# Contents

## Preface
- Audience vi
- Documentation Accessibility vi
- Related Documents vi
- Accessing Oracle Communications Documentation vii
- Document Revision History vii

## 1 Business Operations Center Installation Overview
- About Installing Business Operations Center 1-1
- Overview of the Business Operations Center Installation Steps 1-1
- Ensuring a Successful Business Operations Center Installation 1-3

## 2 Planning Your Business Operations Center Installation
- About Planning Your Business Operations Center Installation 2-1
- About Test Installations and Production Installations 2-1
  - About Test Installations 2-1
  - About Production Installations 2-2
- Database Planning 2-2
- Authentication and Authorization Planning 2-2
- About Installing a Secure System 2-3

## 3 Business Operations Center Requirements
- Software Requirements 3-1
- Hardware Requirements 3-1
- About IPv4 and IPv6 Support for Fusion Middleware Products 3-2

## 4 Business Operations Center Pre-Installation Tasks
- Overview of Production Pre-Installation Tasks 4-1
- Connecting to Oracle BRM 4-1
<table>
<thead>
<tr>
<th>Page</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-2</td>
<td>Installing and Configuring Oracle Enterprise Database</td>
</tr>
<tr>
<td>4-2</td>
<td>Configuring SSL for the Oracle Enterprise Database</td>
</tr>
<tr>
<td>4-2</td>
<td>Installing and Configuring Oracle WebLogic Server</td>
</tr>
<tr>
<td>4-2</td>
<td>Configuring the OPSS JRF-Enabled Business Operations Center Application Domain</td>
</tr>
<tr>
<td>4-3</td>
<td>Installing and Configuring Oracle Unified Directory</td>
</tr>
<tr>
<td>4-3</td>
<td>Configuring Oracle Unified Directory as Authentication Provider</td>
</tr>
<tr>
<td>4-3</td>
<td>Installing and Configuring Oracle Access Management</td>
</tr>
<tr>
<td>4-3</td>
<td>Configuring the Oracle Access Manager Business Operations Center Application Domain</td>
</tr>
<tr>
<td>4-4</td>
<td>Creating the Business Operations Center Application Domain</td>
</tr>
<tr>
<td>4-4</td>
<td>Defining Business Operations Center Resources</td>
</tr>
<tr>
<td>4-5</td>
<td>Configuring Business Operations Center Authentication Modules</td>
</tr>
<tr>
<td>4-5</td>
<td>Creating a Business Operations Center Authentication Scheme</td>
</tr>
<tr>
<td>4-5</td>
<td>Creating the Business Operations Center Authentication Policy and Adding Resources</td>
</tr>
<tr>
<td>4-6</td>
<td>Creating the Business Operations Center Authorization Policy and Adding Resources</td>
</tr>
<tr>
<td>4-8</td>
<td>Configuring and Restarting the Oracle HTTP Server</td>
</tr>
<tr>
<td>4-9</td>
<td>Installing and Configuring Oracle Identity Governance</td>
</tr>
<tr>
<td>4-9</td>
<td>Creating a Secure Passwordless User on the BRM Server</td>
</tr>
<tr>
<td>4-9</td>
<td>Information Requirements</td>
</tr>
<tr>
<td>4-9</td>
<td>Oracle BRM Database Connection Information</td>
</tr>
<tr>
<td>4-10</td>
<td>BRM Connection Information</td>
</tr>
<tr>
<td>4-11</td>
<td>Oracle Database Connection Information</td>
</tr>
<tr>
<td>4-11</td>
<td>OPSS JRF-Enabled Domain Information</td>
</tr>
<tr>
<td>4-11</td>
<td>Oracle Unified Directory Information</td>
</tr>
<tr>
<td>4-12</td>
<td>Oracle Identity Management Console URLs</td>
</tr>
</tbody>
</table>

**5 Installing Business Operations Center**

<table>
<thead>
<tr>
<th>Page</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-1</td>
<td>Downloading Business Operations Center</td>
</tr>
<tr>
<td>5-2</td>
<td>Installing Business Operations Center for Testing</td>
</tr>
<tr>
<td>5-7</td>
<td>Installing Business Operations Center for Production</td>
</tr>
<tr>
<td>5-12</td>
<td>About Installation Logs</td>
</tr>
</tbody>
</table>

**6 Business Operations Center Post-Installation Tasks**

<table>
<thead>
<tr>
<th>Page</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-1</td>
<td>Post-Installation Tasks</td>
</tr>
<tr>
<td>6-2</td>
<td>About Encryption</td>
</tr>
<tr>
<td>6-2</td>
<td>Configuring Additional Settings in Infranet.properties</td>
</tr>
<tr>
<td>6-2</td>
<td>Creating the Business Operations Center WebLogic Server Data Source</td>
</tr>
</tbody>
</table>
7 Verifying the Business Operations Center Installation
Preface

This guide provides instructions for installing Oracle Communications Billing and Revenue Management Business Operations Center.

Audience

This guide is intended for system administrators, database administrators, and developers who install and configure Business Operations Center. Business Operations Center requires Oracle Database, Oracle WebLogic Server, and Oracle Identity Management Suite products in production environments. Additionally, Business Operations Center requires Billing and Revenue Management Revenue Assurance Manager, an optional component, to be installed in your Billing and Revenue Management environment.

See the documentation for those products for additional installation and configuration instructions.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

Related Documents

The following documents contains related information and are referenced in this guide:

- Administering Security for Oracle WebLogic Server
- Oracle Communications Billing and Revenue Management Collecting Revenue Assurance Data
- Oracle Communications Billing and Revenue Management Developer's Guide
- Oracle Communications Billing and Revenue Management System Administrator's Guide
- Oracle Database Online Documentation 12c Release 2
- Oracle Fusion Middleware Administrator's Guide for Oracle Access Management
Accessing Oracle Communications Documentation

Business Operations Center documentation and additional Oracle documentation, such as Oracle Database, WebLogic, and Identity and Access Management documentation, is available from Oracle Help Center:

- [http://docs.oracle.com](http://docs.oracle.com)

Additional Oracle Communications documentation is available from the Oracle software delivery web site:

- [https://edelivery.oracle.com](https://edelivery.oracle.com)

Document Revision History

The following table lists the revision history for this book.

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E72269-01</td>
<td>December 2017</td>
<td>Initial release.</td>
</tr>
<tr>
<td>E72269-02</td>
<td>July 2018</td>
<td>Documentation updates.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Updated the following section:</td>
</tr>
<tr>
<td></td>
<td></td>
<td><a href="#">Software Requirements</a></td>
</tr>
<tr>
<td>Version</td>
<td>Date</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>-----------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>E72269-03</td>
<td>September 2018</td>
<td>Documentation updates for Business Operations Center 12.0 Patch Set 1.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Added the following section:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Configuring the SSL-Enabled Business Operations Center Data Source</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Updated the following sections:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Software Requirements</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Downloading Business Operations Center</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Installing Business Operations Center for Testing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Installing Business Operations Center for Production</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Post-Installation Tasks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Importing the Business Operations Center Security Policies into OPSS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Importing the Business Operations Center Security Policies into OPSS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Updated the following sections:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Software Requirements</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Business Operations Center Pre-Installation Tasks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Installing Business Operations Center for Testing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Installing Business Operations Center for Production</td>
</tr>
</tbody>
</table>
Business Operations Center Installation Overview

This chapter provides an overview of Oracle Communications Billing and Revenue Management Business Operations Center components and installation process.

About Installing Business Operations Center

Business Operations Center installation should be performed only by experienced system administrators. You must be familiar with the following before you begin the installation:

- UNIX/Linux operating system
- Oracle Communications Billing and Revenue Management (BRM)
  - BRM Revenue Assurance Manager
- Oracle WebLogic Server
- Oracle Enterprise Database
- (Optional) Oracle Identity Management (IdM) components, including:
  - Oracle Access Management (OAM)
  - Oracle Identity Governance
  - Oracle Unified Directory (OUD)

Additionally, you should have experience installing Java-related packages.

The Business Operations Center installer creates the required schema in the BRM database and deploys Business Operations Center to a WebLogic server domain.

Overview of the Business Operations Center Installation Steps

The following is an overview of the Business Operations Center installation steps:

1. Plan your installation. Planning your installation involves:
   - Determining the scale of your implementation (for example, whether you are installing a small test system or a large production system).
Note:
You can install a test or development installation of Business Operations Center without IdM. Do not use these installations in production environments. See "About Test Installations and Production Installations" for more information.

• Assessing how many physical computers you need and which software components to install on which computers.
• Planning the system topology (for example, determining whether you want a standalone deployment or a clustered deployment).

