

Oracle Business Intelligence Enterprise Edition Plus – Complete Overview for Implementers

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Product History

Oracle Business Intelligence Enterprise Edition Suite (OBIEE) is an acquisition from Siebel, where the product was originally known as Siebel Analytics. The product is now called OBIEE Plus which contains the integration of Hyperion's Interactive Reporting, Financial Reporting and Web Analysis features.

The original release 10.1.3.2.0 in early January 2007, included the availability of Pre-Packaged Data Warehouse Adapters for Oracle E-Business, PeopleSoft, Siebel, SAP etc. along with the Semantic layer (metadata repository) for the Warehouse, together known as Business Intelligence Applications (BI Apps). Subsequent dot release (10.1.3.2.1) included the availability of Fusion Intelligence for Oracle E-Business Releases 11*i* (R11.5.8 and above) and Release 12.

Oracle also released a scaled-down version of OBIEE Plus called Oracle Business Intelligence Standard Edition1 (OBISE1), which is for customers not interested in the entire BI Apps suite of products. OBISE1 can help customers get started with the reporting interface and can be easily upgraded to OBIEE Plus in the future, which is a good way for customers to "start small but think big".

The BI Publisher Engine for publishing and presentation of crisp reports is integrated within OBIEE Suite. It is also available and integrated with Oracle E-Business Suite in Release 11*i* and Release 12. BI Publisher was formerly known as XML Publisher.

Component Summary

The following are the primary Components of OBIEE Plus suite

Oracle Business Intelligence Answers & Dashboards

Oracle BI Answers is the only report building interface for OBIEE Plus and it is used to build queries (the data) and Reports (the presentation).

Dashboards are simply containers for reports and other content. Both Answers and Dashboards use native connectivity to connect to Oracle, DB2, Teradata, and SQL databases, using ODBC for Microsoft Access and Excel.

The following are the main components of the Answers page

- The Answers Web Catalog stores reports, dashboards, filters, prompts etc.
- BIS Presentation Layer which reads metadata directly from the BIS server, displays Subject areas configured in the BIS Server, from which End-Users can select data elements/fields, create filters, prompts etc. to answer business questions. Essentially a Subject area provides for all the information needed to build a query or a report
- Applications and Administration links to control the Analytics environment, where the Administration link is used to configure security on Catalogs, folders and other areas. Link is also used to debug code generated by the queries constructed on Subject areas

Dashboards are the standard interface to display reports and data. One can display multiple reports or variations of a single report (Chart, Graph, Tabular display etc.) on a dashboard. Dashboards also interactively drill into data and details. Dashboards are typically highly summarized and graphical in nature for use by upper Management and Executives.

Results set from Answers and Dashboards can be exported to PDF, HTML, CSV, Excel etc. The BI Publisher engine can also be used to format output from Answers and Dashboards and to produce crisp looking documents.

BI Delivers or iBots

Oracle BI Delivers is the interface used to create alerts based on analytics results which provides a great way to detect problems or opportunities based on data results from Oracle Answers. Oracle BI Delivers can deliver alerts through a wide range of devices, email, PDA, mobile devices etc. BI Delivers uses intelligence agents or Bots, called iBots which are software-based agents driven by schedule or events that can access, filter, and perform analytics on data based upon defined criteria. The resulting information can then be sent to the appropriate individuals.

BI Publisher Engine

This Engine is integrated with the OBIEE Plus suite in the Presentation Services to produce crisp looking documents. BI Publisher Desktop Template builder, a thick Client developer tool integrated into Microsoft Word or Adobe Acrobat upon install, can be used to design report formats or templates which act as placeholders for data files from Answers and Dashboards. This product was formerly known as XML Publisher.

OBIEE Administrator

A thick client based developer tool used to create and manage metadata Subject Areas (logical Star Schemas).

Metadata Repository (rpd file) file contains the Business logic, connections to source databases and security configurations.

OBIEE Administrator tool uses ODBC connectivity to connect to data sources. Business logic can be built to merge data from more than one source (Oracle EBS OLTP with an external Legacy OLTP source). Users can then create a query on Oracle Answers to see the collective data from multiple sources for Analysis.

OBIEE uses Ralph Kimball's Star–Schema methodology and the Administrator provides for three main layers of abstraction

- Physical Layer that contains data source connections, tables, joins, etc.
- Business Model Layer provides for logical abstraction with data models from multiple data sources organized in a Star Schema
- Presentation Layer is an abstraction from the Business Model and defines the Subject Areas with business label and descriptions. These Subject areas are what is visible to construct queries from Oracle Answers

OBIEE Administrator is also used to configure end–user security to Subject Areas, data, columns etc, which is discussed in detail under the OBIEE Security section.

