

Oracle E-Business Suite (R12) Integration with OID/OAM 11g

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*To my wife for her unconditional love and support and to my beautiful daughter
for keeping mummy occupied and me entertained. – **Atul Kumar***

*To Mom and Dad – Without all your love, faith and support I would not be where
I am today – **Neha Mittal***



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Preface

Oracle E-Business Suite (R12) integration with OID/OAM 11g covers steps to installation OID 11g, OAM 11g, OHS 11g, WebGate 10g. This book also covers integration of OID-OAM, OID-EBS, and OAM-EBS for Single Sign-On including deployment of EBS AccessGate, FAQ for EBS-OID-OAM integration and troubleshooting tips.

You can contact us as ebook@onlineAppsDBA.com if you are having a problem with any aspect of the book, and we will do our best to address it.

What this book covers

Chapter 1, Introduction, covers overview of various components like OID, DIP, ODSM, WebLogic Server, OHS, AccessGate and key profile options used in this EBS (R12) integration with OID/OAM for Single Sign-On

Chapter 2, Install OID/DIP/ODSM, covers installation of WebLogic Server, OID, DIP, and ODSM. This chapter also covers patching OID to 11.1.1.4 and create configure WebLogic Domain to deploy DIP, ODSM, EM and WebLogic Console Application.

Chapter 3, Install OAM, covers installation of WebLogic and OAM Server. This chapter also covers steps to create WebLogic Domain and deploy OAM Application.

Chapter 4, Integrate OAM with OID, covers steps to integrate OAM with OID to configure OID as OAM's primary identity store. This chapter also covers apply 11.1.1.3.2 patch to OAM 11g which is prerequisite for OAM-EBS integration.

Chapter 5, Integrate EBS with OID, covers integration of E-Business Suite with Oracle Internet Directory (OID) for user synchronization.

Chapter 6, Install OHS, covers installation of Oracle HTTP Server (OHS) and patching OHS to 11.1.1.4 version.

Chapter 7, Install WebGate, covers configuring WebGate instance using Remote Registration (RREG) tool and installation of 10g WebGate with Oracle HTTP Server (OHS).

Chapter 8, Deploy EBS AccessGate, covers deploying EBS AccessGate on WebLogic server, configuring mod_wl_ohs, and global logout for EBS-OAM integration.

Chapter 9, FAQ, covers frequently asked questions around integration E-Business Suite with OAM/IOID and common questions like how to find versions, how to find patches applied.

Chapter 10, Troubleshooting, covers troubleshooting various integration points.

Chapter 11, References, covers My Oracle Support Notes, Links to various blogs and websites, and books referred for integration.

1 Introduction

E-Business Suite (EBS) integration with Oracle Access Manager (OAM) for Single Sign-On (SSO) involves integrating EBS with Oracle Internet Directory (OID) for user synchronization, pointing OAM's identity store to use OID, and delegating EBS authentication to OAM. This chapter is overview of components used in integration and request flow. In this chapter we will cover

- EBS-OAM Integration Components
- EBS Authentication request flow
- High-level integration steps
- Installation assumption used in this book



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1.1 OAM EBS Integration Components

In order to understand Oracle Access Manager (OAM) integration with Oracle E-Business Suite, let us first understand various components that are part of OAM-EBS integration.

1.1.1 Oracle Internet Directory (OID)

Oracle Internet Directory (OID) is Lightweight Directory Access Protocol (LDAP) server from Oracle where all enterprise users are stored. Users in OID are synchronized with users in E-Business Suite (EBS) using Directory Integration Platform (DIP). Oracle Access Manager (OAM) should use OID (or Oracle Virtual Directory- OVD pointing to this OID) as its identity store for authentication.

1.1.2 Directory Integration Platform (DIP)

Directory Integration Platform (DIP) 11g is J2EE application deployed on WebLogic server and used for provisioning/synchronization of users/groups across other LDAP servers and applications. DIP consists of two type of engine, **Synchronization** and **Provisioning**. Synchronization component is used to sync users/groups between OID and other LDAP servers like Microsoft Active Directory (MS-AD) or IBM Directory Server. Provisioning is used to sync OID with applications like EBS, Portal, Collaboration Suite. For user synchronization between OID and EBS, DIP uses its provisioning component.

1.1.3 Oracle Directory Services Manager (ODSM)

Oracle Directory Services Manager (ODSM) is a web application deployed on WebLogic server and used to manage OID using web browser. Using ODSM you can configure/manage OID, and create/delete users/groups.

