Migrating Discoverer to OBIEE – Lessons Learned

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Professional Background

- OBIEE Architect at Infosemantics, Inc.
- Experience with BI solutions for Oracle EBS including R12 since 2002
- Experience with Packaged Solutions
  - Oracle Business Intelligence Enterprise Edition
  - Oracle BI Applications (OBIA)
  - Oracle Discoverer
  - Several others including Oracle Daily Business Intelligence, and Noetix Views
Agenda

• Differences in Oracle Discoverer and Oracle BIEE
  – Overview of Discoverer
  – Overview of Oracle BIEE
  – Key differences between Discoverer and Oracle BIEE

• Why Oracle BIEE?
• OBIEE Roadmap for Discoverer Users
• Migration challenges and lessons learned
• Q&A
Discoverer 10g/11g
Discoverer Overview

• Primarily for Adhoc Reporting
• Pre-packaged solution integrated with Oracle E-Business Suite (operational reporting)
• Can be used on custom Data Warehouse solutions as well (requires custom End-User Layer build out)
• Leverages calculations and analytics in Oracle RDBMS
• Integration with Oracle E-Business Suite
Discoverer Overview
Component Puzzle

- Discoverer Administrator
- EUL – End User Layer
- End User Tools
  - Desktop, Plus & Viewer
- Portlets & Portlet Provider
  - Oracle Application Server
    (now a Weblogic Server component)
- Oracle Database at center
  - Internal Data
  - External Data
    - DB links, Gateways
Discoverer Overview
Portlet & Portlet Provider

- Quasi-Dashboard Functionality
- Multiple Reports in Single View
- Combine Multiple Sources
Discoverer Overview

Discoverer Weaknesses

• Oracle Dependency
  – Difficult to connect to RDBMSs other than Oracle
  – End-User Layer and security must reside in one single Oracle database instance
  – No data warehouse type analytics, difficulty with cross-reporting needs across multiple data sources
  – Database links to connect to other data sources, therefore causing significant performance issues

• Performance
  – End-User Layer is built on Views and SQL
  – Difficult to tune SQL generated from the EUL

• No alerting mechanism
• Discoverer Portlets provide limited Dashboard functionality
# Oracle Fusion Middleware Releases

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Overview of OBIEE

- Next generation BI solution from Oracle
- Best in class solution for query and analysis, enterprise reporting, dashboards, and scorecards, built on an open, highly scalable, architecturally unified technology foundation
- Re-branded from Siebel Analytics to OBIEE back in 2007
- OBIEE11g (11.1.1.7) – Latest Release
  - AKA Oracle Fusion Middleware Oracle Business Intelligence
  - Comes with Weblogic Server
  - Tighter integration with Hyperion, Essbase, supports ragged hierarchies and much more
  - BI Apps release 7.9.6.4 (with Informatica as ETL) / 11.1.1.7.1 (with ODI as ETL) for Oracle EBS (11i/R12), PeopleSoft, JDEdwards, SAP etc
Integrated Solution Model

Common Enterprise Information Model

Oracle BI Server

- OLTP & ODS Systems
- Data Warehouse Data Mart
- SAP, Oracle PeopleSoft, Siebel, Custom Apps
- Files Excel XML
- Business Process
- Financial Performance Management Applications
- Hyperion Essbase

Interactive Dashboards
Ad hoc Analysis
Proactive Detection and Alerts
Microsoft Office
Reporting & Publishing
  - BI Publisher
  - Financial Reporting
  - Interactive Reporting
  - SQR Production Reporting
  - Web Analysis
Components of OBIEE 11g

- BI Analysis (Answers)
- Interactive Dashboards
- Delivers or iBots (BI Scheduler)
- BI Publisher Server integrated into OBIEE
- Analysis and Interactive Reporting – New from Hyperion
- Performance Management Scorecard - New
- Windows Client Tools
  - OBIEE Administrator
  - BI Publisher Desktop for Template Creation
  - Catalog Manager
- Oracle Business Intelligence app for iPhone & iPad
Overview of Pre-Built Apps (OBIA)