Oracle Business Intelligence Disconnected Analytics

Provides full analytical functionality for mobile users and enables fully interactive dashboards and ad hoc analysis when disconnected from the corporate network. It provides the same intuitive Oracle Answers and Dashboards interface whether they are working in a connected or disconnected mode. Disconnected Analytics is a Windows based client tool.

Informatica Server and DAC Server (Data Warehouse Administrator Console Services)

Informatica Server and DAC Server are components of BI Applications, which are pre–built applications for Oracle E–Business, PeopleSoft, Siebel, SAP, etc.

BI Applications include pre–built Star–Schema Data Warehouse Adaptors, also known as Business Analytics Warehouse (BAW) for the aforementioned packaged systems. Included is Informatica OEM PowerCenter ETL Server to manage pre–delivered Extraction mappings and also to extend mappings to extract data from other legacy sources. The Informatica client tool needs to be installed in order to extend and/or customize extract mappings.

DAC or Data Warehouse Administrator Console is used to manage Informatica ETL processes, schedule jobs, etc. DAC Console is a Windows based client tool which communicates with the DAC Server when managing ETL jobs.

Also provided is the Metadata repository/Semantic layer (rpd file), pre–built over BAW for reporting from Oracle Answers, along with a Presentation Services Catalog with pre–built KPIs, reports, and dashboards that customers can take advantage of.

The pre-built BAW, the Semantic layer, and the Presentation Services Catalog is together called Analytics which is available for a number of modules within the Oracle E-Business Suite of Applications (GL and Profitability Analytics, Payables Analytics, Receivables Analytics etc.). Please visit Oracle site for a complete list of Analytics currently available to license.

Note: Oracle Business Intelligence Standard Edition-1 (OBISE1), which is a scaled-down version of OBIEE Plus comes with Oracle Data Warehouse Builder license to custom build Data Warehouse solutions for Oracle E-Business or any of the other ERPs and legacy sources.

Installation and related Technology Stack overview

Latest release of OBIEE Plus 10.1.3.3.2 can be installed on Windows, Linux (SUSE, RHAT), Solaris, HP, IBM. Java SDK1.5.2 or higher is a must for both Client and Server component installs. OBIEE Plus for Linux/UNIX is a component of Oracle Application Server10g Release3. On Windows Server installs, one can choose either an IIS or an Oracle Application Server as a Web Server. Please refer to OBIEE System Requirements and Supported Platforms document from Oracle for more details.

Following are the Desktop developer tools that need to be installed on Windows

- OBIEE Administrator tool
- Disconnected Analytics
- BI Publisher for Templates
- DAC Client (Data Warehouse Administrator Console)
- Informatica Client

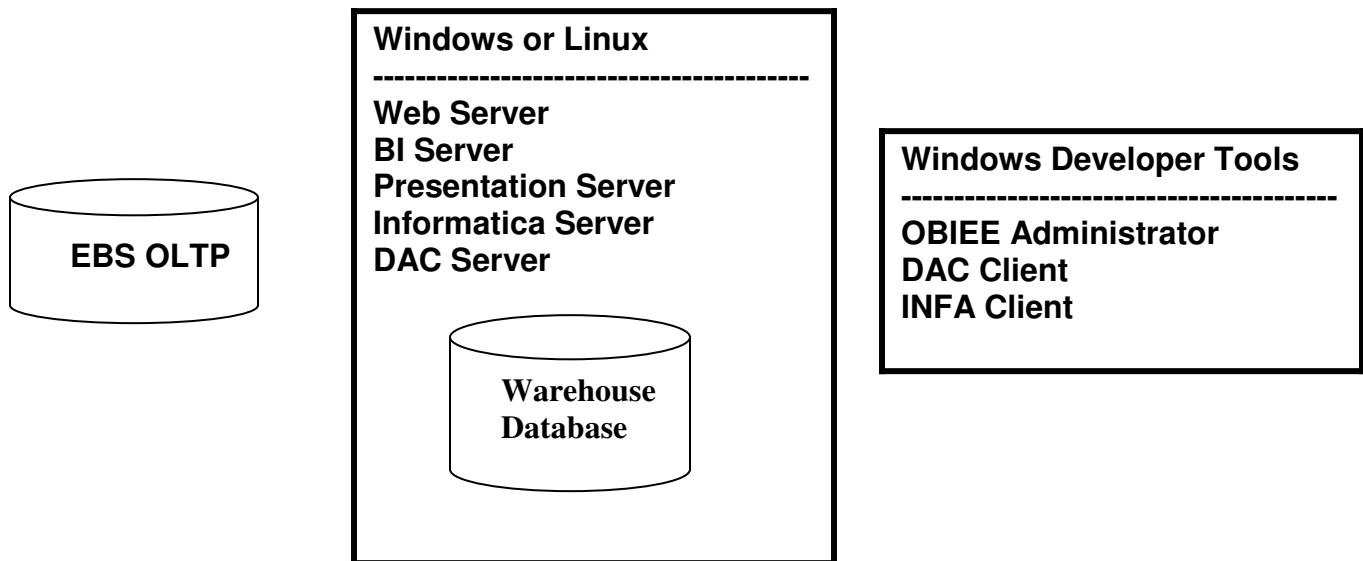
As discussed earlier, DAC Server, Informatica Server, DAC Client and Informatica Client are components of BI Applications suite. The clients need to be installed on Windows, but if one chooses to install DAC and Informatica Servers on Unix/Linux, Oracle doesn't yet provide a BI Applications installer for Unix/Linux yet, therefore Server software also needs to be installed on Windows first and the directories then need to be copied over to Unix/Linux. From a best practices approach, it is best to keep directory structures between Windows and Unix/Linux environments as similar as possible.