1.1.4 Oracle WebLogic Server (WLS)

Oracle WebLogic Server (WLS) is J2EE Application Server from Oracle. WebLogic Domain is logical component in which all resources (Admin Server, Managed Server, Java Database Connectivity(JDBC), Java Messaging Server(JMS)) are deployed/configured. WebLogic Domain consists of one and only one Admin Server and zero or more managed server. In EBS-OAM deployment we will install two WebLogic Servers and two WebLogic Domain (one per installation). First WebLogic Installation (version 10.3.4) with Weblogic Domain will run DIP & ODSM Application (explained above). Second WebLogic Installation (version 10.3.3) with WebLogic Doamin will run OAM Server and EBS AccessGate (EBS-AG). It is possible to configure OAM Server on one WebLogic domain and EBS AccessGate on another WebLogic

Domain. The reason to select two different WebLogic versions a) 10.3.4 WebLogic (for ODSM/DIP) and b) WebLogic 10.3.3 (for OAM) is because DIP/ODSM are from IDM 11.1.1.4 software whereas OAM is from IAM 11.1.1.3 software. EBS AccessGate can be deployed in either 10.3.3 or 10.3.4 WebLogic server. If you wish to install OID 11.1.1.3 then all components (DIP/ODSM/OAM/EBS-AG) can be installed using single WebLogic server (10.3.3) and in single domain.

1.1.5 Oracle Access Manager (OAM)

Oracle Access Manager is a J2EE application deployed on WebLogic Server and used as Authentication & Authorization Server. OAM Server consists of

- OAM Server deployed on WebLogic **Managed Server** (default port 14100). There is OAM-Proxy server running in background on default port 5575. Agents (WebGate) connect to OAM-Proxy Port
- OAMConsole is web application deployed on WebLogic Admin Server (default port 7001). OAM Console application is used to manage configuration, and define/manage policies, authentication schemes.
- OAM Configuration is stored in XML file (oam-config.xml) on server and contains all OAM configuration like servername, port, webgate details, audit store details.
- OAM Policy Store is a repository (database) which stores policy (details like which URL is protected and using what authentication/authorization schemes)

1.1.6 Oracle HTTP Server (OHS)

Oracle HTTP Server is a Web Server from Oracle on which Web Gate is deployed. Users are redirected from EBS Middle Tier to this server for authentication (URL of this server is configured in EBS Profile option “**Application Authentication Agent**”). OHS acts as proxy server to WebLogic Server on which EBS AccessGate (EBS-AG) is deployed. This OHS server also has `mod_wl_ohs` configured to forward request to WebLogic Server where Oracle E-Business Suite AccessGate (EBS-AG) is deployed.

E-Business Suite R12 comes with its own OHS server, OHS server mentioned here is different OHS server than one shipped with EBS R12 technology stack.

1.1.7 Web Gate

Web Gate is a web server plug-in (deployed with WebServer like Apache, OHS, IHS) which intercepts user's request and send it to Oracle Access Manager Server to check if user is authenticated/authorised to access requested resource. Web Gate is installed on same machine as WebServer (OHS) and webgate configuration settings are pointed OHS configuration file (**httpd.conf**). For Web Gate to work an instance of Web Gate must be configured in OAM Server using Remote Registration (REG) utility or OAMConsole and Web Gate must be installed with OHS using same user as OHS.



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1.1.8 mod_wl_ohs

This is module in Oracle HTTP Server (OHS) which forward request from OHS to WebLogic Server as defined in mod_wl_ohs.conf

1.1.9 Oracle E-Business Suite Access Gate

EBS AccessGate (EBS-AG) is a Java EE Application that maps a Single Sign-On user (authenticated via OAM) to an Oracle E-Business Suite user (stored in FND_USER table), and creates E-Business Suite session for that user. EBS-AG is deployed on WebLogic Server using ANT script which creates a web application and JDBC connection to EBS Database. Login Page for E-Business Suite is also configured as part of EBS AG. There are currently two version of E-Business Suite Access Gate i.e. 1.0.2 is certified with OAM 10g R3 where as for OAM 11g R1 you should use Oracle E-Business Suite Access Gate 1.1.0.0 . Oracle E-Business Suite Access Gate 1.1.0.0 is available via patch 10124068 .

If WebLogic Server (which hosts EBS-AG) is on different machine than EBS Middle Tier then you must register node (hosting EBS-AG) in EBS database, create DBC file and use this DBC file during EBS AccessGate deployment.

1.1.10 Profile Option

Profile Option is used in E-Business Suite to update behaviour of environment, two profile option which are used in Oracle E-Business Suite are Application SSO Type and Application Authentication Agent

- **Application SSO Type (APPS_SSO)** - This profile option can be set only at site level from one of four values SSWA, Portal, SSWA w/SSO or Portal w/SSO. To inform E-Business Suite that Single Sign-On is configured and redirect user to Single Sign-On Page and not to Local Login page, set this profile option to either SSWA w/SSO or Portal w/SSO
- **Application Authentication Agent (APPS_AUTH_AGENT)** - When this profile option is set with "Application SSO Type", user is redirected page generated from this profile option. Lets assume value of profile option "Application SSO Type" is set to `http://ohsserver:ohsport/epsauth_dev/` , then user will be redirected to page `http://ohsserver:ohsport/epsauth_dev/OAMLogin.jsp` . Value of profile option "Application Authentication Agent " is set to format `http://server:port/<context_root>` where server is name of server where Oracle HTTP Server (OHS) with Web Gate is installed, port is OHS Listen Port and context_root is context root defined during AccessGate configuration.