



Connector Development

*Oracle® Identity Manager Connector for
Grafana*

Development Guide

Release 1.0.0

February 2024

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Preface

This guide describes the development of the connector that is used to onboard Red Hat Keycloak Realm as an applications into Oracle® Identity Governance.

Audience

This document is intended for people who deal with the administration of resources as well as teams who deal with the integration of target systems.

Related Documents

For information about installing and using Oracle® Identity Governance 12c, visit the following Oracle® Help Center page:

- <https://docs.oracle.com/en/middleware/idm/suite/12.2.1.3/index.html>
- <https://docs.oracle.com/en/middleware/idm/suite/12.2.1.4/index.html>

For information about Identity Governance Connectors documentation, visit the following Oracle® Help Center page:

- <https://docs.oracle.com/en/middleware/idm/identity-governance-connectors/12.2.1.3/index.html>

Typographical Conventions

The following table describes the typographic conventions that are used in this document.

| Convention | Meaning |
|------------------------|--|
| boldface | Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary. |
| <i>italic</i> | Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values. |
| <code>monospace</code> | Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter. |

Symbol Conventions

The following table explains symbols that might be used in this document.

| Convention | Meaning |
|------------|--|
| [] | Contains optional arguments and command options. |
| { } | Contains a set of choices for a required command option. |
| \${ } | Indicates a variable reference. |
| - | Joins simultaneous multiple keystrokes. |
| + | Joins consecutive multiple keystrokes. |
| > | Indicates menu item selection in a graphical user interface. |

Installing the Connector Bundle

The connector supports deployment in a connector server. This is particularly helpful for testing the functionality of the connector outside of the deployment in Oracle® Identity Governance.



Note

The project provides source code that implements JUnit test cases. These test cases can run in this topology.

This section contains the following topics:

- [Install Required Libraries](#)
- [Install Connector Bundle](#)

Install Required Libraries

Make sure following jars are in the class path:



Note

Copy the libraries mentioned below to `<CONNECTOR_SERVER_HOME>/lib/endorsed`.

Installing the Connector Bundle

| Library | Description |
|--|--|
| <code>javax.annotation.javax.annotation-api.jar</code> | Common Annotations for the Java™ Platform API. <i><MW_HOME>/oracle_common/modules/ javax.annotation.javax.annotation-api.jar</i> |
| <code>javax.ws.rs.javax.ws.rs-api.jar</code> | Java API for RESTful Web Services <i><MW_HOME>/oracle_common/modules/ javax.ws.rs.javax.ws.rs-api.jar</i> |
| <code>javax.inject.javax.inject.jar</code> | This package provides portable dependency injection annotations that can be used by any dependency injection framework. <i><MW_HOME>/oracle_common/modules/ javax.inject.javax.inject.jar</i> |
| <code>com.sun.jersey.jersey-core.jar</code> | Jersey Core <i><MW_HOME>/oracle_common/modules/ com.sun.jersey.jersey-core.jar</i> |
| <code>com.sun.jersey.jersey-client.jar</code> | Jersey Client <i><MW_HOME>/oracle_common/modules/ com.sun.jersey.jersey-client.jar</i> |
| <code>jackson-annotations-2.7.9.jar</code> | Core annotations used for value types, used by Jackson data binding package. <i><MW_HOME>/oracle_common/modules/ thirdparty/jackson-annotations-2.7.9.jar</i> |
| <code>jackson-core-2.7.9.jar</code> | Core Jackson processing abstractions (aka Streaming API), implementation for JSON <i><MW_HOME>/oracle_common/modules/ thirdparty/jackson-core-2.7.9.jar</i> |
| <code>jackson-jaxrs-base-2.7.9.jar</code> | Pile of code that is shared by all Jackson-based JAX-RS providers. <i><MW_HOME>/oracle_common/modules/ thirdparty/jackson-jaxrs-base-2.7.9.jar</i> |
| <code>jackson-jaxrs-json-provider-2.7.9.jar</code> | Functionality to handle JSON input/output for JAX-RS implementations (like Jersey and RESTeasy) using standard Jackson data binding. <i><MW_HOME>/oracle_common/modules/ thirdparty/jackson-jaxrs-json-provider-2.7.9.jar</i> |
| <code>jackson-databind-2.7.9.1.jar</code> | General data-binding functionality for Jackson: works on core streaming API. <i><MW_HOME>/oracle_common/modules/ thirdparty/jackson-databind-2.7.9.1.jar</i> |
| <code>org.glassfish.javax.json.jar</code> | Default provider for JSR 374:Java API for Processing JSON <i><MW_HOME>/oracle_common/modules/ thirdparty/javax.json.jar</i> |