2. Review system requirements. System requirements include:
• Hardware requirements, such as disk space and physical RAM
• Software requirements, such as operating system (OS) versions and OS patch requirements, OS kernel tuning requirements, required Oracle software, including:
  – Enterprise Database
  – WebLogic Server
  – (Optional) IdM components, such as:
    Oracle Access Management (OAM)
    Oracle Identity Governance
    Oracle Unified Directory (OUD)
  – Java Development Kit (JDK)

See BRM Compatibility Matrix for required versions.
• Information requirements, such as IP addresses, administrative user credentials, host names, and port numbers
• BRM Server including installation of Revenue Assurance Manager

See "Installing Revenue Assurance Manager" in Oracle Communications Billing and Revenue Management Collecting Revenue Assurance Data for more information.

3. Prepare your foundation by completing the pre-installation tasks:

See "Business Operations Center Pre-Installation Tasks" for more information.


See "Installing Business Operations Center" for more information.

5. Perform the required post-installation configuration tasks.

See "Business Operations Center Post-Installation Tasks" for more information.

6. Verify the installation.

See "Verifying the Business Operations Center Installation" for more information.
Ensuring a Successful Business Operations Center Installation

Business Operations Center uses additional Oracle software products including Enterprise Database, WebLogic Server, and IdM (optional). Familiarize yourself with these products and their installation procedures before installing Business Operations Center.

**Note:**

IdM has important pre-installation requirements including kernel tuning, operating system configuration files editing (for example, editing `limits.conf`), and tuning database parameters. If you are using IdM components, ensure that these requirements have been met when completing the pre-installation tasks before running the Business Operations Center installer so that your installation is successful.

See Oracle Fusion Middleware System Requirements and Specifications for Oracle Identity Management for detailed information.

Consult additional product documentation on the Oracle Help Center for required information at:

https://docs.oracle.com

To ensure that the Business Operations Center installation is successful, follow these guidelines:

- As you install each component (for example, the Enterprise Database and WebLogic Server), verify that the component installed successfully before continuing the installation process.
- Pay close attention to the system requirements. Before you begin installing the application, ensure that your system has the required base software and meets the minimum technical requirements. In addition, ensure that you know all the required configuration values, such as host names and port numbers.
- Make a note of any new configuration values as you create them. You will be required to enter configuration values later in the procedure.
Planning Your Business Operations Center Installation

This chapter provides information on planning your Oracle Communications Billing and Revenue Management Business Operations Center installation.

About Planning Your Business Operations Center Installation

When planning a Business Operations Center installation, consider how many physical servers are required to support the Oracle WebLogic Server domains and Oracle Identity Management (IdM) components needed in your environment. High-availability requirements may increase the number of hosts.

Consider the security and networking requirements necessary for securing Business Operations Center communications with your Oracle Communications Billing and Revenue Management (BRM) system in addition to software and hardware requirements.


About Test Installations and Production Installations

Install Business Operations Center either as a test or production installation depending on your required environment. Both test and production Business Operations Center installations must connect to a BRM system with Revenue Assurance Manager installed. See Oracle Communications Billing and Revenue Management Collecting Revenue Assurance Data for more information.

About Test Installations

Use test installations when setting up internal development or testing Business Operations Center instances. Test installations allow users to use Business Operations Center without IdM security. The deployed Business Operations Center application in your test WebLogic server domain connects directly to your BRM system using native WebLogic server user management.

Test installations include the following components:

- WebLogic Server
- WebLogic Server domain to host Business Operations Center with Business Operations Center security disabled
- Deployed Business Operations Center application WAR
• Creation of Business Operations Center schema in the BRM database

This guide includes information on installing test installations. You do not need to perform the IdM pre-installation steps for test installations. See "Installing Business Operations Center for Testing" for more information on test installations.

About Production Installations

Use production installations when setting up secure Business Operations Center instances using IdM security. Production installations require user authentication and authorization for securing access to Business Operations Center. This guide provides general guidelines in installing and configuring IdM components. It does not contain detailed information on configuring IdM components. Consult the respective product documentation using the links provided in this guide for more information on configuring IdM components.

Production installations include the following components:

• Enterprise Database
• Database creation with Oracle Repository Creation Utility (RCU)
• WebLogic Server
• OPSS JRF-enabled WebLogic domain
• Deployed Business Operations Center application WAR on each Oracle Platform Security Services (OPSS) domain.
• Creation of Business Operations Center schema in the BRM database
• (Optional) Oracle Identity Management (IdM) components, including:
  – Oracle Access Management (OAM) for single-sign on (SSO) configuration.
  – Oracle Unified Directory (OUD) for user directory management.
  – Oracle Identity Governance for connecting to OUD and managing users.

Database Planning

Business Operations Center production installations require an Enterprise Database. This database is in addition to your BRM server database used for the Business Operations Center schema and OPSS schema. Database sizing requirements depend on the number of Business Operations Center users in your environment.

See "Installing and Configuring Oracle Enterprise Database" for information on setting up the required database for Business Operations Center.

Authentication and Authorization Planning

When planning a Business Operations Center installation, consider the requirements carefully. Each OPSS domain hosts a deployed instance of Business Operations Center and connects to OPSS for authorization. Determine how many OPSS domains are needed to support the Business Operations Center deployments required by your transaction volume.

You can use the IdM components and Oracle HTTP Server Webgate for user authentication, SSO, and user directory management. See Oracle Fusion Middleware
About Installing a Secure System

In production environments, you must ensure that communication between components and access to the system servers are secure. The Business Operations Center installer prompts you to select security options. After you install Business Operations Center, enable SSL communication between Business Operations Center and BRM. For information about securing Business Operations Center, see the chapter on Business Operations Center in Oracle Communications Billing and Revenue Management Security Guide.
Business Operations Center Requirements

This chapter describes Oracle Communications Billing and Revenue Management Business Operations Center software and hardware requirements.

Software Requirements

Business Operations Center is deployed on the Oracle Platform Security Services (OPSS) JRF-enabled WebLogic Server domain. See Oracle Platform Security Services or OPSS in Fusion Middleware Identity Management documentation for more information.

You need the following software for installing Business Operations Center:

- OPSS JRF-enabled WebLogic Server domain for deploying Business Operations Center.

  **Note:**
  You configure OPSS when you create the JRF-enabled WebLogic domain. No additional steps are required for configuring OPSS.

- Oracle WebLogic Server installed using the Oracle Fusion Middleware Infrastructure installer.

  Optionally, you can install Oracle Identity Management (IdM) components for authentication and authorization based on your requirements:

  - Oracle Access Management (OAM) for single-sign on (SSO) configuration.
  - Oracle Unified Directory (OUD) for user directory management.
  - Oracle Identity Governance for connecting to OUD and managing users.

Business Operations Center is supported only on the software and hardware listed in these sections. You must install and connect all required software components for a secure installation.

For information on supported operating systems, additional software requirements, and compatible software versions, see “Business Operations Center Software Compatibility” in BRM Compatibility Matrix.

Hardware Requirements

The number and configuration of the hosts used for your Business Operations Center installation depend on your requirements. For example, large transaction volumes, multiple geographical locations, or fail-over requirements affect the amount of required hardware.
Table 3-1 lists the recommended hardware requirement for a single server production Business Operations Center installation containing all components. See “Preparing to Install” in Oracle Fusion Middleware Installation Guide for Oracle Identity Management for more information on IdM component hardware and sizing.

Table 3-1 Business Operations Center Single Server Minimum Hardware Requirements

<table>
<thead>
<tr>
<th>Component</th>
<th>Requirement</th>
</tr>
</thead>
</table>
| Hard disk | 200 GB of free disk space  
**Note:** A minimum of 1.5 GB should be free in the domain home. |
| Processor | Oracle recommends using 6 or more cores, each running at 1.5 GHz or greater. |
| Memory | A minimum of 35 GB physical memory and 16 GB swap.  
If you plan on installing the required database on the same server, see "Checking the Hardware Requirements" for more information about required memory.  
For more information on calculating required memory in your environment, see Oracle Fusion Middleware System Requirements and Specifications for Oracle Identity Management at:  
http://docs.oracle.com/html/E38978_01/r2_im_requirements.htm |

About IPv4 and IPv6 Support for Fusion Middleware Products

For information on network considerations, including support for IPv6 addresses, see "Configuring IPv4 and IPv6 for Fusion Middleware Products" in Oracle Fusion Middleware System Requirements and Specifications at:

http://docs.oracle.com/html/E10558_01/fusion_requirements.htm#BABICJGA
This chapter describes the tasks that you must perform before running the Oracle Communications Billing and Revenue Management Business Operations Center installer. The procedures include links to relevant documentation in related product documentation.

Overview of Production Pre-Installation Tasks

In production installations, the Business Operations Center installer deploys Business Operations Center on a running Oracle Platform Security Services (OPSS) JRF-enabled domain. The installer assumes that the following required software pre-installation tasks, including applying patches and workarounds, have already been completed successfully.

Note:
A test installation without OPSS security can be performed on a basic WebLogic domain. Do not use a test installation in production.

