"Must Know" Tips & Tricks for Oracle Business Intelligence 11g

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Taking full advantage of what OBIEE and OBIFS has to offer

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REMINDER
Check in on the COLLABORATE mobile app
## Our Services

- Enterprise Resource Planning
- Business Intelligence
- EPM-Hyperion
- Middleware
- CRM
- Managed Services
- Education / Oracle University
- Project Advisory Services

## Oracle Partnership

- Oracle Platinum Partner
- Pillar Partner
  - SOA
  - Business Intelligence
  - Hyperion
- Oracle University Approved Education Center
- Oracle University Reseller
- Oracle Accelerator Implementer
- Oracle Managed Cloud Services Implementer
- Oracle Cloud Marketplace
- Small Business Strategy Council
- Advanced Partner Support

## ORACLE SPECIALIZED

- EBS Financial Management
- EBS Human Capital Management
- EBS Supply Chain Management
- BI Applications
- BI Foundation
- Service Oriented Architecture
- Public Sector
- Utilities
- Travel & Transportation
- Education & Research
- Application Development Framework 11g
- WebCenter Content 11g
- Access Management Suite Plus 11g
- Hyperion Planning 11
- Essbase 11
- Database 11g
- Hyperion Financial Management 11

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### Awards

- **3 Time Oracle Excellence Award Winner**
- **2014 Chicago Tribune Top 100 Workplaces**
- **2014, 2013, 2012 Inc. 5000 Fastest Growing Companies**
- **2014, 2012 Best & Brightest Companies to Work For**
- **2011 Inc. Top Small Company Workplaces**
ORACLE BUSINESS INTELLIGENCE

- Interactive Dashboards
- Reporting & Publishing
- Ad-hoc Analysis
- Office Integration
- Scorecards
- Mobile
- Search
- Detect & Alert
- Collaborate
- Data Integration
- Embedded

Oracle BI Enterprise

- Business user access layer
- Friendly field names
- Role based access
- Table, row, column security

- Physical Connections to sources
- Inter/Intra Data Joins
- Common business rules
- Common Hierarchies

Application A
Application B
Application C
Excel Sources
Flat File Sources
Other Systems
Access Sources
Dig into What’s New in Oracle BI
NEW STUFF COMES WITH EACH RELEASE

In OBIEE/OBIFS 11g

- Powerful interface for every type of user
- Integrated BI Publisher
- More MS Office options
- Improved Mobile and Mapping support
- New modules like OSSM
- More integration with EPM (Hyperion, Essbase)
- Exalytics-targeted features
- The Cloud is here!
INTERACTIVE, POWERFUL INTERFACE

High-Fidelity Charting

Dashboards
Collections of related reports providing an interactive experience for users.

Reports & Ad-hoc Analysis
Drag and drop report building. Simple, intuitive web interface.

Charts
Rich, extensible chart library, simple chart builder interface

Rich Visualizations
Go beyond the chart and create other visualizations for your data

Geospatial Mapping
Display data via a map interface, provide drill down to detail layers and to other reports

Actions / Scheduling
Drill to other reports and applications. Smart schedule reports for delivery to recipients
BI PUBLISHER

Template Based Document Generation
- Pixel-perfect printing of documents/forms
- Associate multiple templates to output
- Use MSOffice, Adobe, browser based tools to build document layouts

Access to Multiple Data Sources
- Supplement OBIEE data model with flat files, Excel, web services
- Federate queries across sources
- Model result sets, add calculations, grouping, data triggers (Oracle Reports)

Document Management and Delivery
- Export to multiple formats incl. MSOffice, PDF, PS, electronic formats
- Deliver to multiple channels incl. email, fax, print, ftp, http
- Integrate reports into applications via URL/web services
- Bursting engine to automate the format and delivery of thousands of documents in a single job
- Automated book generation
ORACLE SCORECARD AND STRATEGY MANAGEMENT

• Integrated BI component
  • KPIs as core metadata
  • Thresholds, owners, history
  • Auto-generated interactive analyses
  • Linked objectives & initiatives
• Automatic detection
  • KPI alerts triggered by thresholds
• Strategy visualization
  • Strategy Maps and Trees
  • Cause and Effects
  • Watchlists
  • Annotations & override
• All methodologies
  • Balanced Scorecard, Six Sigma, Baldridge, custom
ORACLE BI FEATURES FOR EPM

