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CONSULTANCY TRAINING SUPPORT

BI 11g Systems Management and Deployment

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UKOUG Business Intelligence & Reporting Tools SIG, October 2010

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Introductions

- Mark Rittman, Co-Founder of Rittman Mead
- Oracle ACE Director, specialising in Oracle BI&DW
- 14 Years Experience with Oracle Technology
- Regular columnist for Oracle Magazine
- Author of forthcoming Oracle Press book on OBIEE 11g
- Writer for Rittman Mead Blog :
<http://www.rittmanmead.com/blog>
- Email : mark.rittman@rittmanmead.com
- Twitter : @markrittman



Rittman Mead Consulting

- Oracle BI&DW Project Specialists providing consulting, training and support
- Clients in the UK, USA, Europe, Middle-East, AsiaPac
- Voted UKOUG BI Partner of the Year 2008
- Offices in Europe, North America and India
- Regular speakers at user group and Oracle events



Oracle Business Intelligence
11g Upgrades

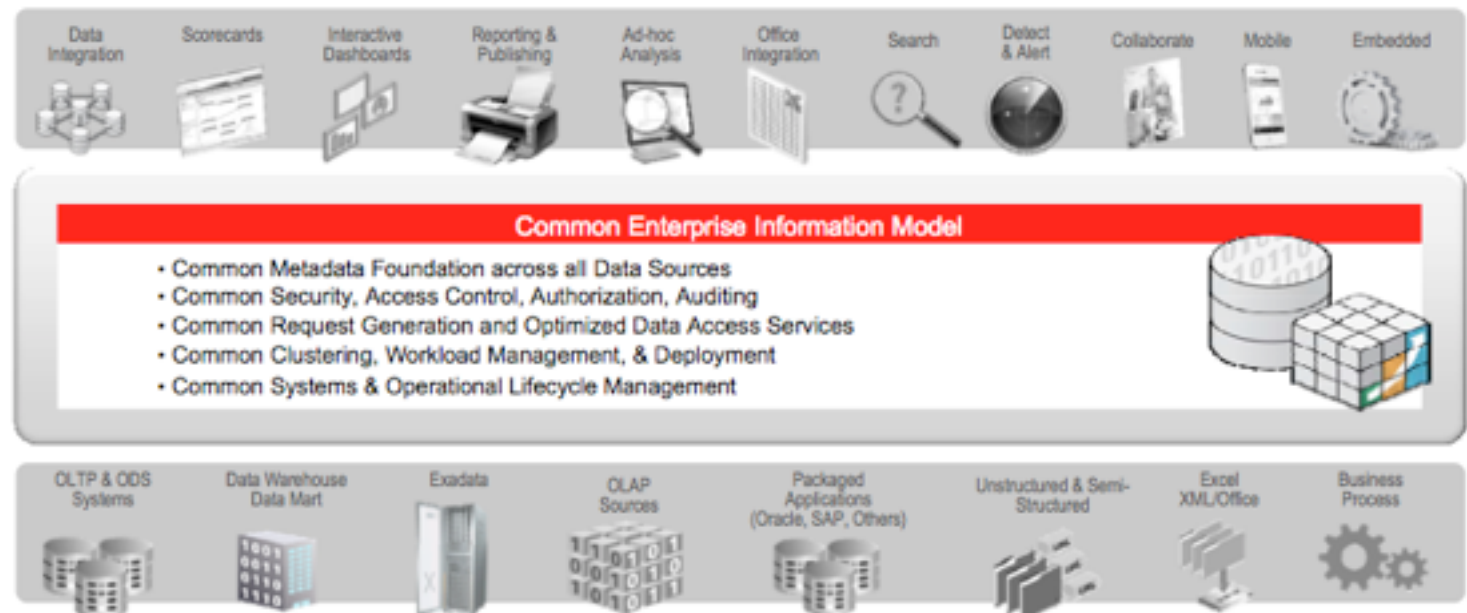
Looking to upgrade from OBIEE 10g to 11g?
Click here for details on Rittman Mead's fixed-price Upgrade Service >

The advertisement features a background of silhouettes of business professionals in a meeting, with a large computer monitor displaying a data dashboard. The text is overlaid on the image.