Pre-installation tasks for Business Operations Center consist of the following steps:

1. Connecting to Oracle BRM
2. Installing and Configuring Oracle Enterprise Database
3. Installing and Configuring Oracle WebLogic Server
4. Configuring the OPSS JRF-Enabled Business Operations Center Application Domain
5. (Optional) Installing and Configuring Oracle Unified Directory
6. (Optional) Installing and Configuring Oracle Access Management
7. (Optional) Installing and Configuring Oracle Identity Governance
8. Creating a Secure Passwordless User on the BRM Server

Connecting to Oracle BRM

Business Operations Center connects to Oracle Communications Billing and Revenue Management (BRM) when retrieving operational data and submitting job requests. The connected BRM instance must have Revenue Assurance Manager installed. The Business Operations Center installer connects to the BRM database and creates the required schema. Table 4-6 lists the BRM connection details required for installing Business Operations Center.
See Oracle Communication Billing and Revenue Management Installation Guide for information on installing BRM.

See "Installing Revenue Assurance Manager" in Oracle Communications Billing and Revenue Management Collecting Revenue Assurance Data for more information.

Installing and Configuring Oracle Enterprise Database

Oracle recommends that an experienced database administrator install and configure your database. To install and configure Oracle Database, see the Oracle Database installation documentation at:

https://docs.oracle.com/en/database/

Record your database details in Table 4-8.

Configuring SSL for the Oracle Enterprise Database

You can configure secure sockets layer (SSL) for the Oracle Enterprise Database by creating the necessary wallets for storing certificates and then modifying the following configuration files to point to the appropriate wallet:

- sqlnet.ora
- tnsnames.ora
- listener.ora

You can use the Orapki utility to create the wallets.

For information, see "Configuring SSL for the Database" in Oracle Fusion Middleware Administrator's Guide.

Installing and Configuring Oracle WebLogic Server

Business Operations Center requires a pre-existing Oracle WebLogic Server middleware home directory. You must download and install Oracle WebLogic Server using the Fusion Middleware Infrastructure installer.

If you are using Oracle Identity Management (IdM) for user authentication and authorization, download and install WebLogic Server before installing IdM.

See "Obtaining the Oracle Fusion Middleware Software" in Oracle Fusion Middleware Installation Guide for Oracle Identity Management for more information on downloading WebLogic Server.


Configuring the OPSS JRF-Enabled Business Operations Center Application Domain

You deploy Business Operations Center on a JRF-enabled Oracle WebLogic Server domain configured as an Oracle Platform Security Services (OPSS) client domain. Create a JRF-enabled domain in Oracle WebLogic Server and configure an
application domain policy that controls access to the Business Operations Center application.

For creating the domain and configuring the domain policy, see "Configuring your Oracle Fusion Middleware Infrastructure Domain" in Oracle Fusion Middleware Installing and Configuring the Oracle Fusion Middleware Infrastructure.

Installing and Configuring Oracle Unified Directory

Download and install the Oracle Unified Directory (OUD) software. For more information, see "Installing the Oracle Unified Directory Software" in Oracle Fusion Middleware Installing Oracle Unified Directory.

Configuring Oracle Unified Directory as Authentication Provider

After installing OUD, configure the OPSS Administration Server to use OUD as the authentication provider.

See "Configuring an Authentication Provider for Oracle Unified Directory" in Oracle Fusion Middleware Securing Oracle WebLogic Server for information on setting up OUD as your authentication provider.

See "Introduction to Oracle Unified Directory" in Oracle Fusion Middleware Administering Oracle Unified Directory for information on setting up OUD, including how to synchronize OUD with existing directories that you may already have.

Record your OUD details in Table 4-10.

Installing and Configuring Oracle Access Management

Download and install the Oracle Access Management (OAM) software. For more information, see the tutorial about installing and configuring Oracle Access Management at:


Configuring the Oracle Access Manager Business Operations Center Application Domain

Create a Business Operations Center application domain in OAM and configure an application domain policy that controls access to the Business Operations Center application.

To create your Business Operations Center application domain in OAM, complete the following steps:

1. Creating the Business Operations Center Application Domain
2. Defining Business Operations Center Resources
3. Configuring Business Operations Center Authentication Modules
4. Creating a Business Operations Center Authentication Scheme
5. Creating the Business Operations Center Authentication Policy and Adding Resources
6. **Creating the Business Operations Center Authorization Policy and Adding Resources**

7. **Configuring and Restarting the Oracle HTTP Server**

   See "Introduction to Application Domain and Policy Creation" in *Oracle Fusion Middleware Administrator's Guide for Oracle Access Management* for more information on application domains and policies.

---

### Creating the Business Operations Center Application Domain

To create the Business Operations Center application domain:

1. Log into your OAM web console at `http://Host:port/oamconsole`, where `Host` and `port` are the server name or IP address and port for your OAM instance.
2. Click **Application Domains** in the **Access Manager** frame.
3. Click **Create Application Domain**.
4. In the **Name** field, enter a name for your application domain.
5. (Optional) Provide **Description**, **Session Idle Timeout (minutes)**, **Allow OAuth Token**, and **Allow Session Impersonation** values.
6. Click **Apply**.

   The Business Operations Center application domain is created.

---

### Defining Business Operations Center Resources

Define the `/opsdashboard**`, `/opsdashboard*`, and `/**` resources for your Business Operations Center application domain. Repeat steps 1 through 4 for each of these resources.

To define Business Operations Center resources in your Business Operations Center application domain:

1. Click **Application Domains** in the **Access Manager** frame.
2. Click the link for your Business Operations Center application domain.
   
   The **Summary** tab for your Business Operations Center application domain is shown.
3. Click the **Resources** tab.
4. Enter or select the following values listed in **Table 4-1**.

---

#### Table 4-1  Business Operations Center Protected Resource Creation Values

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>HTTP</td>
</tr>
<tr>
<td>Description</td>
<td>(Optional) Enter text description</td>
</tr>
<tr>
<td>Host Identifier</td>
<td>IdMSuiteAgent</td>
</tr>
<tr>
<td>Protection Level</td>
<td>Protected</td>
</tr>
</tbody>
</table>
Table 4-1  (Cont.) Business Operations Center Protected Resource Creation Values

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authentication Policy</td>
<td>Protected Policy</td>
</tr>
<tr>
<td>Resource URL (String)</td>
<td>/opsdashboard**, /opsdashboard*, or l**</td>
</tr>
</tbody>
</table>

Define an excluded resource for /fav.ico.

To define the excluded resource, repeat steps 1 through 4 using the values listed in Table 4-2.

Table 4-2  Business Operations Center Excluded Resource Creation Values

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>HTTP</td>
</tr>
<tr>
<td>Description</td>
<td>(Optional) Enter text description</td>
</tr>
<tr>
<td>Host Identifier</td>
<td>IdMSuiteAgent</td>
</tr>
<tr>
<td>Protection Level</td>
<td>Excluded</td>
</tr>
<tr>
<td>Resource URL (String)</td>
<td>favicon.ico</td>
</tr>
</tbody>
</table>


Configuring Business Operations Center Authentication Modules

Create an OIMIDStore authentication model in OAM for authenticating Business Operations Center users.

To create the required authentication model in OAM:

1. Click Authentication Modules in the Access Manager frame. The Authentication Modules node is shown.
2. Click the Create Authentication Module pull-down menu and select Create LDAP Authentication Module.
3. In the Name field, provide a name for your authentication module.
4. In User Identity Store, select OIMIDStore.
5. Click Apply.


Creating a Business Operations Center Authentication Scheme

The authentication module you previously created must be added to a authentication scheme in your Business Operations Center application domain.
To create an authentication scheme and add the authentication module to it:

1. Click **Authentication Schemes** in the **Access Manager** frame.  
   The **Authentication Schemes** node is shown.

2. Click **Create Authentication Scheme**.

3. Enter or select the following values listed in **Table 4-3**.

**Table 4-3  Business Operations Center Authentication Scheme Creation Values**

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Business Operations Center LDAP Scheme name</td>
</tr>
<tr>
<td>Description</td>
<td>(Optional) Enter text description.</td>
</tr>
<tr>
<td>Authentication Level</td>
<td>2</td>
</tr>
<tr>
<td>Challenge Method</td>
<td>FORM</td>
</tr>
<tr>
<td>Challenge Redirect URL</td>
<td>/oam/server</td>
</tr>
<tr>
<td>Authentication Module</td>
<td>Select the authentication module created in the previous step.</td>
</tr>
<tr>
<td>Challenge URL</td>
<td>/pages/login.jsp</td>
</tr>
<tr>
<td>Context Type</td>
<td>default</td>
</tr>
<tr>
<td>Context Value</td>
<td>/oam</td>
</tr>
</tbody>
</table>

4. Click **Apply**.


Creating the Business Operations Center Authentication Policy and Adding Resources

Create an authentication policy that the Business Operations Center application domain uses to manage the resources, authentication module, and authentication scheme previously created.

