SAP BusinessObjects BI Solution Architecture

May 2010
(Version 3.0)
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SAP BusinessObjects Business Intelligence (BI) Solution Architecture

- **Overall Goals**
  - Identify landscape patterns associated with problems customers have today
  - Showcase options for SAP BusinessObjects BI solutions and possible scenarios which can be applied to those landscapes
  - Provide an end-to-end Business Intelligence Solution overview and architecture based on customer landscapes and use cases

- **Impact**
  - Customers can recognize the full potential of the SAP BusinessObjects BI portfolio
  - Consistent approach of deploying SAP BusinessObjects Business Intelligence solutions based on best practices

- **Scope / customer segments**
  - Customers using SAP or non-SAP applications with or without DWH solutions
  - SAP BusinessObjects XI 3.1 Business Intelligence product portfolio
## SAP BusinessObjects BI Solution Architecture
### Customer System Landscapes

<table>
<thead>
<tr>
<th>Datawarehouse strategy</th>
<th>Non-SAP ERP</th>
<th>SAP ERP</th>
<th>Non-SAP ERP &amp; SAP ERP</th>
</tr>
</thead>
<tbody>
<tr>
<td>No DWH</td>
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<tr>
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<td>System Landscape Type 6</td>
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</table>
## SAP BusinessObjects BI Solution Architecture

### Customer System Landscapes – System Landscape Type 1

<table>
<thead>
<tr>
<th>ERP System</th>
<th>Non-SAP ERP</th>
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</tbody>
</table>
System Landscape Type 1: non-SAP ERP without DWH

Customer scenarios

Customer Segment Details

- Implementation of PeopleSoft
  - PeopleTools 8.21, 8.42, 8.45, 8.46, 8.48, 8.49, 8.50
  - PeopleSoft EPM 8.9 & 9.0

- Implementation of Siebel
  - Siebel Business Application 7.5.3, 7.7.2, 7.8.2, 8.0

- Implementation of JD Edwards
  - JD Edward Enterprise One Tools 8.93 – 8.97

- Implementation of Oracle EBS
  - Oracle E-Business Suite 11.5.10 & 12
System Landscape Type 1: non-SAP ERP without DWH

SAP BusinessObjects BI offerings

- SAP BusinessObjects offerings:
  - SAP BusinessObjects BI stack for reporting and analysis
  - SAP BusinessObjects Data Services
  - SAP BusinessObjects Rapid Marts for Oracle, Siebel, PeopleSoft, JD Edwards
  - SAP BusinessObjects Integration for Oracle, JD Edwards, Siebel, PeopleSoft
  - Custom Data Mart using SAP BusinessObjects Data Services
  - SAP NetWeaver BW Accelerator combined with SAP BusinessObjects Data Services and SAP BusinessObjects Explorer
System Landscape Type 1: non-SAP ERP without DWH

Data connectivity
System Landscape Type 1: non-SAP ERP without DWH

Overall Recommendation

- **Recommended Approach**
  - SAP BusinessObjects RapidMarts combined with SAP BusinessObjects Data Services can enable
    - Enterprise Reporting via Crystal Reports
    - Ad Hoc Reporting via Web Intelligence
    - Dashboarding via Xcelsius
      - Live Office and Query as a Web Service are used to enable Dashboarding with Xcelsius
    - Search and Data Exploration via SAP BusinessObjects Explorer
  - SAP BusinessObjects Data Services in combination with SAP NetWeaver BWA can add search and exploration capabilities with SAP BusinessObjects Explorer on top of large volumes of data
    - **Tip**: For limited data volume you can enable data exploration via Universes or use SAP BusinessObjects Explorer on-demand

- **Other Options**
  - SAP BusinessObjects Integration for ERP vendors will enable Crystal Reports and Xcelsius directly on top of the ERP system
    - Live Office is used to enable Dashboarding (Xcelsius) with Crystal Reports acting as data source
System Landscape Type 1: non-SAP ERP without DWH
Product Versions

