths, exposing extensions in physical, logical and presentation layer, etc.

- **Intermediate**
  - Extension of DW Schema for extension columns, additional tables, aggregates, indices, etc.

- **Involved**
  - Extension of ETL for extension columns, descriptive flexfields, additional tables, etc.

- **Degree of Customization**
  - Dashboards & Reports
  - OBIEE Metadata
  - DW Schema
  - ETL

- **Level of Effort**
  - Easy
  - Moderate
  - Intermediate
  - Involved
Financial Analytics (7.9.x)

- No. of dashboards: 5
- No. of dashboard pages: 34
- No. of reports: 225
- No. of metrics: 385

- General Ledger
  - Overview
  - Balance Sheet
  - Cash Flow
  - Budget vs. Actual
  - Asset Usage
  - Liquidity
  - Financial Structure
  - GL Balance
- Profitability
  - Overview
  - P&L
  - Margins
  - Revenue
  - Products
  - Customers
- US Federal Financial Performance
  - Budget Summary
  - Budget Details
  - Budget Spending
  - Payables
- Receivables
  - Overview
  - AR Balance
  - Payments Due
  - Effectiveness
  - Payment Performance
  - Customer Report
  - Invoice Details
  - All AR Transactions
- Payables
  - Overview
  - AP Balance
  - Payments Due
  - Effectiveness
  - Payment Performance
  - Supplier Report
  - Invoice Details
  - All AP Transactions
### Target Roles for Financial Analytics

<table>
<thead>
<tr>
<th>General Ledger</th>
<th>Profitability</th>
<th>Receivables</th>
<th>Payables</th>
<th>U.S. Federal Financial</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- CFO</td>
<td>Primary:</td>
<td>Primary:</td>
<td>Primary:</td>
<td>Primary:</td>
</tr>
<tr>
<td>- VP of Finance</td>
<td>CFO</td>
<td>CFO</td>
<td>CFO</td>
<td>CFO</td>
</tr>
<tr>
<td>- Controller</td>
<td>VP of Finance</td>
<td>VP / Director of Credit and Collections</td>
<td>VP / Director of Accounts Payable</td>
<td>Federal Budget Manager</td>
</tr>
<tr>
<td>- Accounting Manager</td>
<td>Controller</td>
<td>Collections Agent</td>
<td>Payables Analyst</td>
<td>Federal Budget Analyst</td>
</tr>
<tr>
<td>- Analyst</td>
<td>Accounting Manager</td>
<td></td>
<td></td>
<td>AP/AR Manager</td>
</tr>
<tr>
<td><strong>Secondary:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Cost Center Owner</td>
<td>Secondary:</td>
<td>Secondary:</td>
<td>Secondary:</td>
<td>Secondary:</td>
</tr>
<tr>
<td>- General Manager</td>
<td>Cost Center Owner</td>
<td>Sales Professionals</td>
<td>Inventory Manager</td>
<td>General Manager</td>
</tr>
<tr>
<td>- Budget Owner</td>
<td>General Manager</td>
<td>Sales Operations</td>
<td>Procurement Agent</td>
<td>Budget Owner</td>
</tr>
<tr>
<td></td>
<td>Budget Owner</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
General Ledgers Dashboard

The General Ledger Dashboards have been designed to provide insight into key financial areas of performance, including balance sheet, cash flow, expenses, budget vs. actual, working capital, liquidity.

- **Overview**: The Overview dashboard page contains the key financial indicators which top management looks at on a regular basis in order to gauge the overall health of the enterprise.

- **Balance Sheet**: The Balance Sheet dashboard page is useful in understanding the financial health of an organization. It sheds light on the exact amounts a company has in assets and liabilities, and identifies the components that contribute to these amounts.

- **Cash Flow**: The Cash Flow dashboard page helps predict a firm’s ability to sustain (and increase) its cash from current operations. It provides information on: 1) A firm’s ability to generate cash from operations 2) Trends in the flow of cash relating to investing and financing decisions and 3) investment for growth.

- **Budget vs. Actual**: The Budget vs. Actual dashboard page enables organizations to perform quick budget variance analysis and provides insight into those areas that are close to going over budget so that the organization can proactively manage those expenses into control.