To create an authentication policy:

1. Click **Application Domains** in the **Access Manager** frame.  
   The **Application Domain** tab is shown.

2. In the **Search** field, enter the name of your Business Operations Center application domain and press **Enter**.

3. In **Search Results**, click the name of your Business Operations Center application domain.

4. Click on the **Authentication Policies** tab.  
   The **Authentication Policy** node is shown.

5. Click **Create Authentication Policy**.

6. Enter or select the following values listed in **Table 4-4**.
Table 4-4  Business Operations Center Authentication Policy Creation Values

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Business Operations Center authentication policy name</td>
</tr>
<tr>
<td>Description</td>
<td>(Optional) Enter text description</td>
</tr>
<tr>
<td>Authentication Scheme</td>
<td>Select the authentication scheme created in the previous step</td>
</tr>
</tbody>
</table>

7. Click **Apply**.

To add your Business Operations Center resources to your authentication policy:

1. In the **Authentication Policy** node for your previously created policy, click the **Resources** tab.
2. Click **Add**.
3. Select all of the Business Operations Center resources created in “Defining Business Operations Center Resources”.
4. Click **Apply**.

See “Adding an Authentication Policy and Resources” in *Oracle Fusion Middleware Administrator's Guide for Oracle Access Manager with Oracle Security Token Service* for more information on creating an authentication policy and adding resources in OAM console.

Creating the Business Operations Center Authorization Policy and Adding Resources

Create an authorization policy and add resources to this policy for the Business Operations Center application domain.

To create the Business Operations Center application domain authorization policy:

1. Click **Application Domains** in the **Access Manager** frame.
   The **Application Domain** tab is shown.
2. In the **Search** field, enter the name of your Business Operations Center application domain and press **Enter**.
3. In **Search Results**, click the name of your Business Operations Center application domain.
4. Click the **Authorization Policies** tab.
5. Enter or select the following values listed in Table 4-5.

Table 4-5  Business Operations Center Authorization Policy Creation Values

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Business Operations Center authorization policy name</td>
</tr>
<tr>
<td>Description</td>
<td>(Optional) Enter text description</td>
</tr>
</tbody>
</table>
Table 4-5  (Cont.) Business Operations Center Authorization Policy
Creation Values

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Success URL</td>
<td>The redirect URL to be used upon successful authorization</td>
</tr>
<tr>
<td>Failure URL</td>
<td>The redirect URL to be used upon failed authorization</td>
</tr>
</tbody>
</table>

6. Click **Apply**.

7. Click the **Resources** tab.

8. Click **Add**.

9. Select all of the Business Operations Center resources created in "Defining Business Operations Center Resources".

10. Click **Apply**.

See "Creating an Authorization Policy and Specific Resources" in *Oracle Fusion Middleware Administrator's Guide for Oracle Access Manager* for more information on creating an authorization policy and adding resources in OAM console.

Configuring and Restarting the Oracle HTTP Server

After configuring the required Business Operations Center OAM components, edit the Oracle HTTP Server (OHS) `idm.conf` file in your OAM instance to specify the handler, host, and port for the `/opsdashboard` resource. Restart your OHS instance after editing this file.

To configure the `/opsdashboard` resource in the OHS `idm.conf` file:

1. Open a secure shell or terminal window to your OAM host as a user with administrative permissions.

2. Change to the `Middleware_home/config/OHS/OHS_Instance/moduleconf` directory where `Middleware_home` is the middleware home directory of the OAM WebLogic Server instance and `OHS_Instance` is the OHS instance where OAM is hosted.

3. Append the following entry into the `idm.conf` file before the `<VirtualHost>` closing tag:

   ```
   <Location /opsdashboard>
     SetHandler weblogic-handler
     WebLogicHost host name or IP address of your OPSS Administration Server
     WeblogicPort port number the WebLogic host is listening on
   </Location>
   ```

4. Save the file.

5. Change to the `OHS_home/bin` directory where `OHS_home` is the Oracle home directory of your OHS installation.

6. Restart OHS with the following commands:

   ```
   ./opmnctl status
   ./opmnctl stopall
   ```
Installing and Configuring Oracle Identity Governance

Download and install the Oracle Identity Governance software. For more information, see the tutorial about installing and configuring Oracle Identity Governance at:


Creating a Secure Passwordless User on the BRM Server

Business Operations Center communicates securely with the BRM server using a passwordless SSH user. Create this user on your BRM server host. The installer requires the user name.

Passwordless SSH user configuration varies on the host operating system. Consult your operating system documentation for information on configuring passwordless SSH. See “Configuring SSH Manually on All Cluster Nodes” in Oracle Grid Infrastructure Installation Guide for Linux for an example.

Information Requirements

This section describes the information that you will be required to provide during and after the Business Operations Center installation procedure. You define some of these configuration values when you complete the previous steps. After you have completed all of the pre-installation steps, see “Installing Business Operations Center” for information on running the Business Operations Center installer to install Business Operations Center.

Note:

Oracle recommends that you print the tables and record the values for when you run the Business Operations Center installer.

Oracle BRM Database Connection Information

Table 4-6 lists the BRM database details that are required during Business Operations Center installation and response file configuration. Use the Value column to record your environment's details.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database Host Name</td>
<td>The IP address or the host name of the computer on which the BRM database is</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>configured.</td>
<td></td>
</tr>
</tbody>
</table>
Table 4-6  (Cont.) Oracle BRM Database Connection Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database Listener Port Number</td>
<td>The port number assigned to the database service.</td>
<td>-</td>
</tr>
<tr>
<td>Database Service Name</td>
<td>The BRM database service name.</td>
<td>-</td>
</tr>
<tr>
<td>Database Administrator's User Name</td>
<td>The database user name. This user should have the following capabilities on the database: create user, grant any role, grant any privileges, and select any table for Enterprise edition.</td>
<td>-</td>
</tr>
<tr>
<td>Database Administrator's Password</td>
<td>The database user's password.</td>
<td>-</td>
</tr>
<tr>
<td>Database Schema User Name</td>
<td>The database schema user name.</td>
<td>-</td>
</tr>
<tr>
<td>Database Schema Password</td>
<td>The database schema user's password.</td>
<td>-</td>
</tr>
</tbody>
</table>

BRM Connection Information

Table 4-7 lists the BRM connection details that are required during Business Operations Center installation and response file configuration. Use the Value column to record your environment's details.

Table 4-7  Oracle BRM Connection Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>User Name</td>
<td>The user name for connecting to BRM.</td>
<td>-</td>
</tr>
<tr>
<td>Password</td>
<td>The BRM user's password.</td>
<td>-</td>
</tr>
<tr>
<td>Host Name</td>
<td>The IP address or the host name of the machine on which the primary BRM Connection Manager (CM) or CM Master Process (CMMP) are running.</td>
<td>-</td>
</tr>
<tr>
<td>Port Number</td>
<td>The TCP port number of the CM or CMMP on the host computer.</td>
<td>-</td>
</tr>
<tr>
<td>Service Type</td>
<td>The BRM service type.</td>
<td>-</td>
</tr>
<tr>
<td>Service POID Id</td>
<td>The POID of the BRM service.</td>
<td>-</td>
</tr>
<tr>
<td>Use SSL?</td>
<td>Whether to use SSL. If you have not enabled SSL for BRM, deselect the Use SSL? check box. If you have enabled SSL for BRM, leave the Use SSL? check box selected.</td>
<td>-</td>
</tr>
<tr>
<td>Wallet Password</td>
<td>The password for the BOC wallet</td>
<td>-</td>
</tr>
</tbody>
</table>
Oracle Database Connection Information

Table 4-8 lists the Oracle database connection information required for RCU Creation and OPSS configuration. Use the Value column to record your environment's details.

Table 4-8 Oracle Database Connection Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host Name</td>
<td>The IP address or the host name of the computer on which the database is installed.</td>
<td>-</td>
</tr>
<tr>
<td>Port Number</td>
<td>The port number assigned to the database service.</td>
<td>-</td>
</tr>
<tr>
<td>User Name</td>
<td>The user name of the database administrator. This user should have the following capabilities on the database: create user, grant any role, grant any privileges, and select any table for Enterprise edition.</td>
<td>-</td>
</tr>
<tr>
<td>Password</td>
<td>The database administrator's password.</td>
<td>-</td>
</tr>
<tr>
<td>Service Name</td>
<td>The name of the database service.</td>
<td>-</td>
</tr>
</tbody>
</table>

OPSS JRF-Enabled Domain Information

Table 4-9 lists the details for the OPSS JRF-enabled domain that are required during Business Operations Center installation. Use the Value column to record your environment's details.