Oracle Essbase & Hyperion Users

- Essbase as a data source
- Oracle Analysis as a front-end for Essbase and Hyperion
- Integration of Essbase and relational data into drill-through models
- Oracle BI Repository as a data source for Essbase Studio
- Access to OBIEE dashboards & reporting
- SmartView for MS Office
Learn the Architecture and Terminology
**Oracle BI Domain**
- *The overall Oracle BI EE system*

**WebLogic Domain**
- *Set of WebLogic instances servicing one or more J2EE applications*

**Admin Server (WebLogic)**
- *Provides management of both the WebLogic and BI Domain; Only one (1) per WebLogic Domain*

**Managed Server (WebLogic)**
- *Contains deployed J2EE BI application*

**Node Manager (WebLogic)**
- Daemon process that provides remote server start, stop and restart capabilities in addition to monitoring

**Oracle BI System Components**
- BI Server, Presentation Server, Scheduler, Cluster Controller and Java host

**Oracle BI J2EE Components**
- BI Publisher, BI Office, Action Framework Service, BI SAW Bridge Plug-in, Security, Web Services for SOA
DO AN INSTALLATION...SOME SUGGESTIONS

- WebLogic is standard/required/built-in
  - BI is installed within a WLS domain
- Repositories need to be built first (Rep. Creation Util.)
  - Minimally, the MDS and BIPLATFORM schemas are needed
  - Multiple relational databases supported
- Installer Options:
  - “Simple” – For development machines/laptops only; Combines Admin and Managed Servers; cannot be “scaled out”
  - “Enterprise” - Includes configuration steps; generally used when doing primary server installs
  - “Software Only” - Configuration is separate; generally used when scaling out or adding component
- For sizing & capacity planning
  - See Doc ID 1323646.1
INSTALL SCREENSHOTS

Select Installation Type
- Welcome
- Skip Software Updates
- Simple Install
- Prerequisite Checks
- Specify Installation Location
- Administrator Details
- Configure Components
- BIPLATFORM Schema
- MDS Schema
- Security Updates
- Summary
- Installation Progress
- Configuration Progress
- Complete

Configure Components
- Welcome
- Skip Software Updates
- Simple Install
- Prerequisite Checks
- Specify Installation Location
- Administrator Details
- Configure Components
- BIPLATFORM Schema
- MDS Schema
- Security Updates
- Summary
- Installation Progress
- Configuration Progress
- Complete

Select the components to configure as part of the installation process.

Oracle Business Intelligence
- Business Intelligence Enterprise Edition
- Business Intelligence Publisher
- Real-Time Decisions
- Essbase Suite

Oracle Business Intelligence 11g 11.1.1.7.0 - Step 3 of 14
Oracle Business Intelligence 11g 11.1.1.7.0 - Step 7 of 14
- Elapsed Time: 7m 29s
RESULTING BI DOMAIN WITHIN EM
Don’t Ignore Your Data Warehouse Design
CORE DW & BI MODELING PRINCIPLES

1. Target a business process or subject area
2. Solidify the level of detail or grain
   • By default, capture lowest level of detail
     • Allows for drill-down; makes BI “operational”
   • Summarized for special cases only – instead, utilize aggregates
3. Identify the dimensions by which data needs to be analyzed
   • How to “slice and dice” the data
4. Identify the metrics to be included for analysis
   • What numbers and calculations are we looking for
MODEL STAR OR SNOWFLAKE SCHEMAS

• Snowflake Schema
  • A common form of a dimensional model
  • Different hierarchies in a dimension can be extended into their own dimensional tables
    • Therefore, a dimension can have more than a single dimension table.

• Star Schema (recommended)
  • The most common form of dimensional model
  • Each dimension is represented by a single dimension table
DATABASE-LEVEL SUGGESTIONS

- All Dimension tables need primary keys
  - With few exceptions, these ought to be surrogate keys
  - Natural keys must still exist as attributes and be used by ETL
  - A “dummy” (blank/zero/placeholder) record is recommended for each dimension
    - Allows for fact records to have value for each dimension
- All Fact tables must have foreign keys to dimensions
  - These also must be indexed:
    - Standard, Bitmap or Bitmap-Join Indexes (stores rowid for PK as well)
    - NOTE: If Bitmap or Bitmap-Join Indexes are implemented and STAR_TRANSFORMATION_ENABLED=TRUE, the database will force sub-queries against the dimensions before the fact
- Partitioning will almost always help
- Materialized views are good choice for aggregates
Allocate Time for your Oracle BI Repository Design
At a high-level... the pieces