Install Connector Bundle



Note

Copy the Connector Bundle mentioned below to `<CONNECTOR_SERVER_HOME>/bundle`.

| Bundle | Description |
|---|-----------------------|
| <code>gfn.identity.connector.bundle-12.2.1.3.jar</code> | The connector bundle. |

Project Properties

Project Source Path

| Property | Value |
|-------------------|--------------------------------------|
| Java Source Paths | <code>./src/main/java</code> |
| Included | (All) |
| Excluded | (None) |
| Output Directory | <code>./bin</code> |
| Default Package | <code>oracle.iam.identity.icf</code> |

Table 1. Project Source Paths

Ant Build Sources

| Property | Value |
|------------------------|--------------------|
| Ant Build Source Paths | <code>./ant</code> |
| Included | (All) |
| Excluded | (None) |

Table 2. Ant Build Source Paths

Resources

| Property | Value |
|-----------|-----------------------------------|
| Resources | <code>./src/main/resources</code> |
| Included | (All) |
| Excluded | (None) |

Table 3. Project Source Path Resources

Site Document Sources

| Property | Value |
|----------------------------|-------------------------|
| Site Document Source Paths | <code>./src/site</code> |
| Included | (All) |
| Excluded | (None) |

Table 4. Site Document Sources

Unit Test Sources

| Property | Value |
|------------------------|------------------------------|
| Unit Test Source Paths | <code>./src/test/java</code> |

Project Properties

| Property | Value |
|----------|--------|
| Included | (All) |
| Excluded | (None) |

Table 5. Unit Test Sources

Javadoc

| Property | Value |
|-------------|----------------------|
| Destination | . / doc |
| Visibility | public and protected |
| Excluded | (None) |

Table 6. Javadoc

Libraries and Classpath

These are the libraries required to compile and build the connector:

| Library | Location |
|--|-----------|
| JUnit 4 Runtime | Extension |
| MDS Runtime | Extension |
| JAX-RS Jersey 2.x Jackson | Extension |
| WLS Platform 12c Jersey Core | User |
| WLS Platform 12c Jersey Client | User |
| ICF Platform 12c Connector | User |
| IGD Platform 12c Server | User |
| IGD Platform 12c Adapter | User |
| IGD Platform 12c Scheduler | User |
| OCS Headstart 12c Foundation | User |
| OCS Identity 12c Foundation | User |
| OCS Identity 12c Utility | User |
| ICF Platform 12c Integration | User |
| ICF Platform 12c Foundation | User |
| ICF Platform 12c REST | User |

Table 7. Classpath Entries



Note

JUnit 4 Runtime needs only be part *Libraries and Classpath* if you want to run the Junit Test.

Preferences

IDE Preferences

These are the preferences specific to the product installation:



Warning

These preferences are not provided by the version control system due to they are heavily depended on your product installation and the check out of the source code.

| Property Name | Property Value |
|---------------|--|
| fmw.base | /opt/oracle/product/ide/12.2.1 |
| fmw.base.ide | <i>\${fmw.base}</i> /jdeveloper |
| fmw.base.jrf | <i>\${fmw.base}</i> /oracle_common/modules |
| fmw.base.wls | <i>\${fmw.base}</i> /wlserver |
| fmw.base.soa | <i>\${fmw.base}</i> /soa/soa/modules |

These are the preferences specific to the project and workspace folder structure:

| Property Name | Property Value |
|---------------|-------------------------|
| wks.base | /Users/dsteding/Project |
| ocs.base | /Users/dsteding/Project |

Identity Workspace Preferences

This build file references [IDE Preferences](#)

These are the preferences specific to the version control:

| Property Name | Property Value |
|---------------------|---------------------------|
| application.release | 12.2.1.3 |
| application.version | ./\${application}.version |
| application.jar | \${application}.jar |

These are the preferences specific to the project installation:

| Property Name | Property Value |
|---------------|--------------------------------|
| ocs.base.icf | \${ocs.home}/IdentityConnector |
| ocs.base.oim | \${ocs.home}/IdentityManager |
| wks.base.icf | \${wks.home}/IdentityManager |

Connector Workspace Preferences

This build file references [Identity Workspace Preferences](#)

Library References

JDeveloper Library References

Consulting Foundation Services

OCS Headstart 12c Foundation

General

| Property | Value |
|--------------|------------------------------|
| Id | oracle-hst-12c-foundation |
| Library Name | OCS Headstart 12c Foundation |
| Location | User |
| Description | |

Path

| Property | Value |
|-------------|---|
| Class Path | <ocs-root>/FoundationFramework/hstFoundation/lib/hst-foundation.jar |
| Source Path | <ocs-root>/FoundationFramework/hstFoundation/lib/hst-foundation-src.jar |
| Doc Path | <ocs-root>/FoundationFramework/hstFoundation/lib/hst-foundation-doc.jar |

Dependencies

If you include this library in a project its required to include also:

| Library | Location |
|---|-----------|
| Java EE | Extension |
| WLS Platform 12c Groovy | User |

OCS Headstart 12c Deployment

This library is not indended to be used in the classpath of the project.