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Oracle Business Intelligence 11g

- The latest release of OBIEE (Oracle BI Enterprise Edition)
- Major changes to front-end, integration, architecture
- Objective is to make it more “enterprise-ready”
- Closely integrated with Oracle Fusion Middleware 11g



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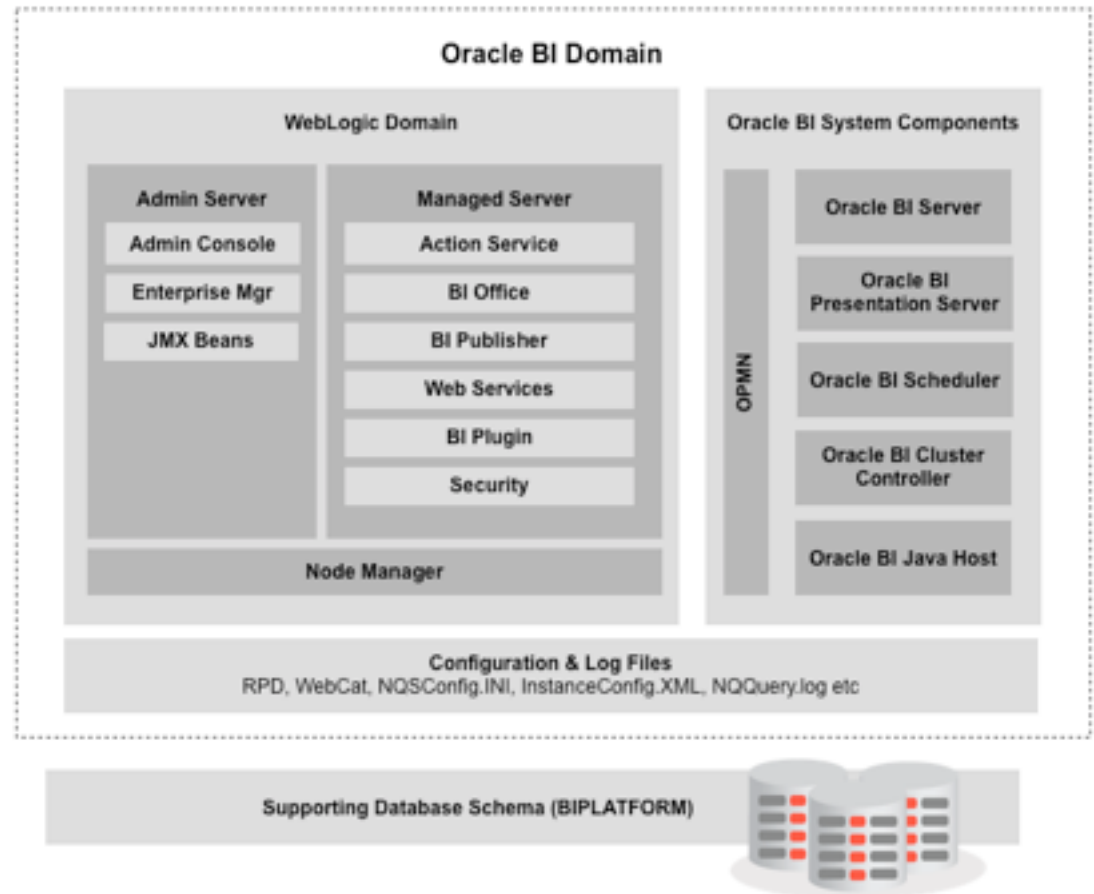
Based on Fusion Middleware 11g Platform

- Fully-integrated with Oracle Fusion Middleware 11g
- Common security (Oracle Identity Management, Oracle Access Manager)
- Built on WebLogic Server
- Managed through Fusion Middleware Control (Enterprise Manager)
- Built using multiple technologies including JDeveloper (ADF)