- **Asset Usage**: The Asset Usage dashboard page displays reports that enable organizations to quickly assess the status of the components of working capital. Reports focus primarily on analyses that evaluate working capital via different ratios, thus giving the organization a complete view.

- **Liquidity**: The Liquidity dashboard page helps companies ensure that they are in a position where they are managing their short term assets such that there will be plenty of resources to cover payments toward liabilities.

- **Financial Structure**: The Financial Structure dashboard page allows users to view ratios of debt to equity, debt to asset as well as the composition of liabilities.

- **GL Balance**: The GL Balance dashboard page allows users to look up GL Balances by specific GL Accounts and or categories by date.
Financial Metrics (KPI’s)

### Example Financial Analytics Metrics

<table>
<thead>
<tr>
<th>Receivables</th>
<th>Payables</th>
<th>General Ledger</th>
<th>Profitability</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR Balance</td>
<td>AP Balance</td>
<td>Balance Sheet</td>
<td>Profitability Returns</td>
</tr>
<tr>
<td>DSO</td>
<td>DPO</td>
<td>Cash</td>
<td>Return on Equity</td>
</tr>
<tr>
<td>Closing Group Amt</td>
<td>Closing Group Amt</td>
<td>Accounts Receivable</td>
<td>Return on Assets</td>
</tr>
<tr>
<td>Credit Limit Used %</td>
<td>Total AP Overdue Amt</td>
<td>Debt to Equity Ratio</td>
<td>Return on Capital</td>
</tr>
<tr>
<td>Total AR Overdue Amt</td>
<td>Overdue Amt to Total %</td>
<td>Current Ratio</td>
<td>Margins</td>
</tr>
<tr>
<td>AR Aging</td>
<td>AP Aging</td>
<td>Asset Turnover</td>
<td>Gross Margin %</td>
</tr>
<tr>
<td>AR Aging 1-30 Amt</td>
<td>AP Aging 1-30 Amt</td>
<td>AR Turnover</td>
<td>Operating Margin %</td>
</tr>
<tr>
<td>AR Due 1-30 Amt</td>
<td>AP Due 1-30 Amt</td>
<td>AP Turnover</td>
<td>EBT Margin %</td>
</tr>
<tr>
<td>AR Overdue 1-30 Amt</td>
<td>AP Overdue 1-30 Amt</td>
<td>Inventory Turnover</td>
<td>Net Income Margin %</td>
</tr>
<tr>
<td>Payment Performance</td>
<td>Payment Performance</td>
<td>Cash Cycle</td>
<td>Product Profitability</td>
</tr>
<tr>
<td>AR Payment Days</td>
<td>AP Payment Days</td>
<td>Fixed Assets Turnover</td>
<td>Revenue</td>
</tr>
<tr>
<td>AR Weighted Days</td>
<td>AP Weighted Days</td>
<td>Cash Flow</td>
<td>Product Gross Profit</td>
</tr>
<tr>
<td>Times Paid Before Due</td>
<td>Times Paid Before Due</td>
<td>Operating Cash Flow</td>
<td>Product Operating Profit</td>
</tr>
<tr>
<td>AR Transactions</td>
<td>AP Transactions</td>
<td>Investing Cash Flow</td>
<td>Customer Profitability</td>
</tr>
<tr>
<td>AR Avg Invoice Amt</td>
<td>AP Avg Invoice Amt</td>
<td>Financing Cash Flow</td>
<td>Revenue</td>
</tr>
<tr>
<td>AR Credit Memo Amt</td>
<td>AP Avg Payment Amt</td>
<td>Net Cash Flow</td>
<td>Customer Gross Margin</td>
</tr>
</tbody>
</table>

### Sample Pre-Built Dashboards

<table>
<thead>
<tr>
<th>Financial Controller</th>
<th>Receivables Manager</th>
<th>Payables Manager</th>
<th>Department Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance Sheet</td>
<td>AR Balance</td>
<td>AP Balance</td>
<td>Budget Vs Actual</td>
</tr>
<tr>
<td>Cash Flow</td>
<td>Payments Due</td>
<td>Payments Due</td>
<td>P&amp;L</td>
</tr>
<tr>
<td>Budget Vs Actual</td>
<td>Effectiveness</td>
<td>Effectiveness</td>
<td>Product Profitability</td>
</tr>
<tr>
<td>P&amp;L</td>
<td>Invoice Details</td>
<td>Invoice Details</td>
<td>Customer Profitability</td>
</tr>
</tbody>
</table>
GL Reports – Cash Flow Summary