Library References

General

| Property | Value |
|--------------|------------------------------|
| id | oracle-hst-12c-deployment |
| Library Name | OCS Headstart 12c Deployment |
| Location | User |
| Description | |

Path

| Property | Value |
|-------------|---|
| Class Path | <ocs-root>/FoundationFramework/hstDeployment/lib/hst-deployment.jar |
| Source Path | <ocs-root>/FoundationFramework/hstDeployment/lib/hst-deployment-src.jar |
| Doc Path | <ocs-root>/FoundationFramework/hstDeployment/lib/hst-deployment-doc.jar |

Dependencies

If you include this library in a project its required to include also:

| Library | Location |
|--|----------|
| OCS Headstart 12c Foundation | User |

OCS Headstart 12c Security

General

| Property | Value |
|--------------|----------------------------|
| Id | oracle-hst-12c-security |
| Library Name | OCS Headstart 12c Security |
| Location | User |
| Description | |

Path

| Property | Value |
|-------------|---|
| Class Path | <ocs-root>/FoundationFramework/hstSecurity/lib/hst-security.jar |
| Source Path | <ocs-root>/FoundationFramework/hstSecurity/lib/hst-security-src.jar |
| Doc Path | <ocs-root>/FoundationFramework/hstSecurity/lib/hst-security-doc.jar |

Dependencies

If you include this library in a project its required to include also:

| Library | Location |
|---------|-----------|
| Java EE | Extension |

OCS Headstart 12c Faces**General**

| Property | Value |
|--------------|-------------------------|
| Id | oracle-hst-12c-faces |
| Library Name | OCS Headstart 12c Faces |
| Location | User |
| Description | |

Path

| Property | Value |
|-------------|---|
| Class Path | <ocs-root>/FoundationFramework/hstFaces/lib/hst-faces.jar |
| Source Path | <ocs-root>/FoundationFramework/hstFaces/lib/hst-faces-src.jar |
| Doc Path | <ocs-root>/FoundationFramework/hstFaces/lib/hst-faces-doc.jar |

Dependencies

If you include this library in a project its required to include also:

| Library | Location |
|--|-----------|
| Java EE | Extension |
| JSP Runtime | Extension |
| JSF 2.2 | Extension |
| JSTL 1.2 | Extension |
| Trinidad Runtime 11 | Extension |
| Resource Bundle Support | Extension |
| Resource Bundle Variable Resolver | Extension |
| ADF Common Runtime | Extension |
| ADF Model Runtime | Extension |
| ADF Controller Runtime | Extension |
| ADF Controller Schema | Extension |
| ADF Faces Runtime 11 | Extension |
| ADF Common Web Runtime | Extension |
| OCS Headstart 12c Foundation | User |

Platform Foundation Services

OCS Platform 12c Core

General

| Property | Value |
|--------------|-----------------------|
| Id | oracle-hst-12c-core |
| Library Name | OCS Platform 12c Core |
| Location | User |
| Description | |

Path

| Property | Value |
|-------------|--|
| Class Path | <ocs-root>/FoundationService/platformCore/lib/ocs-hst-core.jar |
| Source Path | <ocs-root>/FoundationService/platformCore/lib/ocs-hst-core-src.jar |
| Doc Path | <ocs-root>/FoundationService/platformCore/lib/ocs-hst-core-doc.jar |

OCS Platform 12c Json**General**

| Property | Value |
|--------------|-----------------------|
| Id | oracle-hst-12c-json |
| Library Name | OCS Platform 12c Json |
| Location | User |
| Description | |

Path

| Property | Value |
|-------------|--|
| Class Path | <ocs-root>/FoundationService/platformJson/lib/ocs-hst-json.jar |
| Source Path | <ocs-root>/FoundationService/platformJson/lib/ocs-hst-json-src.jar |
| Doc Path | <ocs-root>/FoundationService/platformJson/lib/ocs-hst-json-doc.jar |

OCS Platform 12c Rest**General**

| Property | Value |
|--------------|---|
| Id | oracle-hst-12c-rest |
| Library Name | OCS Platform 12c Rest |
| Location | User |
| Description | REST APIs provide a convenient and efficient way for clients to access data and functionality. This approach has thus been widely adopted, and building a REST API is a core skill for software developers working in any language, including Java. |