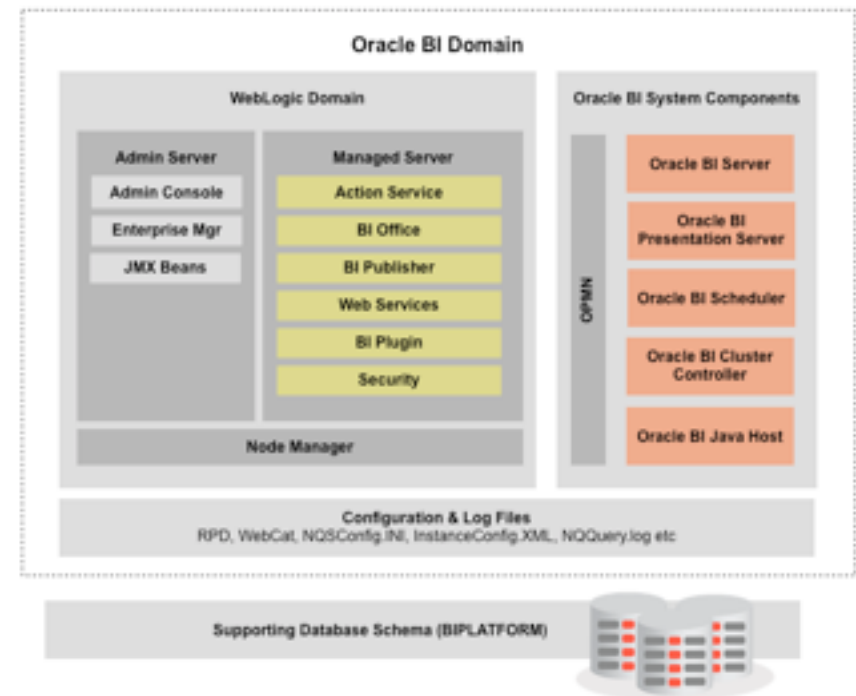
OBIEE 11g Basic Architecture

- Overall system called an “Oracle BI Domain”
- Made up of Java and non-Java components
- Java components hosted in WebLogic Server 11g
- Managed using OEM and WebLogic Admin Server
- Supporting database schema for repositories, metadata



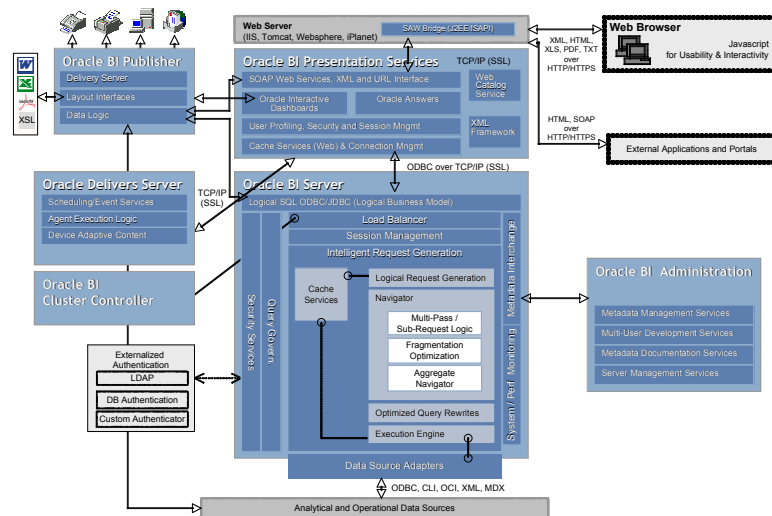
OBIEE 11g System Components, Java Components and OPMN

- OBIEE components divided into System and Java components
- System components are still C/C++ executables, are controlled by OPMN, and are managed by Fusion Middleware Control
- Java Components are JEE applications, are installed in the managed server, and are controlled by FMW Control