The Deployment Options section below describes different architectural options to deploy each of the Components. It is to be noted however that the entire OBIEE Infrastructure needs to be installed first on each of the Server installs.

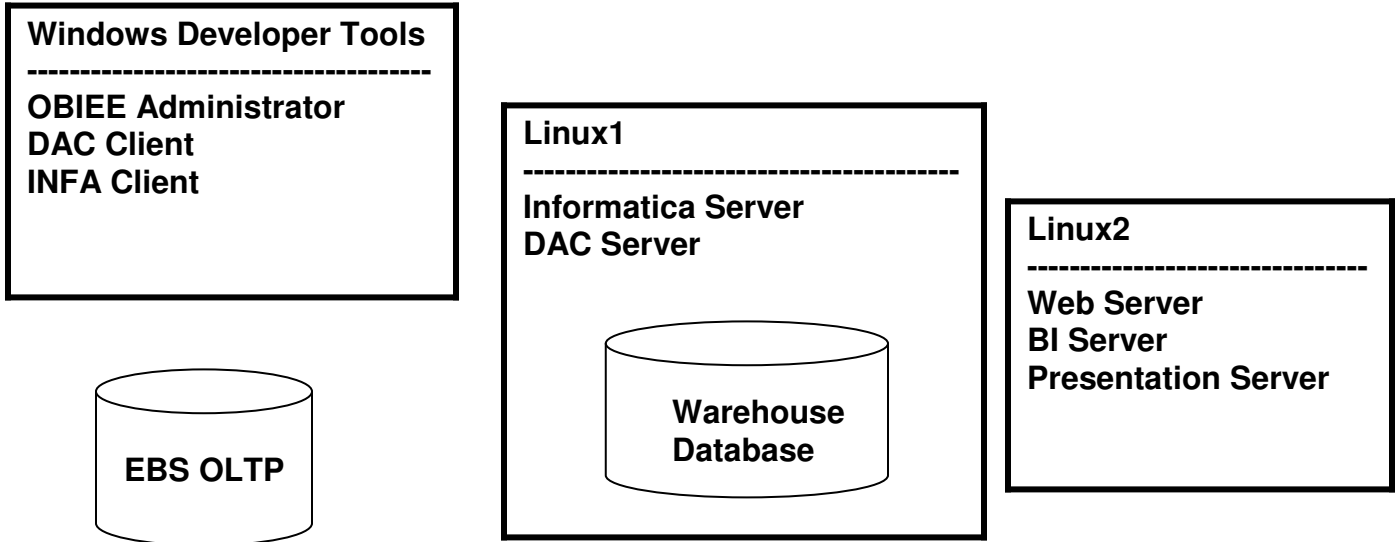
Deployment Options

OBIEE Plus architecture options can begin with an install of all components in one single server for evaluation, Proof-of-Concepts etc., or to multiple servers for Development and Production, considering scalability and usage. Deployment options on Linux Servers are considered for this discussion. Hardware, memory, CPU requirements are not discussed here as they vary with customer's data, sources, data volume, user base, and other factors. Please refer to "OBIEE System Requirements and Supported Platforms" document for recommendations.