- **Purpose:**
  - Displays an overview of the components of cash flow over time

- **User Focus:**
  - CFO, VP of Finance, Controllers, Accounting Managers, Analysts

- **Location:**
  - Dashboard – General Ledger
  - Page – Overview

- **Source:**
  - Financials - GL Cash Flow Subject Area

![Cash Flow Summary Table]

<table>
<thead>
<tr>
<th></th>
<th>2001 Q 1</th>
<th>2001 Q 2</th>
<th>2001 Q 3</th>
<th>2001 Q 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Cash Flow</td>
<td>$20,372,966,230</td>
<td>$1,709,030,207</td>
<td>($232,792,466)</td>
<td>($1,700,917,558)</td>
</tr>
<tr>
<td>Financing Cash Flow</td>
<td>($21,703,193,139)</td>
<td>($3,166,171,434)</td>
<td>$108,223,494</td>
<td>$411,347,557</td>
</tr>
<tr>
<td>Investing Cash Flow</td>
<td>$36,018,583</td>
<td>$642,094</td>
<td>$376,504</td>
<td>$378,512</td>
</tr>
<tr>
<td>Net Cash Flow</td>
<td>($1,294,206,326)</td>
<td>($1,376,499,133)</td>
<td>($124,192,470)</td>
<td>($1,375,191,488)</td>
</tr>
</tbody>
</table>
Configuring Financial Analytics Groups (Domain Value Files)

• Why knowledge of Oracle EBS (or the source system) is important?
• Reports are as good as its configuration
• How to configure Financial Reports using the Chart of Account Grouping?

Source: Mohit S, Oracle
Group Account Number Configuration

• EBS GL doesn’t contain business attributes that represent a real world entity such as Supplier, Customer, and Employee etc.
• This information generally resides in the sub ledgers. For example, Supplier dimension in Accounts Payables (AP) and Customer dimension in Account Receivables (AR).
• In Oracle GL, the transactions are tracked at an account level and used more for book keeping purposes.
• To facilitate reporting on the GL TX’s in DW environment, Fina Apps uses Group Account Number to categorize the accounting TX’s.
Group Account Number Configuration

Purchase Order Transaction (header)

<table>
<thead>
<tr>
<th>Purchase Order#</th>
<th>Buyer</th>
<th>Supplier</th>
<th>Location</th>
<th>Start Date</th>
<th>Amount</th>
</tr>
</thead>
</table>

Dimension

Fact

GL Journal Entry

<table>
<thead>
<tr>
<th>Journal#</th>
<th>Period</th>
<th>Account Combination</th>
<th>Creation Date</th>
<th>Amount</th>
</tr>
</thead>
</table>