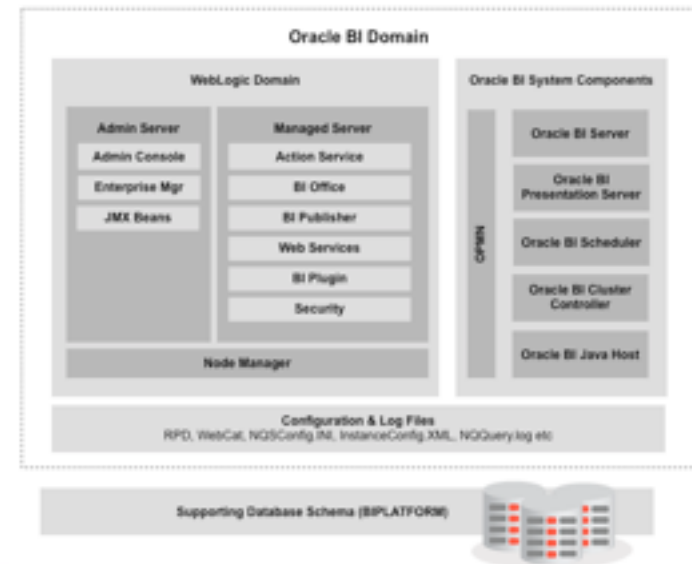


11g Architecture Compared to 10g Architecture

- Main difference is wrapping components in WLS platform and EM management
- Individual servers, components are still the same (BI Server, Presentation Server, BI Publisher J2EE application etc)
- Some reworking has taken place in 11gR1 (unified logging, management of config files using EM etc)
- Basic concepts, plus clustering (OBIEE), scheduling etc are the same as in 10g

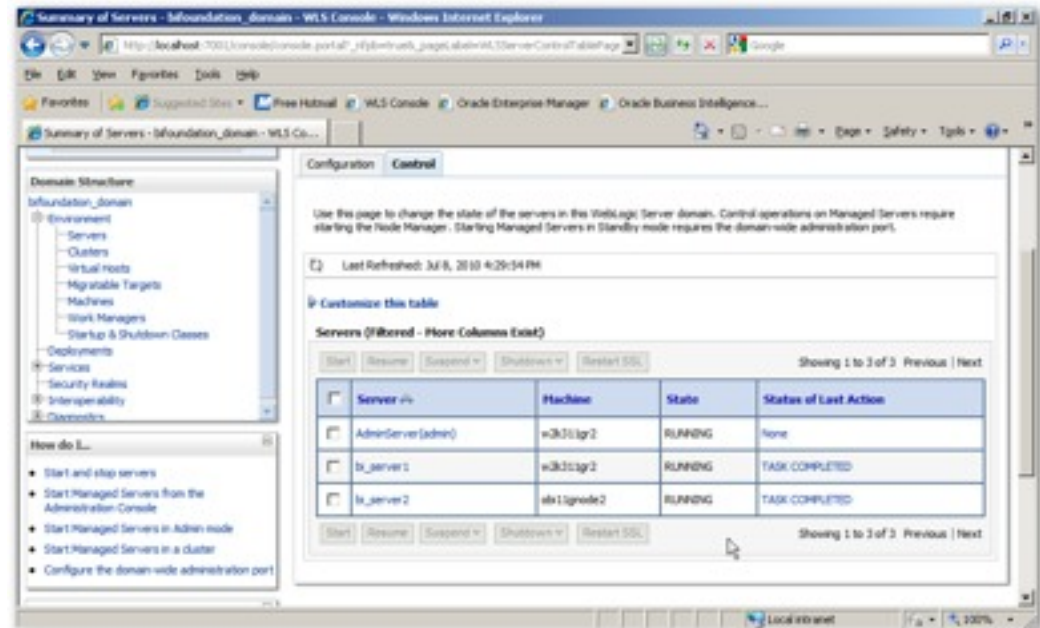


VS.