Table 4-9 OPSS JRF-Enabled Domain Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host Name</td>
<td>The IP address or the host name of the computer on which the OPSS JRF-enabled domain is configured.</td>
<td>-</td>
</tr>
<tr>
<td>Port Number</td>
<td>The port number assigned to the OPSS JRF-enabled domain administration server.</td>
<td>-</td>
</tr>
<tr>
<td>User Name</td>
<td>The OPSS JRF-enabled domain administrator user name.</td>
<td>-</td>
</tr>
<tr>
<td>Password</td>
<td>The password for the OPSS JRF-enabled domain administrator user.</td>
<td>-</td>
</tr>
<tr>
<td>WebLogic Home</td>
<td>The path of the directory in which the WebLogic Server software is installed on the OPSS JRF-enabled domain server.</td>
<td>-</td>
</tr>
</tbody>
</table>

Oracle Unified Directory Information

Table 4-10 lists the details for the Oracle Unified Directory (OUD) authentication provider that are required during Business Operations Center installation. Use the Value column to record your environment's details.
Table 4-10  Oracle Unified Directory Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider Name</td>
<td>Name of OUD Authentication provider.</td>
<td>-</td>
</tr>
<tr>
<td>Host Name</td>
<td>The host name or IP address of the LDAP server.</td>
<td>-</td>
</tr>
<tr>
<td>Port Number</td>
<td>The port number on which the LDAP server is listening.</td>
<td>-</td>
</tr>
<tr>
<td>Admin User Name</td>
<td>The Distinguished Name (DN) of the LDAP user that WebLogic Server should use to connect to the LDAP server.</td>
<td>-</td>
</tr>
<tr>
<td>Admin Password</td>
<td>The credential (usually a password) used to connect to the LDAP server.</td>
<td>-</td>
</tr>
<tr>
<td>User Base DN</td>
<td>The base distinguished name (DN) of the tree in the LDAP directory that contains use.</td>
<td>-</td>
</tr>
<tr>
<td>Group Base DN</td>
<td>The base distinguished name (DN) of the tree in the LDAP directory that contains group.</td>
<td>-</td>
</tr>
<tr>
<td>Asserter Name</td>
<td>The name of the OAM Identity Asserter.</td>
<td>-</td>
</tr>
</tbody>
</table>

Oracle Identity Management Console URLs

Table 4-11 lists the Oracle Identity Management Console URLs which are required to complete Business Operations Center pre-installation and configuration. The Host is the server name or IP address of your OPSS Administration Server. Default values are provided for the ports. Use the Value column to record your environment's details.

Table 4-11  Oracle Identity Management Console URLs

<table>
<thead>
<tr>
<th>Web Application URL</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="http://Host:7778/identity">http://Host:7778/identity</a></td>
<td>Oracle Identity Management console</td>
<td>-</td>
</tr>
<tr>
<td><a href="http://Host:7777/oamconsole">http://Host:7777/oamconsole</a></td>
<td>Oracle Access Management console</td>
<td>-</td>
</tr>
<tr>
<td><a href="http://Host:7001/console">http://Host:7001/console</a></td>
<td>Oracle WebLogic Administration Console</td>
<td>-</td>
</tr>
</tbody>
</table>
Installing Business Operations Center

This chapter describes how to install Oracle Communications Billing and Revenue Management Business Operations Center. Before installing Business Operations Center, read the following chapters:

- Business Operations Center Installation Overview
- Planning Your Business Operations Center Installation
- Business Operations Center Requirements
- Business Operations Center Pre-Installation Tasks

Business Operations Center supports test and productions installations. See "Installing Business Operations Center for Testing" for information on test installations and "Installing Business Operations Center for Production" for information on production installations.

Downloading Business Operations Center

To download the Business Operations Center installer:

1. Create a temporary directory (temp_dir).
2. Go to the Oracle support Web site:
   https://support.oracle.com
3. Sign in with your user name and password.
4. Click the Patches & Updates tab.
5. From the list, select Patch Name or Number.
6. In the text field, enter PatchNumber and click Search, where PatchNumber is patch number of Oracle Communications Billing and Revenue Management (BRM) 12.0 patch set that includes the Business Operations Center software.

   See BRM 12.0 Patch Set Installation Guide for more information about the patch number.

   The Patch Search Results page appears.
7. Click the patch name.

   The patch details appear.
8. From the Platform list, select the platform and click Download, where platform is linux or solaris.

   The File Download dialog box appears.
9. Download the appropriate pPatchNumber_121_Generic.zip software pack to temp_dir.
10. Unzip the pPatchNumber_121_Generic.zip file.

    The package includes the BusinessOperationsCenter_generic.jar installer.
Installing Business Operations Center for Testing

Business Operations Center test installations do not use Oracle Identity Management (IdM) security. The installer deploys the application to a basic Oracle WebLogic domain with Business Operations Center authorization disabled. Use test installations for internal development and testing only.

To install a Business Operations Center test installation in a basic domain:

1. Verify your Java Development Kit is installed correctly, including setting your `JAVA_HOME` environment variable and that the `JAVA_HOME/bin` directory is in your path.

2. Copy the required third-party libraries to the `Domain_home/lib` directory, where `Domain_home` is the WebLogic Server domain home directory of the domain in which Business Operations Center will be deployed. See `BRM Compatibility Matrix` for information on the required third-party libraries.

3. Start the Oracle WebLogic Server basic domain administration server or the managed server on which you want to deploy Business Operations Center.

4. Download the Business Operations Center installer. See "Downloading Business Operations Center" for more information on how to download the installer.

5. Run the following command, which launches the Business Operations Center installer:

   ```
   java -jar BusinessOperationsCenter_generic.jar
   ```

   **Note:**

   Specify the `-invPtrLoc` flag and an Oracle Inventory path location in the `java` command for launching the Business Operations Center installer if you are using an existing or custom Oracle inventory location for maintaining your installed Oracle products and installation logs.
Note:

Business Operations Center requires post-installation configuration of an Oracle WebLogic Server data source. By default, the installer uses the value `bocdb` for this data source's name. To use a custom data source name, specify the name by passing the following flag when launching the installer:

```
DS_NAME="new_value"
```

For example:

```
java -jar BusinessOperationsCenter_generic.jar DS_NAME="name"
```

where `name` is the name of the WebLogic Server data source.

See "Creating the Business Operations Center WebLogic Server Data Source" for more information on configuring the WebLogic data source after installation completes.

The Welcome screen appears.

6. Click **Next**.

   The Installation Inventory screen appears. Select an **Inventory Directory** and **Operating System Group**.

7. Click **Next**.

   The Installation Location screen appears. Enter your Oracle Home directory path in **Oracle Home** or click **Browse** to select a directory.

8. Click **Next**.

   The Features Sets Selection screen appears. This screen displays the installable Business Operations Center components. Select **Business Operation Center Components**.

9. Click **Next**.

   If you are installing Business Operations Center 12.0 or 12.0 Patch Set 1, the WebLogic Server Details screen appears. Proceed to step 12.

   If you are installing Business Operations Center 12.0 Patch Set 2, the Specify Prerequisite Libraries Location screen appears. Proceed to next step.

10. In the **Prerequisite Libraries** field, enter the full path or browse to the directory in which the OJDBC8 jar required for the Business Operations Center installation are stored.

11. Click **Next**.

    The WebLogic Server Details screen appears.

12. Enter the details listed in **Table 5-1** for the WebLogic Server domain in which you want to deploy Business Operations Center:
Table 5-1  WebLogic Server Details

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host Name</td>
<td>IP address or the host name of the computer on which the WebLogic Server domain is configured.</td>
</tr>
<tr>
<td>Port Number</td>
<td>Port number assigned to the WebLogic Server domain administration server.</td>
</tr>
<tr>
<td>User Name</td>
<td>WebLogic Server domain administrator user name.</td>
</tr>
<tr>
<td>Password</td>
<td>Password for the WebLogic Server domain administrator user.</td>
</tr>
<tr>
<td>WebLogic Home</td>
<td>Path of the directory in which the WebLogic Server software is installed.</td>
</tr>
<tr>
<td>Use SSL?</td>
<td>Whether to use SSL (unselect for test installations).</td>
</tr>
</tbody>
</table>

**Note:**

The Business Operations Center installer will not proceed until it verifies that the information you entered is valid. The domain must be in a **RUNNING** state.

13. Click **Next**.

The Target Server screen appears.

14. Select the server on which to deploy Business Operations Center. The target server list includes the AdminServer and any managed servers managed by the AdminServer.

**Note:**

Oracle recommends that you deploy Business Operations Center on a WebLogic Server managed server. If you select a WebLogic Server managed server, ensure that the WebLogic Server managed server and the node manager are running.

15. Click **Next**.

A warning appears confirming that the domain is not configured as an Oracle Platform Security Services (OPSS) Oracle Java Required Files (JRF)-enabled Domain.

16. Click **OK**.

The Target Server screen appears.

17. Select your target server.

18. Click **Next**.

The Authentication and Asserter screen appears.