Dimension

Fact
Group Account Number Configuration

Out of the box Balance Sheet report

<table>
<thead>
<tr>
<th></th>
<th>2005 / 07</th>
<th>2005 / 08</th>
<th>2005 / 09</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>$2,516,861,372</td>
<td>$2,516,648,176</td>
<td>$2,516,848,325</td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>$3,099,479,436</td>
<td>$2,756,469,398</td>
<td>$3,172,745,234</td>
</tr>
<tr>
<td>Inventories</td>
<td>$204,383,843</td>
<td>$204,383,845</td>
<td>$204,383,845</td>
</tr>
<tr>
<td>Prepaid Expenses</td>
<td>$6,418,563</td>
<td>$6,418,563</td>
<td>$6,418,563</td>
</tr>
<tr>
<td>Other Current Assets</td>
<td>$1,866,660</td>
<td>$1,866,680</td>
<td>$1,866,680</td>
</tr>
<tr>
<td><strong>Current Assets</strong></td>
<td><strong>$2,971,999,300</strong></td>
<td><strong>$2,915,657,603</strong></td>
<td><strong>$3,235,566,757</strong></td>
</tr>
<tr>
<td>Net PPE</td>
<td>$45,206,743</td>
<td>$45,206,743</td>
<td>$45,206,743</td>
</tr>
<tr>
<td>Goodwill</td>
<td>$4,719,952</td>
<td>$4,719,952</td>
<td>$4,719,952</td>
</tr>
<tr>
<td>Other Assets</td>
<td>$76,657</td>
<td>$76,650</td>
<td>$76,650</td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td><strong>$3,043,843,274</strong></td>
<td><strong>$2,927,589,577</strong></td>
<td><strong>$3,278,510,724</strong></td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>($3,276,350,709)</td>
<td>($779,579,526)</td>
<td>$2,525,996,604</td>
</tr>
<tr>
<td>Accrued Liabilities</td>
<td>($139,030)</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Short Term Borrowing</td>
<td>$6,657,360</td>
<td>$6,683,549</td>
<td>$6,683,549</td>
</tr>
<tr>
<td>Other Current Liabilities</td>
<td>($391,958)</td>
<td>$57,204</td>
<td>$87,204</td>
</tr>
<tr>
<td><strong>Current Liabilities</strong></td>
<td><strong>($3,371,211,996)</strong></td>
<td><strong>($772,808,779)</strong></td>
<td><strong>$2,633,767,356</strong></td>
</tr>
<tr>
<td>Long Term Debt</td>
<td>$2,063</td>
<td>$5,053</td>
<td>$5,053</td>
</tr>
<tr>
<td>Other Liabilities</td>
<td>$63,627,720</td>
<td>$63,627,720</td>
<td>$63,627,720</td>
</tr>
<tr>
<td><strong>Long Term Liabilities</strong></td>
<td><strong>$63,627,720</strong></td>
<td><strong>$63,627,720</strong></td>
<td><strong>$63,627,720</strong></td>
</tr>
<tr>
<td>Preferred Stock</td>
<td>($15,111)</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Common Stock</td>
<td>$175,846,389</td>
<td>$175,846,389</td>
<td>$175,846,389</td>
</tr>
<tr>
<td>Retained Earnings</td>
<td>$19,800,759</td>
<td>$19,800,759</td>
<td>$19,800,759</td>
</tr>
<tr>
<td>Other Equity</td>
<td>($17,802)</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td><strong>Total Shareholders Funds</strong></td>
<td><strong>($33,003)</strong></td>
<td><strong>$0</strong></td>
<td><strong>$0</strong></td>
</tr>
<tr>
<td><strong>Total Liabilities</strong></td>
<td><strong>($3,297,582,180)</strong></td>
<td><strong>($770,177,001)</strong></td>
<td><strong>$2,697,400,129</strong></td>
</tr>
</tbody>
</table>

Metadata repository (rpd file)
Group Account Number Configuration

Metadata repository (rpd file)

Oracle BI Administration Tool - OracleBIAnalyticsApp.rpd

Presentation
- Profit Center
  - Facts - Balance Sheet Statement
    - Cash
    - Accounts Receivable
    - Raw Material Inventory
    - Work in Process Inventory
    - Finished Goods Inventory
    - Inventories
    - Prepaid Expenses
    - Other Current Assets
    - Current Assets
    - PPE
    - Accumulated Depreciation
    - Net PPE
    - Goodwill
    - Other Assets
    - Long Term Assets
    - Total Assets

Business Model and Mapping
- Other Income
- Other Current Assets
- Other Assets
- Other Liabilities
- Other Current Liabilities
- Other Equity
- Product Variance Expenses
- Purchases
- Prepaid Expenses
- PPE
- Preferred Stock
- PPE Amount

Logical Column - Prepaid Expenses

Data Type: DOUBLE
Data Type derives from physical sources:

FILTER([Fact][SUM][Fact_W_GL_BALANCE.BALANCE_GLOBAL1_AMT] USING Dim_W_GL_ACCOUNT_D.GROUP_ACCOUNT_NUM = 'PPAID EXP')
Group Account Number Configuration

Metadata repository (rpd file)

W_GL_BALANCE_F table
Summing up Account Hierarchy

The nerd/geek/dork/dweeb population hierarchy
Managing the OBIEE Project

• Quick Dev / Test environment install for OBIEE
• Socialization
  • Show customer’s data and invite users to start playing with it to Create a Dashboard Envy
• Fit Gap Analysis
• Iterate and fine tune the system
General Ledger - Overview

Cash Flow Summary
Click on the values to drill to further detail.