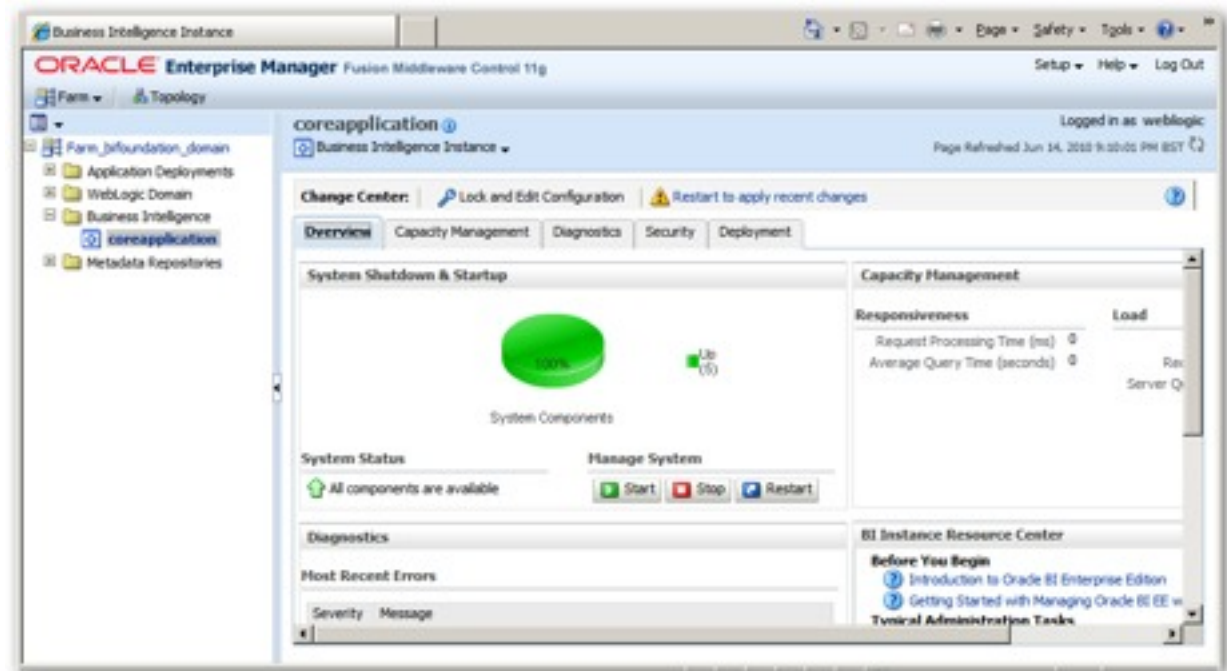
Oracle WebLogic Server 11g

- J2EE Application Server used for hosting OBIEE 11g Java components
 - ▶ Plays role performed by OC4J/OAS in 10g version
- Managed using the WebLogic Administration Server
 - ▶ Weblogic Server Administration Console
 - ▶ Fusion Middleware Control
 - ▶ JMX MBeans (programmatic access to BI Domain)
- OBIEE Java components held in (n) Managed Servers
- System Components Managed by Fusion Middleware Control, but exist outside of WLS domain



Oracle Enterprise Manager Fusion Middleware Control

- Manage System Components (BI Server, BI Presentation Server etc)
- Start, Stop and Restart all System Components and Managed Servers
- Configure Preferences and Defaults
- Scale out System Components
- Performance Monitoring and Diagnostics



Fusion Middleware Control Overview Page

- Provides overview of aggregate health of Oracle BI domain
- Listing of most recent issues and errors
- Capacity Management key metrics

The screenshot shows the Fusion Middleware Control Overview Page for a Business Intelligence Instance. The page is titled "coreapplication" and "Business Intelligence Instance". It is logged in as "weblogic" and the page was refreshed on Oct 12, 2010 4:45:26 PM BST.

The page has a navigation bar with tabs: Overview, Capacity Management, Diagnostics, Security, and Deployment. The "Overview" tab is selected.

The main content area is divided into several sections:

- System Shutdown & Startup:** A green circle indicates 100% system components are up. A small green square indicates the system is up for 5 minutes.
- System Status:** A green arrow indicates "All components are available". There are buttons for "Start", "Stop", and "Restart".
- Capacity Management:**
 - Responsiveness:** Request Processing Time (ms) 0, Average Query Time (seconds) 5.
 - Load:** Active Sessions 0, Requests (per minute) 0, Server Queries (per second) 9.
- Diagnostics:** A section titled "Most Recent Errors" with a table of error messages.

Severity	Message
✖	Gen1, Year[nQSError: 36006] Promotion of checkout lock on Gen1, Year to ex
✖	Gen1, Year[nQSError: 36006] Promotion of checkout lock on Gen1, Year to ex
✖	Failed to initialize SharedServices security instance. Component for SYSTEM
✖	Exception occurred.
✖	An exception when looking up for tree expression SYSTEM\FOUNDATION_
- BI Instance Resource Center:** A section titled "Before You Begin" and "Typical Administration Tasks" with links to various documentation pages.