The Oracle BI Model

User Requests

Presentation Catalog

Business Models

Physical Models

Data Sources

Logical Queries

Role-Based Subject Areas

• Defines components for physical queries
• Aligns with data source structures
• Encapsulates source dependencies for portability and federation purposes
• Defines analytic behavior
• Abstraction of sources
• Mappings for each logical column (decision rules, etc)
• Conformed dimensions, hierarchies
• Relational, structured view of dimensional business model
• Organization of objects
• Role-based
• Name and descriptive overrides – simplified, appropriate business terminology
• Most Important!!
HELPFUL RPD UTILITIES

- For building and maintaining models and subject areas…
  1. Replace Columns or Table in Logical Table Sources
  2. Rename Wizard
  3. Update Physical Layer
  4. Remove Unused Physical Objects
- For metadata documentation…
  1. Repository Documentation *(delimited output)*
  2. Generate Metadata Dictionary *(will need to configure online access)*
- For deploying changes…
  1. Generate Deployment File
Take Full Advantage of User Experience Enhancements
VISUALIZATION ENHANCEMENTS

**Performance Tiles**
Immediately reveals summary metrics to the end user that will likely also be presented in larger, more detailed dashboard views.

**100% Stacked Bar**
Compare distributions within categories and also display the differences between categories.

**Freeze Headers**
Anchor the header for large tables or pivot views.

**Waterfall**
Determine how an initial value is affected by a series of intermediate positive or negative values.

**View Suggestions**
An algorithm will determine which visualization type would be best suited for the display of current data.

**Trellis Chart Grid**
Data-dense view type displays large amounts of data for comparative analysis.
VISUALIZATION SUGGESTIONS

11.1.1.7

- Helps users select the chart type best suited for the display of targeted data and analysis
- **Options like:**
  - Analyzing Trends
  - Comparing Values
  - Comparing Percentages
- Also, ‘Best Visualization’ selection option
USER INTERACTION IMPROVEMENTS

Navigation / Actions from Totals
Pass context to any Action Framework process

Breadcrumbs
Contextual awareness and Breadcrumbs for easy navigation

Pass Context to ADF
This allows to capture the current state of the BI content for leverage in Fusion Applications

Search with Endeca MDEX
Facet-based UI for full-text search from the OBIEE UI

Save As Analysis on Dashboard
New Save-as option when editing Analysis from dashboard replace the updated analysis within the dashboard

Trellis Actions
Context per bar in Simple Trellis Action for entire cell in Advanced Trellis
NEW RUN-TIME OPTIONS

11.1.1.6+

- Give users the ability to ‘select’, add, remove, group, calculate, sub-total, etc.
- Need to set this on the Analysis Properties
INSTRUCT USERS ON THESE FEATURES
Not available only in ‘Design’ anymore (11.1.1.6+)
PROMPT ‘APPLY’ AND ‘RESET’ BUTTONS

Optionally remove both buttons

- Set at Page Settings for Prompts
- Settings available at the Dashboard level
- Needed to support Exalytics
Make BI Interactive
USE THE ACTION FRAMEWORK

- Agents - Enable you to automate your business processes
  - The new generation of iBots from 10g
  - Provide event-driven alerting, scheduled content publishing, and conditional event-driven actions
    - Various subscription and recipient options
    - Complex layered triggering requirements can be implemented
  - Alerts can be delivered to: (1) Alerts section of Home page, (2) 1st page of My Dashboard, (3) on any dashboard page, (4) within the dialog displayed from the Alerts! button in the global header, and (5) specified delivery devices – phones, etc.

- Actions - Enable navigation or invoking of services or other requests
MORE ON BI ACTION FRAMEWORK

Automatic

- Sense
  - Detect business events & conditions.
- Respond automatically
  - Generate and deliver reports
  - Alert and Notify users
  - Initiate business processes and workflows
- Monitor Progress
  - Track resolution and progress

Human-Driven

- Define actions in response to insights
  - Associate with key business conditions
- Navigate
  - Guide users to relevant analysis, web content and transactional systems
- Take Action
  - Initiate workflows & business processes
MASTER-DETAIL LINKING

• First, pick a driving column (report element) on the “Master” to initiate the event, *also specifying a channel name*
• Second, have the “Detail” analyses listening
  • It’s possible to list multiple even channels here, too
MASTER-DETAIL EVENTS
Leverage Integrated EPM Solutions and MS Office Support
ORACLE BI FEATURES FOR EPM