Select View: Pivot Table

Operating Cash Flow
2008 Q 1: $1,200,071,020.97
2008 Q 2: $547,876,703.05
2008 Q 3: $400,295,540.60
2008 Q 4: $1044,193,310.27

Financing Cash Flow
2008 Q 1: $1,372,117,840.15
2008 Q 2: $(737,301,965.21)
2008 Q 3: $(611,322,439.22)
2008 Q 4: $(500,668,694.25)

Investing Cash Flow
2008 Q 1: $181,344,960.29
2008 Q 2: $(46,281,804.27)
2008 Q 3: $137,126,935.32
2008 Q 4: $(793,547,852.93)

Net Cash Flow
2008 Q 1: $8,898,771
2008 Q 2: $(146,244,395)
2008 Q 3: $(573,207,958)
2008 Q 4: $744,702,635

Jumpstart to show value with your own data

To view the detailed cash flow report, please click on the following link to navigate over to Cash Flow Dashboard.

Cash Flow

To view the complete balance sheet including the Long Term Assets, please click here to navigate over to Balance Sheet Dashboard.

Expenses by Category
Click on chart or values in table to drill to further detail.

Top 10 Cost Centers by Expenses
Click on the cost center to drill to further detail.

Grand Total
$10,307,776,83
100.0%

GL Account Category is equal to PL and Transaction Amount is in Top 10 and Group Account Number is not equal to / is not in REVENUE, OTHER INC

Modify - Refresh - Print - Download

Local Intranet: 5:57 PM
### GL Balance Dashboard Page

#### GL Account Balance

**Time run:** 8/4/2009 2:52:41 PM

<table>
<thead>
<tr>
<th>GL Account Number</th>
<th>GL Account Name</th>
<th>Financial Statement Item</th>
<th>Group Account Number</th>
<th>GL Account Category</th>
<th>Closing Account</th>
</tr>
</thead>
<tbody>
<tr>
<td>2640</td>
<td>2640</td>
<td>OTHERS</td>
<td>OTHER ASSET</td>
<td>BS</td>
<td>$19,917,096,474.39</td>
</tr>
<tr>
<td>8318</td>
<td>8318</td>
<td>OTHERS</td>
<td>EXPENDITURE</td>
<td>PL</td>
<td>$3,870,409,428.05</td>
</tr>
<tr>
<td>2641</td>
<td>2641</td>
<td>OTHERS</td>
<td>OTHER ASSET</td>
<td>BS</td>
<td>$308,499,971.42</td>
</tr>
<tr>
<td>5523</td>
<td>5523</td>
<td>OTHERS</td>
<td>OTHERS</td>
<td>BS</td>
<td>$347,082,212.91</td>
</tr>
<tr>
<td>0946</td>
<td>0946</td>
<td>AR</td>
<td>AR</td>
<td>BS</td>
<td>$417,344,000.00</td>
</tr>
<tr>
<td>0163</td>
<td>0163</td>
<td>OTHERS</td>
<td>EXPENDITURE</td>
<td>PL</td>
<td>$416,773,566.64</td>
</tr>
<tr>
<td>2043</td>
<td>2043</td>
<td>OTHERS</td>
<td>OTHER ASSET</td>
<td>BS</td>
<td>$301,640,120.00</td>
</tr>
<tr>
<td>0621</td>
<td>0621</td>
<td>AR</td>
<td>AR</td>
<td>BS</td>
<td>$317,191,247.17</td>
</tr>
<tr>
<td>0600</td>
<td>0600</td>
<td>AR</td>
<td>AR</td>
<td>BS</td>
<td>$228,595,580.69</td>
</tr>
<tr>
<td>8004</td>
<td>8004</td>
<td>OTHERS</td>
<td>EXPENDITURE</td>
<td>PL</td>
<td>$211,964,868.92</td>
</tr>
</tbody>
</table>

**Current Fiscal Quarter View**

Modify - Refresh - Print - Download - Add to Briefing Book
Accounts Payable Related
OBIA - Flow

- Includes infrastructure components and:
  - OBAW and ETL components to load it
  - Informatica, DAC, and BI Server metadata
Creating the Data Warehouse Tables
Informatica PowerCenter – Administration Screens
Informatica Administration Console

The Integration Service INFAIntSrvc is enabled and running in Normal mode.