Fusion Middleware Control Capacity Management Page

- Four tabs for monitoring and managing load on the system
- Metrics and counters for numbers of queries, cache hits etc
- Start, stop and restart individual system components
- Enable caching and other performance features
- Scale-up to add additional system components to host

coreapplication
Business Intelligence Instance

Logged in as weblogic
Page Refreshed Oct 22, 2010 4:45:26 PM BST

Change Center: Lock and Edit Configuration

Overview **Capacity Management** Diagnostics Security Deployment

Metrics **Availability** Scalability Performance

System Components Availability

Start All Stop All Restart All Start Selected Stop Selected Restart Selected

Name	Status	Host	Port	Oracle Instance	Note
BI Presentation Servers	🟢				
coreapplication_obips1	🟢	bi11gw33	9710	instance1	
BI Servers	🟢				
BI Schedulers	🟢				
BI Cluster Controllers	🟢				
BI JavaHosts	🟢				

Potential Single Points of Failure

The following components have no backup configured. A failure in one of these components can bring down your system

Risk of Failure	Name	Type	Recommended action
Medium	coreapplication_obips1	BI Server	Scale Out Selected

Fusion Middleware Control Diagnostics Page

- View log files aggregated across the whole cluster
- Search log files
- View log files linked by ECID transaction ID

The screenshot shows the 'Diagnostics' tab in the Fusion Middleware Control interface. It displays a table of 'Most Recent Errors' and 'Most Recent Warnings'.

Most Recent Errors

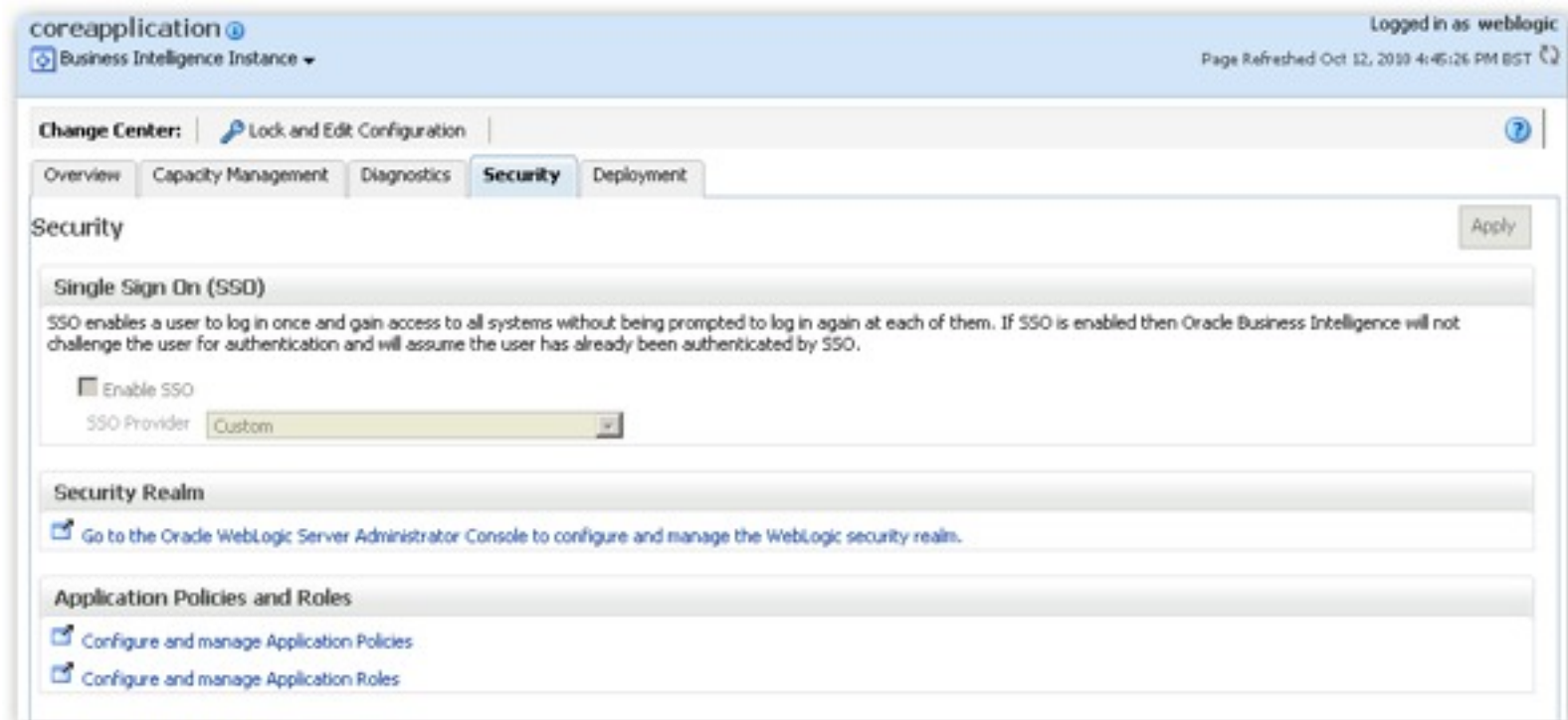
Severity	Date/Time	Component	Message
✖	Oct 12, 2010 03:40:54 PM BST	OracleBIServerC	Gen1_Year[nQSError: 36006] Promotion of checkout lock on Gen1_Year to exclusive failed.
✖	Oct 12, 2010 03:40:54 PM BST	OracleBIServerC	Gen1_Year[nQSError: 36006] Promotion of checkout lock on Gen1_Year to exclusive failed.
✖	Oct 12, 2010 03:39:06 PM BST	bi_server1	Failed to initialize SharedServices security instance. Component for SYSTEM\FOUNDATION_SERVICE
✖	Oct 12, 2010 03:39:06 PM BST	bi_server1	Exception occurred.
✖	Oct 12, 2010 03:39:06 PM BST	bi_server1	An exception when looking up for tree expression SYSTEM\FOUNDATION_SERVICES_PRODUCT\SH