19. Select **Skip Authenticator and Asserter**.

20. Click **Next**.
A warning appears confirming that the Authenticator and Asserter will not be configured.

21. Click **OK**.

The Database Connection Details screen appears.

22. Enter the database connection details for your BRM database listed in Table 5-2.

Table 5-2  BRM Database Connection Details

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host Name</td>
<td>(From 12.0 Patch Set 2 installation only) The IP address or the host name of the machine on which the BRM database is installed.</td>
</tr>
<tr>
<td>Port Number</td>
<td>(From 12.0 Patch Set 2 installation only) The port number assigned to the BRM database.</td>
</tr>
<tr>
<td>Service Name</td>
<td>The database service name.</td>
</tr>
<tr>
<td>User Name</td>
<td>The user name of a database administrator.</td>
</tr>
<tr>
<td>Password</td>
<td>The database administrator’s password.</td>
</tr>
<tr>
<td>Schema User Name</td>
<td>The BRM database schema user name.</td>
</tr>
<tr>
<td>Schema Password</td>
<td>The BRM database schema user password.</td>
</tr>
<tr>
<td>Confirm Password</td>
<td>Enter the BRM database schema user password again.</td>
</tr>
</tbody>
</table>

23. Click **Next**.

The Business Operation Center User Details screen appears.

24. Enter the user details for your Business Operations Center database administrator listed in Table 5-3.

Table 5-3  Business Operations Center User Details

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>User Name</td>
<td>The user name of your Business Operations Center database administrator.</td>
</tr>
<tr>
<td>Password</td>
<td>The Business Operations Center database administrator password.</td>
</tr>
<tr>
<td>Default Tablespace</td>
<td>The default tablespace for the database administrator.</td>
</tr>
<tr>
<td>Temp Tablespace</td>
<td>The temp tablespace for the database administrator.</td>
</tr>
</tbody>
</table>

25. Click **Next**.

The Business Operation Center User Interface Details screen appears.

26. Enter the user details for your Business Operations Center user interface listed in Table 5-4.
Table 5-4  Business Operations Center User Interface Details

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Billing Care URL</td>
<td>URL of the Oracle Communications Billing Care instance configured for use with your BRM Server if installed. Leave blank if Billing Care is not installed in your environment.</td>
</tr>
<tr>
<td>Logout URL</td>
<td>Redirect URL where Business Operations Center sends a user after logout and session termination.</td>
</tr>
<tr>
<td>Help URL</td>
<td>URL location of the Business Operations Center Online Help Guide located on the Oracle Help Center.</td>
</tr>
<tr>
<td>Timeout Warning Duration</td>
<td>Number of session idle seconds before Business Operations Center displays a timeout warning to a user (default value is 90 seconds).</td>
</tr>
</tbody>
</table>

27. Click Next.

The Business Operation Center BRM Connection Details screen appears.

28. Enter the BRM server connection details listed in Table 5-5.

Table 5-5  Business Operations Center BRM Connection Details

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>User Name</td>
<td>The user name for connecting to BRM.</td>
</tr>
<tr>
<td>Password</td>
<td>The BRM user's password.</td>
</tr>
<tr>
<td>Host Name</td>
<td>The IP address or the host name of the machine on which the primary BRM Connection Manager (CM) or CM Master Process (CMMP) are running.</td>
</tr>
<tr>
<td>Port Number</td>
<td>The TCP port number of the CM or CMMP on the host computer. The default value is 11960.</td>
</tr>
<tr>
<td>Service Type</td>
<td>The BRM service type. The default value is /service/admin_client.</td>
</tr>
<tr>
<td>Service POID Id</td>
<td>The POID of the BRM service. The default value is 1.</td>
</tr>
<tr>
<td>Use SSL?</td>
<td>Whether to use SSL. If you have not enabled SSL for BRM, deselect the Use SSL? check box. If you have enabled SSL for BRM, leave the Use SSL? check box selected.</td>
</tr>
<tr>
<td>Wallet Password</td>
<td>The password for the BOC wallet.</td>
</tr>
<tr>
<td>Confirm Wallet Password</td>
<td>Enter the password for the BOC wallet again.</td>
</tr>
</tbody>
</table>

29. Click Next.

The Business Operation Center Web Service Details screen appears.

30. Enter the web service details listed in Table 5-6.
Table 5-6 Business Operations Center Web Service Details

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passwordless SSH User Name</td>
<td>User name of passwordless SSH user configured for secure communications between the Business Operations Center host and the BRM Server host. See &quot;Creating a Secure Passwordless User on the BRM Server&quot; for more information.</td>
</tr>
<tr>
<td>BRM Server Timezone</td>
<td>Time Zone (TZ) value of the server operating system on which the BRM is running.</td>
</tr>
</tbody>
</table>

31. Click Next.

The Auto Updates screen appears.

32. Select an auto update option, then click Next.

The Installation Summary screen appears.

33. Confirm your installation selections, then click Install.

The installation proceeds and executes post install scripts to complete the Business Operations Center installation.

Installing Business Operations Center for Production

For production installations, run the Business Operations Center installer from the computer hosting the OPSS JRF-enabled domain on which you deploy Business Operations Center. The installation must be performed by a user who has permissions to write to the oraInventory directory and the Middleware_home/user_projects/domains directory, where Middleware_home is the directory in which you installed the Oracle Middleware components.

To install Business Operations Center on your OPSS JRF-enabled domain:

1. Verify your Java Development Kit is installed correctly, including setting your JAVA_HOME environment variable and that the JAVA_HOME/bin directory is in your path.

2. Copy the required third-party libraries to the Domain_home/lib directory. See BRM Compatibility Matrix for information on the required third-party libraries.

3. Start the Oracle WebLogic Server basic domain administration server or the managed server on which you want to deploy Business Operations Center.

4. Download the Business Operations Center installer. See "Downloading Business Operations Center" for more information on how to download the installer.

5. Run the following command, which launches the Business Operations Center installer:

   java -jar BusinessOperationsCenter_generic.jar
Note:

Specify the -invPtrLoc flag and an Oracle Inventory path location in the java command for launching the Business Operations Center installer if you are using an existing or custom Oracle inventory location for maintaining your installed Oracle products and installation logs.

The Welcome screen appears.

6. Click **Next**.

   The Installation Inventory screen appears. Select an **Inventory Directory** and **Operating System Group**.

7. Click **Next**.

   The Installation Location screen appears. Enter your Oracle Home directory path in **Oracle Home** or click **Browse** to select a directory.

8. Click **Next**.

   The Features Sets Selection screen appears.

   This screen displays the installable Business Operations Center components. Select **Business Operation Center Components**.

9. Click **Next**.

   If you are installing Business Operations Center 12.0 or 12.0 Patch Set 1, the WebLogic Server Details screen appears. Proceed to step 12.

   If you are installing Business Operations Center 12.0 Patch Set 2, the Specify Prerequisite Libraries Location screen appears. Proceed to next step.

10. In the **Prerequisite Libraries** field, enter the full path or browse to the directory in which the OJDBC8 jar required for the Business Operations Center installation are stored.

11. Click **Next**.

   The WebLogic Server Details screen appears.

12. Enter the details listed in Table 5-7 for the WebLogic Server domain in which you want to deploy Business Operations Center:

### Table 5-7 WebLogic Server Details

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host Name</td>
<td>IP address or the host name of the computer on which the WebLogic Server domain is configured.</td>
</tr>
<tr>
<td>Port Number</td>
<td>Port number assigned to the WebLogic Server domain administration server.</td>
</tr>
<tr>
<td>User Name</td>
<td>WebLogic Server domain administrator user name.</td>
</tr>
<tr>
<td>Password</td>
<td>Password for the WebLogic Server domain administrator user.</td>
</tr>
<tr>
<td>WebLogic Home</td>
<td>Path of the directory in which the WebLogic Server software is installed.</td>
</tr>
</tbody>
</table>
### Table 5-7 (Cont.) WebLogic Server Details

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use SSL?</td>
<td>Whether to use SSL (select for production installations).</td>
</tr>
</tbody>
</table>

**Note:**

The Business Operations Center installer will not proceed until it verifies that the information you entered is valid. The domain must be in a **RUNNING** state.

13. Enter the required SSL information.

Business Operations Center requires JSSE-Based SSL enabled in your OPSS JRF-enabled domain. See "Using the JSSE-Based SSL Implementation" in Oracle Fusion Middleware Securing Oracle WebLogic Server for more information on using JSSE-Based SSL.

If you have configured SSL in your OPSS JRF-enabled domain, leave the **Use SSL?** check box selected, and, in the **KeyStore Location** field, enter the path of the client-side keystore file generated from the exported public certificate using the *keytool* utility.