The service is running.

Node: n1_jac22819
Codepage: MS Windows Latin 1 (ANSI), superset of Latin1
Backup Nodes: None

DataMovementMode: ASCII
$PMSuccessEmailUser:
$PMFailureEmailUser:
$PMSessionLogCount: 0
$PMWorkflowLogCount: 0
$PMSessionErrorThreshold: 0
License: License_jac22819_9567
Table 2-2  Table Types Used by the Oracle Business Analytics Warehouse

<table>
<thead>
<tr>
<th>Table Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate tables (_A)</td>
<td>Contain summed (aggregated) data.</td>
</tr>
<tr>
<td>Dimension tables (_D)</td>
<td>Star analysis dimensions.</td>
</tr>
<tr>
<td>Staging tables for Dimension (_DS)</td>
<td>Tables used to hold dimension information that have not been through the final ETL transformations.</td>
</tr>
<tr>
<td>Staging tables for Usage Accelerator (WS_)</td>
<td>Tables containing the necessary columns for the ETL transformations.</td>
</tr>
<tr>
<td>Dimension Hierarchy tables (_DH)</td>
<td>Tables that store the dimension's hierarchical structure.</td>
</tr>
<tr>
<td>Dimension Helper tables (_DHL)</td>
<td>Tables that store M:M relationships between two joining dimension tables.</td>
</tr>
<tr>
<td>Staging tables for Dimension Helper (_DHLS)</td>
<td>Staging tables for storing M:M relationships between two joining dimension tables.</td>
</tr>
<tr>
<td>Fact tables (_F)</td>
<td>Contain the metrics being analyzed by dimensions.</td>
</tr>
<tr>
<td>Fact Staging tables (_FS)</td>
<td>Staging tables used to hold the metrics being analyzed by dimensions that have not been through the final ETL transformations.</td>
</tr>
</tbody>
</table>
## Column Name Convention

### Table 2-6 Standard Column Suffixes

<table>
<thead>
<tr>
<th>Suffix</th>
<th>Description</th>
<th>In Table Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>_CD</td>
<td>Code field.</td>
<td>_D, _DS, _FS, _G, _GS</td>
</tr>
<tr>
<td>_DT</td>
<td>Date field.</td>
<td>_D, _DS, _FS, _G, _DHL, _D HLS</td>
</tr>
<tr>
<td>_I</td>
<td>Language Independent Code. &lt;br&gt;In the transactional database, list of value (LOV) information is stored with both language-independent and display values. A Language Independent Code column references the language-independent LOV, which may be different from the displayed value in both the transactional system and the data warehouse.</td>
<td>_D, _MD</td>
</tr>
<tr>
<td>_ID</td>
<td>_ID columns are used in _FS tables. They correspond to the _WID columns of the corresponding _F table.</td>
<td>_FS</td>
</tr>
<tr>
<td>_FLG</td>
<td>Indicator or Flag.</td>
<td>_D, _DHL, _DS, _FS, _F, _G, _D HLS</td>
</tr>
<tr>
<td>_WID</td>
<td>Identifier generated by Oracle BI linking dimension and fact tables, except for ROW_WID.</td>
<td>_F, _A, _DHL</td>
</tr>
<tr>
<td>_NAME</td>
<td>Name corresponding to the code column (columns ending with _CODE)</td>
<td>_D, _F, _A</td>
</tr>
<tr>
<td>_DESC</td>
<td>Long Description corresponding to the code column (columns ending with _CODE)</td>
<td>_D, _F, _A</td>
</tr>
</tbody>
</table>
Star Data Model
Data Dictionary

**W_PURCH_ORDER_F**

**Business Name:** Purchase Order

**Description:**
W_PURCH_ORDER_F fact table is used to capture all the purchase orders that are raised on suppliers by the purchasing unit of a business organization (purchasing organization). The types of purchase orders can be many and would typically include one-time, regular, blanket, release etc. The data in this table is stored at the purchase order product line item level. The purchase order lines in this table are in turn referenced by fact rows in the W_PURCH_RCPT_F table. The data in this table is expected to be dynamic in nature during the lifecycle of a specific purchase order and its receipt related cycles. Columns like RECEIVED_QTY, ACCEPTED_QTY and STATUS_WID represent the current status/information related to a purchase order line item.