- **Product Components and Versions**
  - SAP BusinessObjects Explorer, accelerated version 2.0
    - SAP BusinessObjects Explorer XI 3.2
    - SAP NetWeaver BW Accelerator 7.20
  - SAP BusinessObjects Accelerator 1.0
    - SAP NetWeaver BW Accelerator 7.20
    - SAP BusinessObjects Data Services XI 3.2 SP1
      - index designer
  - SAP BusinessObjects Integration for Siebel, JD Edwards, PeopleSoft, Oracle XI 3.1 Service Pack 2
  - SAP BusinessObjects Enterprise XI 3.1 Service Pack 02
  - Crystal Reports 2008 Service Pack 02
  - Xcelsius 2008 Service Pack 02
  - Live Office XI 3.1 Service Pack 02
System Landscape Type 1: non-SAP ERP without DWH

Summary

Pros
- Rapid Marts can be deployed and provide a reporting environment in a few days
- Rapid Marts deliver pre-built content and ETL jobs for a large set of ERP modules
- Rapid Marts allow offloading reporting requests from the ERP landscape
- SAP BusinessObjects Integration Kits for ERP vendors offer a simple and inexpensive option for operational reporting using Crystal Reports
- Using SAP NetWeaver BWA with SAP BusinessObjects Data Services provides a very simple, easy to deploy solution for SAP ERP and non-SAP data and SAP BusinessObjects Explorer

Cons
- Rapid Marts are not designed to combine data from different ERP vendors into a single view (Rapid Marts are not a replacement for a full data warehouse solution)
- Rapid Marts are not a 100% out-of-the-box solution. Rapid Marts are a 80% pre-built solution which requires Field Services involvement for customization
**System Landscape Type 1: non-SAP ERP without DWH**

**Overall Benefit**

1. Customers can use Rapid Marts and SAP BusinessObjects Data Services to create a quick and simple solution to enable the complete SAP BusinessObjects BI portfolio

2. Customers can leverage the investment into SAP BusinessObjects Data Services and extend the usage to accelerate the data using SAP NetWeaver BW Accelerator to enable data search and exploration with SAP BusinessObjects Explorer

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<th>Integration Point</th>
<th>Technical Details</th>
<th>Technical Benefits to Customer</th>
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| **BusinessObjects Integration for Oracle, PeopleSoft, Siebel, JD Edwards** | BusinessObjects Integration provides direct data connectivity to ERP systems and authentication provider for the BI platform to achieve SSO | • Direct connectivity towards the ERP system  
• Single Sign On based on ERP credentials  
• Re-use of ERP credentials on the BI platform for security |
| **Rapid Marts with Data Services** | Rapid Marts and Data Services are able to extract the data from the ERP system and create a data mart based on a pre-built schema based on best practices. | • Simple and quick implementation  
• Rapid Marts deliver pre-built schemas based on best practices  
• Universes on top of Rapid Marts enable the complete BI portfolio |
| **SAP NetWeaver BW Accelerator with Data Services** | SAP NetWeaver BWA allows acceleration of any data source via SAP BusinessObjects Data Services | • SAP NetWeaver BW Accelerator allows indexing of any data source  
• SAP NetWeaver BW Accelerator provides high performing access to large data volumes |

**Bottom Line Business Benefits**

1. Customers can use Rapid Marts and SAP BusinessObjects Data Services to create a quick and simple solution to enable the complete SAP BusinessObjects BI portfolio

2. Customers can leverage the investment into SAP BusinessObjects Data Services and extend the usage to accelerate the data using SAP NetWeaver BW Accelerator to enable data search and exploration with SAP BusinessObjects Explorer
System Landscape Type 1: non-SAP ERP without DWH
- BI Landscape Growth Opportunities -
System Landscape Type 1: non-SAP ERP without DWH
- Product Background Information -

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The *de facto* standard for reporting

- Proven world standard for report design
- Ubiquitous reporting assets and expertise for fast implementation
- Chosen reporting solution by over 500 major independent software vendors

Deploy a common framework for all enterprise reporting needs

- Build any kind of report – such as business, financial, legal, and regulatory reports
- Sophisticated report formatting: create multi-page, multi-query, pixel-perfect reports
- Templates and wizards to speed up report creation
- Secure, large-scale distribution of reports over the web
- Connectivity to any data source
SAP BusinessObjects Web Intelligence
Enable Self-Service Access to Information and Analytics

Empower business users with powerful, yet easy to use analysis

- Intuitive, web-based interface with offline capabilities
- Start from a blank slate or use an existing analysis or report
- Multi-source access
- Interactivity with filtering, ranking, sorting, calculations, etc
- Data lineage