Most Recent Warnings

Severity	Date/Time	Component	Message
⚠	Oct 12, 2010 03:37:43 PM BST	bi_server1	Unexpected Exception when initializing CSF for Registry. No credentials will be accessible. Ignore this
⚠	Oct 12, 2010 03:37:37 PM BST	OracleBIServerC	[nQSError: 43123] Query log for some users are enabled, performance may decreased
⚠	Oct 12, 2010 03:25:23 PM BST	OracleBISchedu	[67004] Configuration value MailSmtxCipherList not set.
⚠	Oct 12, 2010 03:25:23 PM BST	OracleBISchedu	[67004] Configuration value MailSmtxCaCertificateDirectory not set.
⚠	Oct 12, 2010 03:25:23 PM BST	OracleBISchedu	[67004] Configuration value MailSmtxCaCertificateFile not set.

Fusion Middleware Control Security Page

- Enable SSO using a number of providers
- Links to manage application roles
- Note : Management of users, groups etc

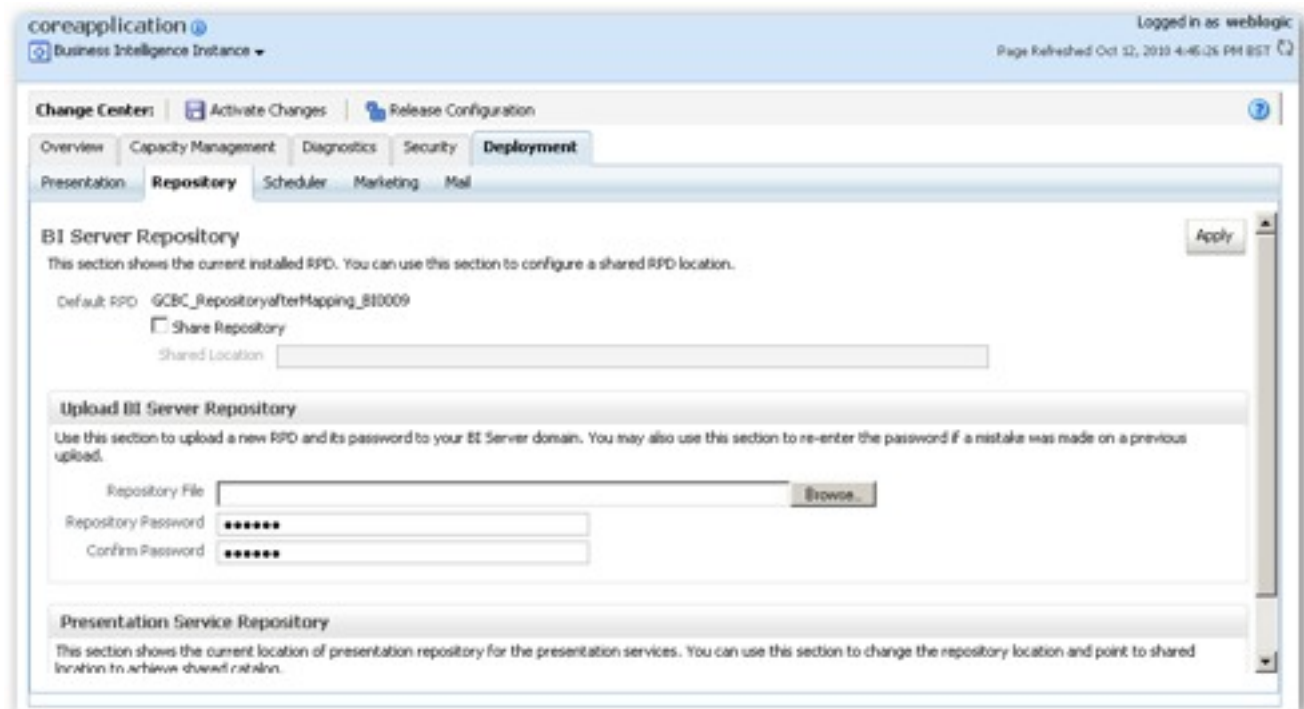


The screenshot shows the Fusion Middleware Control Security page. The page title is "coreapplication" and it is logged in as "weblogic". The page was refreshed on Oct 12, 2010 at 4:45:26 PM BST. The page is divided into several sections:

- Change Center:** Lock and Edit Configuration
- Navigation:** Overview, Capacity Management, Diagnostics, **Security**, Deployment
- Security:** This section contains the following options:
 - Single Sign On (SSO):** SSO enables a user to log in once and gain access to all systems without being prompted to log in again at each of them. If SSO is enabled then Oracle Business Intelligence will not challenge the user for authentication and will assume the user has already been authenticated by SSO.
 - Enable SSO
 - SSO Provider: Custom
 - Security Realm:** Go to the Oracle WebLogic Server Administrator Console to configure and manage the WebLogic security realms.
 - Application Policies and Roles:**
 - Configure and manage Application Policies
 - Configure and manage Application Roles

Fusion Middleware Control Deployment Page

- Deploy new copies of the RPD, web catalog; defined shared locations
- Configure scheduler connections, mail server connections