<table>
<thead>
<tr>
<th>Table Columns:</th>
<th>Description</th>
<th>Datatype</th>
<th>Lookup Table</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Column Name</strong></td>
<td><strong>Description</strong></td>
<td><strong>Datatype</strong></td>
<td><strong>Lookup Table</strong></td>
</tr>
<tr>
<td>SUPPLIER_WID</td>
<td>Supplier Surrogate Key</td>
<td>This indicates the supplier on whom the purchase order has been placed. The link to the W_SUPPLIER_D dimension. Lookup: W_SUPPLIER_D</td>
<td>NUMBER(10)</td>
</tr>
<tr>
<td>PRODUCT_WID</td>
<td>Product Surrogate Key</td>
<td>This indicates the product which is being sourced from the supplier on the purchase order line item. Lookup: W_PRODUCT_D</td>
<td>NUMBER(10)</td>
</tr>
<tr>
<td>INVENTORY_PROD_WID</td>
<td>Inventory Product Surrogate Key</td>
<td>This indicates the business location -- product combination against which the purchase order item will be received.</td>
<td>NUMBER(10)</td>
</tr>
</tbody>
</table>
DAC LifeCycle

DAC Process Life Cycle

Setup -> Design -> Execute

Diagnose -> Monitor
DAC Execution Plans

Execution Plans
An execution plan is a unit of work that enables you to organize, schedule, and execute ETL processes. An execution plan comprises the following objects: subject areas, ordered tasks, indexes, tags, parameters, source system folders, and phases.

DAC supports single-source and multi-source execution plans, which are described in the following sections:
- About Single-Source Execution Plans
- About Multi-Source Execution Plans

- Single Source and multi-source scenarios
Monitoring / Tuning the ETL
Full ETL / Incremental ETL

- Full ETL and Reset DW
- Why full and incremental may take comparable time?
- Analogy of stack of books
- Real-time, how real?
Micro-ETL (Near Real-Time)

- Micro ETL execution plans are frequent ETL processes scheduled such as hourly or half-hourly.
- Usually handle small subject areas or subsets of larger subject areas.
- DAC tracks refresh dates for tables in micro ETL execution plans separately from other execution plans and uses these refresh dates in the change capture process.
- After a micro ETL execution plan runs, DAC populates refresh date values in the Refresh Dates child tab of the Execution Plans tab.
- DAC automatically detects the last refresh date for the tables common to both execution plans and intelligently extracts only the most recent records for the micro ETL execution plan.
Micro ETL Pitfalls

• For related star schemas, if one schema is omitted from a micro ETL, the cross-star reports may be inaccurate. E.g. if the Person fact table is refreshed more frequently than Revenue fact table, report spanning Person and Revenue star schemas may produce inconsistent results.

• If you omit dimension tables from a micro ETL, FK’s keys for fact tables will point to Unspecified rows for the new dim records. FK references will be resolved when the Complete ETL execution plan is run.

• If you do not include aggregate tables in micro ETL, reports that use data from these tables will be inconsistent with the detailed fact tables. However, if aggregate tables are included in the micro ETL, the aggregate calcs are performed taking longer time.
Process Flow for New OBAW Objects

- Add in OBAW
- Import in Infa
- Configure DAC
Index and Analyze Table Syntaxes

- Customsql.xml file is located in the ..\BIFOUNDATION\DAC\CustomSQLs directory. **To edit the Analyze Table syntax**

  1. Open the customsql.xml file, locate the Analyze Table syntax for DB type.
  <SqlQuery name = "ORACLE_ANALYZE_TABLE" STORED_PROCEDURE = "TRUE">