For information on generating a keypair and root certificate for your encrypted password, and storing the certificate, using the Java *keytool* utility, see:

https://docs.oracle.com/javase/8/docs/technotes/tools/unix/keytool.html

See "Configuring SSL" in Oracle Fusion Middleware Securing Oracle WebLogic Server for more information on using SSL in your domain.

14. Click **Next**.

The Target Server screen appears.

15. Select the server on which to deploy Business Operations Center. The target server list includes the AdminServer and any managed servers managed by the AdminServer.

**Note:**

Oracle recommends that you deploy Business Operations Center on a WebLogic Server managed server. If you select a WebLogic Server managed server, ensure that the WebLogic Server managed server and the node manager are running.

16. Click **Next**.

The Authentication and Asserter screen appears.

17. Enter the information listed in Table 5-8 required to connect to the OUD authenticator if you are using OUD. See Table 4-10 for more information:

If you are not using OUD, select **Skip Authenticator and Asserter**.
A warning appears confirming that the Authenticator and Asserter will not be configured. Click OK.

Table 5-8  Authentication and Asserter Details

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider Name</td>
<td>OUD Authentication provider you configured in your OPSS JRF-enabled domain administration server.</td>
</tr>
<tr>
<td>Host Name</td>
<td>Host name or IP address of the LDAP server.</td>
</tr>
<tr>
<td>Port Number</td>
<td>Port number on which the LDAP server is listening.</td>
</tr>
<tr>
<td>Admin User Name</td>
<td>Distinguished Name (DN) of the LDAP user that WebLogic Server should use to connect to the LDAP server.</td>
</tr>
<tr>
<td>Admin Password</td>
<td>Credential (usually a password) used to connect to the LDAP server.</td>
</tr>
<tr>
<td>User Base DN</td>
<td>Base distinguished name (DN) of the tree in the LDAP directory that contains users. For example: cn=Users,dc=example,dc=com</td>
</tr>
<tr>
<td>Group Base DN</td>
<td>Base distinguished name (DN) of the tree in the LDAP directory that contains groups. For example: cn=Groups,dc=example,dc=com</td>
</tr>
<tr>
<td>Asserter Name</td>
<td>Name to use during Business Operations Center deployment. A new asserter is created if a OAMIdentityAsserter type does not exist in your OPSS JRF-enabled domain already.</td>
</tr>
</tbody>
</table>

18. Click Next.

The Database Connection Details screen appears.

19. Enter the database connection details for your BRM database listed in Table 5-9.

Table 5-9  BRM Database Connection Details

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host Name</td>
<td>(From 12.0 Patch Set 2 installation only) The IP address or the host name of the machine on which the BRM database is installed.</td>
</tr>
<tr>
<td>Port Number</td>
<td>(From 12.0 Patch Set 2 installation only) The port number assigned to the BRM database.</td>
</tr>
<tr>
<td>Service Name</td>
<td>The database service name.</td>
</tr>
<tr>
<td>User Name</td>
<td>The user name of a database administrator.</td>
</tr>
<tr>
<td>Password</td>
<td>The database administrator's password.</td>
</tr>
<tr>
<td>Schema User Name</td>
<td>The BRM database schema user name.</td>
</tr>
<tr>
<td>Schema Password</td>
<td>The BRM database schema user password.</td>
</tr>
<tr>
<td>Confirm Password</td>
<td>Enter the BRM database schema user password again.</td>
</tr>
</tbody>
</table>

20. Click Next.

The Business Operation Center User Details screen appears.

21. Enter the user details for your Business Operations Center database administrator listed in Table 5-10.
Table 5-10  Business Operations Center User Details

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>User Name</td>
<td>The user name of your Business Operations Center database administrator.</td>
</tr>
<tr>
<td>Password</td>
<td>The Business Operations Center database administrator password.</td>
</tr>
<tr>
<td>Default Tablespace</td>
<td>The default tablespace for the database administrator.</td>
</tr>
<tr>
<td>Temp Tablespace</td>
<td>The temp tablespace for the database administrator.</td>
</tr>
</tbody>
</table>

22. Click **Next**.

The Business Operation Center User Interface Details screen appears.

23. Enter the user details for your Business Operations Center user interface listed in Table 5-11.

Table 5-11  Business Operations Center User Interface Details

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Billing Care URL</td>
<td>URL of the Oracle Communications Billing Care instance configured for use with your BRM Server if installed. Leave blank if Billing Care is not installed in your environment.</td>
</tr>
<tr>
<td>Logout URL</td>
<td>Redirect URL where Business Operations Center sends a user after logout and session termination.</td>
</tr>
<tr>
<td>Help URL</td>
<td>URL location of the Business Operations Center Online Help Guide located on the Oracle Help Center.</td>
</tr>
<tr>
<td>Timeout Warning Duration</td>
<td>Number of session idle seconds before Business Operations Center displays a timeout warning to a user (default value is 90 seconds).</td>
</tr>
</tbody>
</table>

24. Click **Next**.

The Business Operation Center BRM Connection Details screen appears.

25. Enter the BRM server connection details listed in Table 5-12.

Table 5-12  Business Operations Center BRM Connection Details

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>User Name</td>
<td>The user name for connecting to BRM.</td>
</tr>
<tr>
<td>Password</td>
<td>The BRM user’s password.</td>
</tr>
<tr>
<td>Host Name</td>
<td>The IP address or the host name of the machine on which the primary BRM Connection Manager (CM) or CM Master Process (CMMP) are running.</td>
</tr>
<tr>
<td>Port Number</td>
<td>The TCP port number of the CM or CMMP on the host computer.</td>
</tr>
<tr>
<td>Service Type</td>
<td>The BRM service type; for example, /servide/admin_client.</td>
</tr>
<tr>
<td>Service POID Id</td>
<td>The POID of the BRM service. The default value is 1.</td>
</tr>
</tbody>
</table>
Table 5-12  (Cont.) Business Operations Center BRM Connection Details

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use SSL?</td>
<td>Whether to use SSL. If you have not enabled SSL for BRM, deselect the Use SSL? check box. If you have enabled SSL for BRM, leave the Use SSL? check box selected.</td>
</tr>
<tr>
<td>Wallet Password</td>
<td>The password for the BOC wallet.</td>
</tr>
<tr>
<td>Confirm Wallet Password</td>
<td>Enter the password for the BOC wallet again.</td>
</tr>
</tbody>
</table>

26. Click Next.
   The Business Operation Center Web Service Details screen appears.

27. Enter the web service details listed in Table 5-13.

Table 5-13  Business Operations Center Web Service Details

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passwordless SSH User Name</td>
<td>User name of passwordless SSH user configured for secure communications between the Business Operations Center host and the BRM Server host. See &quot;Creating a Secure Passwordless User on the BRM Server&quot; for more information.</td>
</tr>
<tr>
<td>BRM Server Timezone</td>
<td>Time Zone (TZ) value of the server operating system on which the BRM is running.</td>
</tr>
</tbody>
</table>

28. Click Next.
   The Auto Updates screen appears.

29. Select an auto update option, then click Next.
   The Installation Summary screen appears.

30. Confirm your installation selections, then click Install.
   The installation proceeds and executes post install scripts to complete the Business Operations Center installation.

31. Click Finish to complete the installation.

See "Business Operations Center Post-Installation Tasks" for required tasks to complete after the Business Operations Center installer exits.

See "Verifying the Business Operations Center Installation" for information on verifying the successful installation of Business Operations Center.

See "About Installation Logs" for information on the Business Operations Center installer logs.

About Installation Logs

The installation logs are used for debugging purposes. You can check the log files in the oraInventorylogs directory. The default location of the oraInventory directory is in the /etc/orainst.loc file.

You use the following log files to monitor installation and post-installations:
• **installAction** `TimeStamp.log`
• **oraInstall** `TimeStamp.err`
• **oraInstall** `TimeStamp.out`
• **dbScripts** `TimeStamp.log` (for the scripts executed using SQL*Plus and JDBC)
• **silentInstall** `TimeStamp.log` (for silent mode installation)

where `TimeStamp` is the date and time the log file was created.
This chapter provides instructions for Oracle Communications Billing and Revenue Management Business Operations Center post-installation tasks.

Post-Installation Tasks

After installing Business Operations Center test or production installations, do the following on each domain host where Business Operations Center is deployed:

- Adjust your BRM connection pool settings and enable logging in the `Infranet.properties` file for your Business Operations Center environment. You can customize the Billing Care connection pool settings by adding additional entries in the Billing Care Infranet.properties configuration file. See “Configuring Additional Settings in Infranet.properties” for more information.

**Note:**

During installation, the Business Operations Center installer copies the Business Operations Center `Infranet.properties` configuration file to the domain administrative user's home directory on each domain server where Business Operations Center is deployed. You can update the `Infranet.properties` file in this location.

You can also copy the `Infranet.properties` file in the domain administrative user's home directory to the `domain_home` directory if required. In this case, the `Infranet.properties` file in the `domain_home` directory takes precedence over the `Infranet.properties` file in the domain administrative user's home directory.