- Configure some dashboard default settings



The screenshot shows the Fusion Middleware Control interface. At the top, it displays 'coreapplication' and 'Business Intelligence Instance'. The user is logged in as 'weblogic' and the page was refreshed on Oct 12, 2010 4:46:26 PM EST. The 'Change Center' section includes 'Activate Changes' and 'Release Configuration' buttons. The main navigation tabs are 'Overview', 'Capacity Management', 'Diagnostics', 'Security', and 'Deployment'. Under 'Deployment', there are sub-tabs for 'Presentation', 'Repository', 'Scheduler', 'Marketing', and 'Mail'. The 'Repository' sub-tab is active, showing the 'BI Server Repository' configuration. This section includes a description, a 'Default RPD' field with the value 'GCBC_RepositoryafterMapping_BI0009', a 'Share Repository' checkbox, and a 'Shared Location' text input field. Below this is the 'Upload BI Server Repository' section, which includes a 'Repository File' field with a 'Browse...' button, and 'Repository Password' and 'Confirm Password' fields, both masked with asterisks. At the bottom, there is a 'Presentation Service Repository' section with a description.



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Demonstration

Systems Management and Deployment using OBIEE 11g

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Summary and Further Reading

- OBIEE 11g comes with a wide range of new features
- New graphing, mapping, scorecard and OLAP analysis features
- Better integration with Essbase and non-relational data (ADF etc)
- Extended RPD capabilities including lookup tables, double-columns
- Leverages Oracle WebLogic Server and Oracle Enterprise Manager
- Improved systems management capabilities
- For more details, check out these resources:
 - ▶ <http://www.rittmanmead.com/obiee11g>
 - ▶ <http://www.rittmanmead.com/blog>
 - ▶ @rittmanmead
 - ▶ @markrittman
- Contact me at mark.rittman@rittmanmead.com to discuss further





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