  **DBMS_STATS.GATHER_TABLE_STATS**(ownname => '@TABLEOWNER', tabname => '%1', estimate_percent => 30, method_opt => 'FOR ALL COLUMNS SIZE AUTO', cascade => true )
  </SqlQuery>

  2. Edit the syntax. E.g., to gather statistics for only the indexed columns:
  <SqlQuery name = "ORACLE_ANALYZE_TABLE" STORED_PROCEDURE = "TRUE">

  **DBMS_STATS.GATHER_TABLE_STATS**(ownname => '@TABLEOWNER', tabname => '%1', estimate_percent => 10, method_opt => 'FOR ALL INDEXED COLUMNS', cascade => true )
  </SqlQuery>
OBIA List of Docs

• Main Page for Documents (http://www.oracle.com/technology/documentation/bi_ee.html)
• OBIA install guide (E14217-01)
• OBIA Config guide (E14216-01)
• DMR 7.9.6
• Data Lineage 7.9.6
• Business Definitions of Metrics
• Sample Reports – Product Guides
Trouble Shooting
7.9.6 Issues

- Unzip of Informatica 8.6 hotfix is asking for password – (do not use Windows uncompress)
- BUG 8557986: DAC SETUP INFORMATICA SERVERS SCREEN IS NOT UPDATED FOR OBIA 7.9.6 GUIDE

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Oracle Support - May 22, 2009 11:41:42 AM GMT-04:00

Hello Shyam,

Thank you for contacting Oracle Support. Your service request has been assigned to me.

In previous cases we found that the "password protected" message only appears when extracting with Extraction Wizard. Please use Winzip or Winrar program to extract the files. I also found that the extraction may give an error for some file due to a path too long. To avoid this error please change the names of the folders to something shorter.

I hope this information helps.

Regards,
Maria Pia Soto
...Issues

• Need for PARAM_OLTP_ORA11I in EBS R12 Source

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Oracle Support - June 3, 2009 7:17:14 PM GMT-04:00
Following is summary of call with Shyam:

After log of debugging we finally narrowed it down to following defect -

Bug 8314065: REG: EBS11.5.10: SDE_ORA_ARTRANSACTIONFACT_ARSCCHEDULE_DERIVE TASK FAILS

The workaround is to manually add PARAM_OLTP_ORA11I connection in Workflow and after that the tasks completed fine.

regards,
~Rajesh.
BOM related

- Bill Of Material Related, missing join in the RPD
- Another one EBS side table _DS not truncated every night

Oracle Support - August 12, 2009 2:07:19 PM GMT-04:00

KNOWLEDGE CONTENT

Knowledge content was created in metalink3:

W_BOM_HEADER_DS is not getting truncated - BOM index failing (Doc ID 873047.1)
Importance of Metalink3 – Oops Support.Oracle.com

Product: Siebel Financial Analytics

Last Update: (13+ weeks ago) Hi Shyam,

Per our conversation yesterday I’ve created a documentation bug to handle this issue and also a knowledge document in metalink3. Now I’m going to close this service request as...

Edit your Service Request

History

Sort by: New to Old

Hi Shyam,

Per our conversation yesterday I’ve created a documentation bug to handle this issue and also a knowledge document in metalink3. Now I’m going to close this service request as we discussed yesterday.

Thank you,

Luis

Oracle Support - May 28, 2009 6:47:49 PM GMT-04:00

BUG 8557986: DAC SETUP INFORMATICA SERVERS SCREEN IS NOT UPDATED FOR OBIA 7.9.6 GUIDE
Q&A

• Questions  =>  Follow up via:  
http://oraclebiwasig.blogspot.com/

• Contact Info  
Shyam Varan Nath  
ShyamVaran@Gmail.com  
(954) 609 2402
OBIEE 11g Features

• OBIEE 11g is expected in next year
• Support for unbalanced/ragged hierarchy
• Better integration with Essbase
• Cross subject area reporting
• OBI Apps for HFM and so on…
• More details here
• “…new addition to the web catalog in 11g, “conditions”, which are defined against data items and can be used by actions and other processes to run checks like “is the customer profitable”, “do they have a checking account” and so on, I used a variation on this when doing my BI and SOA articles and it’s a similar idea to the conditions that you can define in the Discoverer EUL.”