Lighten IT workload

- Self-service analysis and reporting
- Controlled and secure access with tight BI platform integration
- Intuitive, business-centric view of information with universes
SAP BusinessObjects Xcelsius Enterprise
Create Interactive Analytics and Dashboards

Consume attractive, personalized dashboards online or offline
- Access to personalized, Flash-based dashboards
- Secure visualizations anywhere – portal, reports, PDF, Office documents

Empower business users with interactive information
- Powerful “what-if” analysis with sliders and other controls
- Ability to drill-down into details
- Pre-built components, skins, maps, charts, gauges, and selectors
SAP BusinessObjects Explorer, accelerated version brings together high-performance in-memory acceleration with intuitive search and exploration.

Users can search and explore large volumes of any enterprise data to answer ‘on the fly’ questions, discover relationships, and uncover root cause.

You can bring BI to all business users with immediate insight at the speed of thought without needing assistance from business analysts or IT.
SAP BusinessObjects Explorer
Architecture overview

Landscape Type 1
Landscape Type 2
Landscape Type 3
Landscape Type 4
Landscape Type 5
Landscape Type 6

SAP BusinessObjects Explorer
Non-accelerated
Accelerated version

Excel
Universe
SAP BusinessObjects Enterprise

Index Designer
SAP BusinessObjects Data Services

BW Accelerator

External Data
SAP ERP
SAP NetWeaver BW

Business Warehouse
Overview:

- Operational reporting and ad-hoc analysis directly on top of these applications
- Add-On to BusinessObjects Enterprise
- Available for
  - Oracle E-Business Suite
  - PeopleSoft
  - Siebel
  - JD Edwards

Key Features:

- Tight integration with ERP security
  - Logon to BOE using application credentials
  - Same security access as logging on directly to application
- Single Sign-On
- Native Real-Time data access data
- Sample reports
SAP BusinessObjects Integration for Oracle, Siebel, JD Edwards, PeopleSoft

- **SAP BusinessObjects Integration for PeopleSoft**
  - Connectivity for PeopleSoft queries (v 8.21 to 8.49)
  - Universes on top of PeopleSoft EPM (v 8.9 and 9.0) with application level security

- **SAP BusinessObjects Integration for JD Edwards**
  - JD Edward Enterprise One Tools 8.93 – 8.97
  - Connectivity to JD Edwards tables and views

- **SAP BusinessObjects Integration for Siebel**
  - Siebel Business Application 7.5.3, 7.7.2, 7.8.2, 8.0
  - Connectivity to Siebel Business Objects and Siebel Components

- **SAP BusinessObjects Integration for Oracle EBS**
  - Oracle E-Business Suite 11.5.10 & 12
  - Connectivity to Oracle EBS Views and Stored Procedures

**Note:** These connectivity - except PeopleSoft EPM – are for Crystal Reports only at this point of time (Release XI 3.1 Service Pack 02)
Key Messages:

- SAP BusinessObjects BI products are “in-the-box” (OEM) in many different Oracle products.

- Oracle continues to leverage SAP BusinessObjects BI solutions, for example, at end of 2008, PeopleSoft re-signed their OEM agreement to ship SAP BusinessObjects product in their next release.