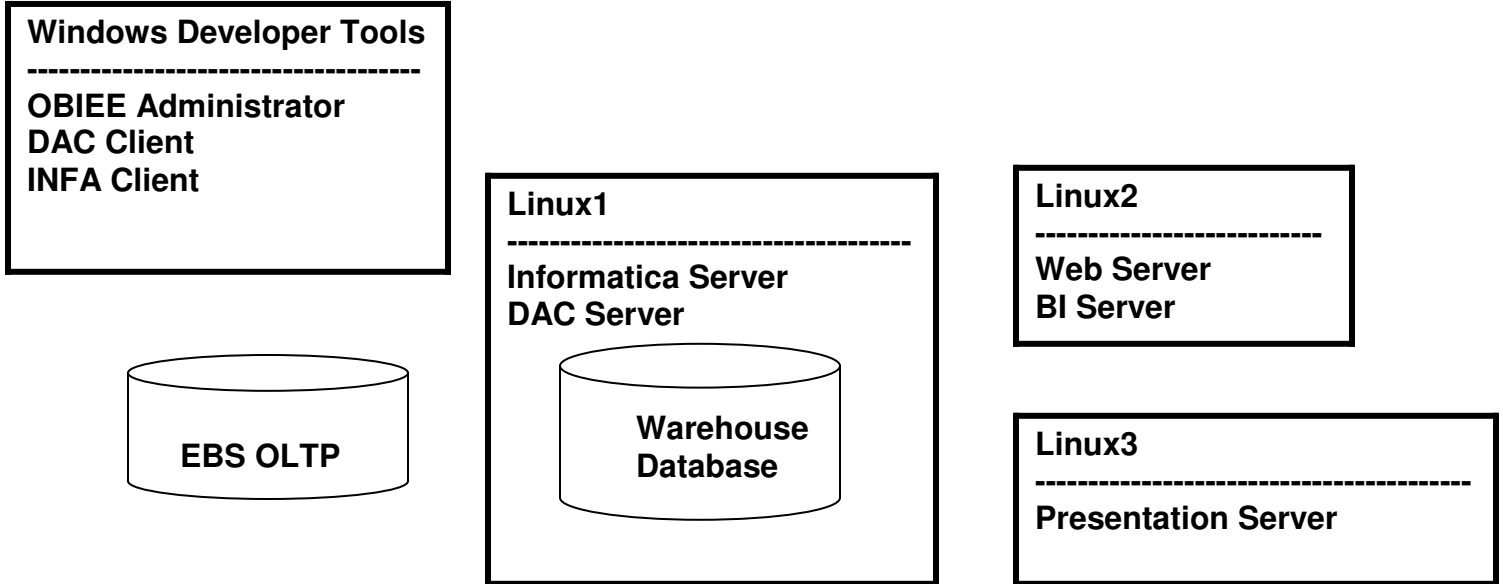
1. Below is a simple architecture option for evaluations and POCs



2. Architecture option for Development build/Test



3. Architecture option for a typical Production deployment



OBIEE Security Overview

OBIEE Plus suite provides for the following security mechanisms:

- Application Authentication – Provides for provisioning of OBIEE Answers and Dashboards application access. Supports LDAP authentication, OID integration, Single-Sign-On (SSO), etc.
- Data Authorization – OBIEE Server security is configured via the OBIEE Administrator tool where access to Subject areas and column level security can be provisioned. OBIEE Plus also supports the setting up of data security using Oracle E-Business roles and Responsibilities
- Additionally, OBIEE Presentation Server permissions can also be set to control access to Web Catalogs, Folders, Reports, Dashboards, etc. OBIEE Web Administrator and Catalog Manager are used to configure the above.

Summary

Hopefully this discourse has provided enough information and details for users to start exploring and evaluating the product suite based on their needs. The OBIEE Plus suite certainly is a great Business Intelligence and Analytics solution with all its offerings. Companies can look to the suite to deploy a single Corporate-wide reporting solution across all organizations merging disparate legacy systems and data sources for a unified view of all their data. That being said there are a few implementation challenges which are:

- Fewer resources with the right mix of skills – Most implementers have experience with its predecessor product Siebel Analytics, and most have implemented solutions for Siebel CRM, but it will be a challenge initially to cross-train resources to work and implement solutions for Oracle E-Business, PeopleSoft, SAP, etc. This should go away over time
- Important to hire an experienced Data Warehouse Architect or Data Modeler to design and model Star Schemas
- OBIEE has the capability to merge data from disparate sources, which is a great feature, however, performance tuning will be a challenge to address for Implementers and Support staff. This too can be overcome as Customers transition to an Enterprise-wide Data Warehouse as a solution, using Oracle BI Apps and extending Informatica ETL mappings to bring data together from all the sources

Informative Links

http://www.oracle.com/technology/documentation/bi_ee.html - Documentation site for OBIEE
http://www.oracle.com/technology/obe/obe_bi/bi_ee_1013/index.html - OBIEE Tutorial
http://www.oracle.com/technology/documentation/bi_apps.html - Oracle BI Applications

Book – The Data Warehouse Lifecycle Toolkit by Ralph Kimball, Margy Ross, Warren Thornthwaite