- If using Internet Explorer, configure the browser cache refresh setting to retrieve new data on each page visit. See "Configuring Internet Explorer for Business Operations Center" for more information.


- For testing installations, create the following Business Operations Center groups in Oracle Weblogic Server and add the Business Operations Center users to these groups:
  - BOC_ADMIN
  - BOC_FINANCE
For more information on creating groups and adding the users in Oracle Weblogic Server, see "Manage users and groups" in Oracle Fusion Middleware Oracle WebLogic Server Administration Console Online Help 12c.

For production installations:


About Encryption

Encrypting your BRM and BIP passwords and using SSL increases the security of your Business Operations Center deployment. See Oracle Communications Billing and Revenue Management Security Guide for more information about securing your Business Operations Center environment.

Configuring Additional Settings in Infranet.properties

Business Operations Center uses the default connection pool settings for your BRM instance. You can customize the Business Operations Center connection pool settings by adding additional entries into the Infranet.properties file. You can also enable logging by adding optional entries in the Infranet.properties file.

Note:

You can update the connection details in the Infranet.properties file or in the Business Operations Center wallet. However, it is recommended to update the sensitive information (such as BRM user password) only by using the Business Operations Center wallet.

See "Configuring the Connection Pool" in Oracle Communications Billing and Revenue Management System Administrator's Guide for more information on customizing the default connection pool.

See "Optional Entries in the Infranet.properties File" in Oracle Communications Billing and Revenue Management Developer's Guide for more information on enabling logging for Business Operations Center connections to BRM.

Creating the Business Operations Center WebLogic Server Data Source

Configure a JDBC data source in the Business Operations Center WebLogic Server domain. The deployed Business Operations Center application uses this data source to connect to the database schema created by the installer.

By default, Business Operations Center uses a value of bocdb for the WebLogic Server data source. If you did not specify a custom name for your Business Operations Center database when launching the installer, create a data source named bocdb using the WebLogic Server Administration Console. See "Configuring JDBC Data Sources" in Oracle Fusion Middleware Configuring and Managing JDBC Data
Sources for Oracle WebLogic Server for information on creating the required data source for Business Operations Center.

If you specified a custom name for your Business Operations Center database schema during installation, create the WebLogic Server data source using this name. Additionally, you must edit the `quartz.properties` file with your data source’s name.

To edit the `quartz.properties` file data source name:

1. Open the `Domain_home/lib/quartz.properties` file where `Domain_home` is the WebLogic Server domain home directory of the domain in which Business Operations Center is deployed.
2. In the `DS_NAME` parameter, change the value to your custom data source name.
3. Save the file.
4. Restart the domain.

Configuring the SSL-Enabled Business Operations Center Data Source

You can configure a Secure Sockets Layer (SSL)-enabled JDBC data source in the Business Operations Center WebLogic Server domain for secured communications.

To configure the SSL-enabled Business Operations Center data source in WebLogic Server:

1. Create a truststore and then add the root certificate (which you created while configuring SSL for the Oracle database) as a trusted certificate to the truststore.
2. Log in to WebLogic Server Administration Console.
3. In the Domain Structure panel, click Services and Data Sources. The available data sources are displayed.
4. Select the Business Operations Center WebLogic Server Data Source for which you want to enable SSL. The default data source is `bocdb`.
5. In the Configuration tab, select Connection Pool.
6. Modify the connection URL:

```
jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCPS)(HOST=hostname)(PORT=ssl-port)))(CONNECT_DATA=(SERVICE_NAME=SID))
```

Where:
- `hostname` is the name of the machine on which the Oracle database is installed.
- `ssl-port` is the SSL-enabled port used for connecting to the Oracle database.
- `SID` is the unique name of the Oracle database.

7. Add the following properties:

   If you require client authentication (two way authentication):

   ```
   javax.net.ssl.keyStore=keystore location
   javax.net.ssl.keyStoreType=JKS
   javax.net.ssl.keyStorePassword=keystore password
   javax.net.ssl.trustStoreType=truststore location
   javax.net.ssl.trustStoreType=JKS
   javax.net.ssl.trustStorePassword=truststore password
   ```
where:

- **keystore location** is the path to the client-side keystore file generated from the exported public certificate using the **keytool** utility.
- **krystore password** is the password of the keystore.
- **truststore location** is the path to the directory in which the truststore created in step 1 is stored.
- **truststore password** is the password of the truststore.

If you do not require client authentication:

```java
javax.net.ssl.trustStoreType=truststore location
javax.net.ssl.trustStoreType=JKS
javax.net.ssl.trustStorePassword=truststore password
```

8. Restart the WebLogic Server domain.

Your data source is now configured to use SSL.

9. Test and verify the connection.

See the discussion about SSL-enable a data source in *Oracle Fusion Middleware Administrator's Guide* for detailed information.

### Importing the Business Operations Center Security Policies into OPSS

Business Operations Center includes the **system-jazn-data.xml** file containing default OPSS policies, resource-types, resource, and actions. You must import this file into your OPSS Administration Server to set up the initial Business Operations Center OPSS configuration. This procedure only needs to be complete once for each OPSS Administration Server.

The **system-jazn-data.xml** file is located in the following directory:

```
Domain_home/lib/oes_config
```

where **Domain_home** is the WebLogic domain home directory location of the OPSS JRF-enabled domain in which Business Operations Center is deployed.

To import the **system-jazn-data.xml** file into your OPSS Administration Server:

1. Open a secure shell or terminal session on the server where you installed Business Operations Center.

2. Change to the **Domain_home/lib/oes_config** directory.

3. Open the **jps-config.xml** file and modify the following parameters:

   - **sourceContext**. Specify the location of the **system-jazn-data.xml** file, which contains the policies to be migrated to the database. The **system-jazn-data.xml** file is in the same location as the **jps-config.xml** file.

     ```xml
     <serviceInstance name="src.xml" provider="policystore.xml.provider"
     location="location of the **system-jazn-data.xml** file">
     <description>File Based Policy Store Service Instance</description>
     </serviceInstance>
     ```

   - **destinationContext**. Enter the credentials for Oracle Platform Security Services (OPSS) schema.

     ```xml
     <serviceInstance name="policystore.db.destination"
     provider="policystore.provider">
     ```
<description>DB Based Policy Store Service Instance</description>

•  
jpsContext. Specify the source context and the destination context.

  
  <jpsContext name="sourceContext">
    <serviceInstanceRef ref="src.xml"/>
  </jpsContext>
  
  <jpsContext name="destinationContext">
    <serviceInstanceRef ref="policystore.db.destination"/>
  </jpsContext>

4. Save the file.

5. Run the migrateSecurityStore utility to import the Business Operations Center policy into your OPSS Administration Server.

See “Migrating From XML to Database” in Oracle Fusion Middleware Administrator’s Guide for detailed information on how to import the Business Operations Center system-jazn-data.xml file into your OPSS Administration Server.

Configuring Internet Explorer for Business Operations Center

Internet Explorer browser users must change the default cache configuration for Business Operations Center to properly refresh Business Operations Center data.

To configure Internet Explorer to refresh Business Operations Center data on each page visit in Internet Explorer, on each client where Internet Explorer is installed:

1. Open Internet Explorer.

2. Click the gear options menu.

3. Click Internet Options.

   The Internet Options window opens.

4. In the General tab, under Browsing History, click Settings.

   The Website Data Settings window opens.

5. In the Temporary Internet Files tab, select Every time I visit the webpage for the Check for newer versions of stored pages option.

6. Click OK.

   The Website Data Settings window closes.

7. Click OK to close the Internet Options window.

Enabling Logging

Business Operations Center writes log messages using the Java Logging API. See "Java Logging” in Oracle Fusion Middleware Configuring Log Files and Filtering Log
Messages for Oracle WebLogic Server for more information on enabling Business Operations Center logging.
Verifying the Business Operations Center Installation

You can verify that Oracle Communications Billing and Revenue Management Business Operations Center is installed by checking the state of all installed components or by logging in to Business Operations Center.

To check the state of all installed components:

1. Log in to the Administration Server managing your Business Operations Center Oracle Platform Security Services (OPSS) JRF-enabled domain servers.

2. In the Domain Structure section, click Deployments.

   The Summary of Deployments screen appears.

3. Ensure that all of the managed servers are running.

4. If Business Operations Center is installed successfully, the following deployment appears in Active state:
   • Business Operations Center

To log in to Business Operations Center:

1. Open a browser window.

2. Enter the URL provided by the Business Operations Center installer at the end of the installation.

3. Click Go.

   The Business Operations Center login page appears.

4. Do the following:
   a. In the User Name field, enter the user name of a valid user that exists in your Oracle Unified Directory server.
   b. In the Password field, enter the password.

   The Business Operations Center home page appears, verifying that Business Operations Center is installed successfully.