<table>
<thead>
<tr>
<th>Oracle Application</th>
<th>Business Objects Technology Inside</th>
</tr>
</thead>
<tbody>
<tr>
<td>PeopleSoft</td>
<td>BusinessObjects™ XI and over 600 Crystal reports are embedded in PeopleSoft. License is restricted to use with PeopleSoft data.</td>
</tr>
<tr>
<td>PeopleSoft EPM</td>
<td>Prebuilt BusinessObjects integration and content ships with PeopleSoft EPM.</td>
</tr>
<tr>
<td>JD Edwards EnterpriseOne</td>
<td>BusinessObjects XI and Crystal Reports® are embedded in JD Edwards EnterpriseOne.</td>
</tr>
<tr>
<td>JD Edwards World</td>
<td>BusinessObjects XI and Crystal Reports are embedded in JD Edwards World</td>
</tr>
<tr>
<td>Oracle Retail (Retek)</td>
<td>BusinessObjects XI and Crystal Reports bundle is available for Oracle Retail Store Inventory Management.</td>
</tr>
<tr>
<td>Oracle Governance Risk and Compliance Application Suite (LogicalApps)</td>
<td>BusinessObjects XI with BusinessObjects Web Intelligence® is embedded in Oracle LogicalApps ACTIVE governance solution.</td>
</tr>
<tr>
<td>Oracle LODESTAR (Utilities)</td>
<td>BusinessObjects XI and Crystal Reports are embedded in LODESTAR utilities software.</td>
</tr>
<tr>
<td>Oracle Utilities Customer Care and Billing and Enterprise Taxation Management (SPL WorldGroup)</td>
<td>BusinessObjects XI and Crystal Reports is embedded in Oracle Utilities Customer Care and Billing (formerly SPL Customer Care &amp; Billing).</td>
</tr>
<tr>
<td>Oracle Communications Billing and Revenue Management (Portal Software)</td>
<td>BusinessObjects XI and Crystal Reports are embedded in Oracle’s Communications Billing and Revenue Management (formerly Portal Software).</td>
</tr>
<tr>
<td>Oracle Database</td>
<td>Oracle OEM’s Business Objects Insight LXP is embedded in the search functionality in Oracle Database.</td>
</tr>
</tbody>
</table>
Data Integrator: Enterprise-class Data Integration platform

Explore, transform, and move data anywhere, at any frequency

- **Deliver trusted information**
  - Market leading data quality functionality within the data integration environment
  - Built-in features for validating data against business rules and auditing data movement execution
  - End-to-end metadata impact analysis and lineage

- **Agility and ease-of-use**
  - Single easy to use development interface to build, test, and deploy
  - Web-based administration and management
  - Collaboration features for team development

- **Deliver extreme ETL scalability**
  - Parallelized processing down to the transform level
  - Grid computing for high availability and throughput
  - Services-based architecture enabling right-time data delivery
  - Powerful prepackaged transformations
## Data Integrator: Enterprise-Wide Data Access

**Support for structured and unstructured data**

Broad connectivity to databases, applications, legacy, file formats, and unstructured data

<table>
<thead>
<tr>
<th>Databases</th>
<th>Applications</th>
<th>Files/Transport</th>
<th>Mainframe (with partner)</th>
<th>Unstructured Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle, DB2, Sybase &amp; IQ, SQL Server, Informix, Teradata, ODBC, MySQL, Netezza</td>
<td>JD Edwards, Oracle Apps, PeopleSoft, Siebel, Salesforce.com, SAP NetWeaver BI, SAP ERP, ABAP, BAPI, IDoc</td>
<td>Text delimited, Text fixed width, EBCDIC, XML, Cobol, Excel, HTTP, JMS, SOAP (Web Services)</td>
<td>ADABAS, ISAM, VSAM, Enscribe, IMS/DB, RMS</td>
<td>Any text file type, 32 languages</td>
</tr>
</tbody>
</table>

**Landscape Types**

- Landscape Type 1
- Landscape Type 2
- Landscape Type 3
- Landscape Type 4
- Landscape Type 5
- Landscape Type 6
Packaged ETL solution for SAP, Oracle, PeopleSoft

- Source data identification
- Source to target mappings
- Pre-defined target data model and schema
- Data Integrator jobs
- Extensive application documentation

**Production Management**

- Change data capture jobs
- Error recovery and check-point restart
Rapid Mart data model uses star design principle

Information-rich: Content stored in ~50 tables

Pre-build universes included with access to all objects

Pre-build WebI reports

Pre-build Xcelsius dashboards

All ready to use right from the start!

Rapid Marts can be implemented individually, or in any combination, to form a single platform that delivers the infrastructure of internal and external information needed.
SAP BusinessObjects Rapid Marts
Available Rapid Marts for Oracle, Siebel, PeopleSoft

<table>
<thead>
<tr>
<th>PeopleSoft</th>
<th>Siebel</th>
<th>Oracle Apps</th>
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<tbody>
<tr>
<td>General Ledger</td>
<td>Pipeline</td>
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Landscape Type 1 | Landscape Type 2 | Landscape Type 3 | Landscape Type 4 | Landscape Type 5 | Landscape Type 6
Further Information

SAP BusinessObjects Community

SAP BusinessObjects BI Solution Architecture

http://www.sdn.sap.com/irj/boc/bi-solution-architecture
Thank you!