- Also known as Business Intelligence Applications – Latest release 7.9.6.4 (with Informatica as ETL) and release 11.1.1.7.1 (with ODI as ETL) with OBIEE 11g
  - Release 11.1.1.7.1 is available for limited modules for Oracle EBS R12
- Star-Schema Data Warehouse Adaptors for Oracle E-Business, PeopleSoft, Siebel, SAP etc.
  - Includes Informatica PowerCenter ETL Server or ODI Tools
  - Data Warehouse Administrator Console Services (DAC)
- Metadata Repository (semantic layer) for above, to access from OBIEE Answers and Dashboards
- Includes Presentation Services catalog (pre-built Dashboards, Answers and KPIs)
- BI Apps is available to license by module
  - Financial Analytics
  - Procurement & Spend Analytics
  - Order Management & Supply Chain Analytics
  - HR Analytics etc.
Excellent platform and good percentage of content comes pre-built
OBIEE Advantages over Discoverer

- OBIEE is the next generation solution from Oracle
- OBIEE is designed to connect to a wide variety of data sources simultaneously (Oracle, SQLServer, Teradata, XML, spreadsheets, etc)
  - Integrate via the BI Server Common Enterprise Information Tier for cross-reporting and drill-across
- OBIEE has a single thin client (web) interface for dashboards and ad hoc queries; (Discoverer requires installation of a JRE client and separate tools for dashboards and ad hoc queries)
- More visualizations options in OBIEE – Charts, Gauges, Controls etc.
- Interactive dashboards and drill-downs
- OBIEE has extensive alert and delivery options
- Performance optimizations with Caching, Aggregates, easier tuning of SQL, and Star-Schemas
- SOA and Web Services integration
- Hyperion integration
- Highly Scalable
OBIEE Roadmap for Discoverer Users

• Consider Migration of Discoverer over to OBIEE
  • Keeps license costs low
  • De-Commission Discoverer
  • Gain experience with the new platform, both for End Users and IT
• License Pre-built BI Applications later
• Scale-up to include other data sources Enterprise-Wide
Migration Challenges and Lessons Learned

- Design Challenges
- EUL Migration issues
- Handling Security in OBIEE
- Performance optimizations in OBIEE
- End-User training and acceptance
Design Challenges

EULs, Custom EULs and approach
- Oracle delivered EUL – no OBIEE equivalent rpd (see Doc ID #1066087.1 regarding converting Oracle’s EUL to rpd)
- Migration Assistant
- Custom development
- Plan for a Discovery and Assessment phase to understand effort, and design approach, considering security, performance, report migrations, End-User exposure and adaptability
Discoverer Metadata Conversion Assistant

• **Purpose:**
  - Convert a Discoverer EUL into an OBIEE repository file(s)

• **Limitations of the tool**
  - Best when used against an existing data warehouse (star schema)
  - Certain joins such as 1:1 joins, reciprocal joins, joins that have a calculation in the condition and duplicate joins will not be migrated
  - Workbooks are not migrated
  - Optional conditions are not migrated
  - Item hierarchies based on complex folders will not be migrated
  - Discoverer Date Hierarchy templates will not be migrated
  - Item Classes are not migrated
  - Discoverer Summary Folders are not migrated
Discoverer EUL is integrated with EBS Roles and Responsibilities
Custom EULs have their own
Consider implementing Active Directory, SSO authentications
Maintain central repository for Groups and manage security via Weblogic administration
Performance Optimizations

- Consider Table level optimizations
- Consider Aggregates and their usage if possible within OBIEE
- Consider Dashboard delivery mechanism for users that don’t need to be running ad-hoc reports
End User Acceptance

- Plan training early on
- As a first release, try to mimic Subject Areas, similar to Business Areas in Discoverer
- Same with folder structures and naming conventions
- Engage user community to take on report development
- Follow Train-the-Trainer approach
- Plan for mini workshops
- Develop Sample reports by Business for better understanding
- Develop tool-tips describing the objects
Additional Information on the Migration Tool:

In summary, the Migration Tool should be considered as an accelerant and/or assistant – there will likely need to be quite a bit of manual work on the repository before it is ready to be used for queries.


References

- Oracle Fusion Middleware Documentation Library
  - http://download.oracle.com/docs/cd/E14571_01/bi.htm
- Hardware/Software certifications
- Product Lifetime Support Policy
- http://www.rittmanmead.com/blog/
- Siebel.ittoolbox.com
- Forums.oracle.com
- http://oraclebizint.wordpress.com
http://www.infosemantics.com -> Tools

Oracle E-Business R12.1.3 Public Vision instance

Oracle BIEE 11g sandbox environment, with BI Applications for all major modules (access available upon request)

✓ Fully configured with data extracted from Oracle R12 Vision
About Infosemantics

- Established in 2001
- Commercial, Higher Education, and Federal Government client base
- Matured presence Internationally
- Senior resources averaging 15 years of experience
Thank You!

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