Improved install, setup and support features

• Essbase as an OBIEE aggregate persistence target
  • Embedded Essbase Studio facilities - automatically create and populate OBIEE aggregates into ASO cubes
• Fully integrated into installation (11.1.1.7)
• Better integration with Enterprise Manager
• Outline imports are handled better
  • Hierarchies better maintained
  • Parent-Child hierarchies supported
• Alias tables and User-Defined Attributes (UDAs) supported
INTEGRATED EPM-RELATED TOOLS

• OBIEE adds the following tools to the list of BI desktop tools that are available for download:
  • Oracle Hyperion Smart View for Office
    • Replaces previous BI Office solution
  • Oracle Hyperion Financial Reporting Studio
  • If Essbase is installed:
    • Oracle Essbase Studio Console
    • Oracle Essbase Administrative Services Console
SMART VIEW FOR OFFICE

Simple Setup Steps

1. Download and install
2. Go into Excel
3. On SmartView ribbon, click on ‘Panel’ and setup Private Connection
4. Choose OBIEE for the provider
5. Enter Server and Credentials
   - Server: ../analytics/jbips
BI VIEW CREATION IN SMART VIEW

- Report View creation from Excel
- Save in Excel or as a report View
- Publish and save in the OBIEE Web Catalog
BI PRESENTATION CATALOG IN SMART VIEW

- Smart View provides MSOffice integration
- Full support for BI dashboard page and report prompts
- Enhanced security including single sign-on
EXPORT DASHBOARDS & DASHBOARD CONTENT

- Export Dashboard or Dashboard page
  - Dashboard pages appear as separate Excel worksheets
Mobilize Your Users
ORACLE BI MOBILE HD
IT Controlled – Managed – Consistent

- Extend Oracle BI to mobile devices – smartphones, tablets
- No additional development
ORACLE BI MOBILE APP DESIGNER

Self-service – Purpose Built Analytic Apps

- Self-service capability allowing business users to create and distribute targeted mobile apps with zero-coding
ORACLE BI MOBILE APP DESIGNER

After Installation

• Requires:
  • OBI 11.1.1.7.13107 Patch 17530796
  • BI Mobile App Designer Patch 17220944
ORACLE BI MOBILE APP DESIGNER

Specify Targeted Device and Data Source for New Applications
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Main Page, Subpages and Frames
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Adding Tables, Pivot Tables, Chart and List Components
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Enhance with Accordions, Tiles, Navigation Pages and Maps
Consider All of Your Users
1. Set ‘Analysis Editor’ to Wizard (or turn ‘Accessibility Mode’ ‘On’ in earlier releases).

2. Now, editing or creating analyses opens wizard in new tab/window.

Utilize Metrics for System Performance
MONITORING PERFORMANCE

Via Enterprise Manager (under AdminServer)
CACHE MANAGEMENT

- OBIEE turns it on by default for new installs
- Cache status is stored in nqsconfig.ini
- To enable or disable cache, navigate to Capacity Management > Performance
- Required to restart services after change
Leverage Oracle’s Samples and Examples
ORACLE SAMPLE APPLICATION

Latest: V406

- OBIEE SampleApp Lite
  - Comes with OBIEE install
  - Full version of SampleApp
    - VirtualBox image includes OEL6.5, Mobile App Designer v2 & Oracle Database 12c
    - Comprehensive collection of examples designed to demonstrate Oracle BI capabilities

ORACLE BY EXAMPLE

OBIEE Tutorials

Follow Oracle’s BI Product Roadmap
ORACLE’S BI STRATEGY IS “CLOUD FIRST”

- Oracle BI Cloud Service (BICS)
  - Many improvements coming
- Oracle Transactional BI (OTBI)
  - Pre-Built modules available with Cloud ERP
- Oracle Transactional BI Enterprise (OTBIE)
  - Currently available for HCM Cloud
- Oracle BI Applications 11g > Moved to Oracle Data Integrator
- Oracle Endeca Information Discovery
- Coming Soon…
  - New Visualization Layer options (Visual Analyzer)
  - New Mobile Voice applications (BI Ask)
Finally, Be Iterative!
BI IS A PROCESS... an *Evolution!*

- Gather **Data** Assets
- Consolidate **Information**
- Derive **Strategies**
- Analyze and Report **Insights**
- Take **Action**
Questions?
Comments?
THANK YOU

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Please complete the session evaluation
We appreciate your feedback and insight

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