Path

| Property | Value |
|-------------|--|
| Class Path | <ocs-root>/FoundationService/platformRest/lib/ocs-hst-rest.jar |
| Source Path | <ocs-root>/FoundationService/platformRest/lib/ocs-hst-rest-src.jar |
| Doc Path | <ocs-root>/FoundationService/platformRest/lib/ocs-hst-rest-doc.jar |

OCS Platform 12c Security**General**

| Property | Value |
|--------------|---------------------------|
| Id | oracle-hst-12c-jca |
| Library Name | OCS Platform 12c Security |
| Location | User |
| Description | |

Path

| Property | Value |
|-------------|--|
| Class Path | <ocs-root>/FoundationService/platformJps/lib/ocs-hst-jps.jar |
| Source Path | <ocs-root>/FoundationService/platformJps/lib/ocs-hst-jps-src.jar |
| Doc Path | <ocs-root>/FoundationService/platformJps/lib/ocs-hst-jps-doc.jar |

OCS Platform 12c Faces**General**

| Property | Value |
|--------------|------------------------|
| Id | oracle-hst-12c-faces |
| Library Name | OCS Platform 12c Faces |
| Location | User |
| Description | |

Path

| Property | Value |
|-------------|--|
| Class Path | <ocs-root>/FoundationService/platformFaces/lib/ocs-hst-faces.jar |
| Source Path | <ocs-root>/FoundationService/platformFaces/lib/ocs-hst-faces-src.jar |
| Doc Path | <ocs-root>/FoundationService/platformFaces/lib/ocs-hst-faces-doc.jar |

Platform Access Services

IAD Platform 12c Core

General

| Property | Value |
|--------------|-----------------------|
| Id | oracle-iad-12c-core |
| Library Name | IAD Platform 12c Core |
| Location | User |
| Description | |

Path

| Property | Value |
|-------------|--|
| Class Path | <ocs-root>/AccessService/platformCore/lib/ocs-iad-core.jar |
| Source Path | <ocs-root>/AccessService/platformCore/lib/ocs-iad-core-src.jar |
| Doc Path | <ocs-root>/AccessService/platformCore/lib/ocs-iad-core-doc.jar |

IAD Platform 12c Authentication

General

| Property | Value |
|--------------|---------------------------------|
| Id | oracle-iad-12c-authn |
| Library Name | IAD Platform 12c Authentication |
| Location | User |
| Description | |

Path

| Property | Value |
|-------------|--|
| Class Path | <ocs-root>/AccessService/platformAuthn/lib/ocs-iad-authn.jar |
| Source Path | <ocs-root>/AccessService/platformAuthn/lib/ocs-iad-authn-src.jar |
| Doc Path | <ocs-root>/AccessService/platformAuthn/lib/ocs-iad-authn-doc.jar |

IAD Platform 12c Assertion**General**

| Property | Value |
|--------------|----------------------------|
| Id | oracle-iad-12c-saml |
| Library Name | IAD Platform 12c Assertion |
| Location | User |
| Description | |

Path

| Property | Value |
|-------------|--|
| Class Path | <ocs-root>/AccessService/platformSaml/lib/ocs-iad-saml.jar |
| Source Path | <ocs-root>/AccessService(platformSaml/lib/ocs-iad-saml-src.jar |
| Doc Path | <ocs-root>/AccessService/platformSaml/lib/ocs-iad-saml-doc.jar |

Platform Identity Services**IGD Identity 12c Core****General**

| Property | Value |
|--------------|-----------------------|
| Id | oracle-igd-12c-core |
| Library Name | IGD Identity 12c Core |
| Location | User |
| Description | |

Path

| Property | Value |
|-------------|--|
| Class Path | <ocs-root>/IdentityService/platformServer/lib/ocs-igd-core.jar |
| Source Path | <ocs-root>/IdentityService/platformServer/lib/ocs-igd-core-src.jar |
| Doc Path | <ocs-root>/IdentityService/platformServer/lib/ocs-igd-core-doc.jar |

IGD Platform 12c SCIM**General**

| Property | Value |
|--------------|--|
| Id | oracle-igd-12c-scim |
| Library Name | IGD Identity 12c SCIM |
| Location | User |
| Description | SCIM, or System for Cross-domain Identity Management, is an IETF standard that defines an extensible schema mechanism and REST API for managing users and other identity data. |

Path

| Property | Value |
|-------------|--|
| Class Path | <ocs-root>/IdentityService/platformServer/lib/ocs-igd-scim.jar |
| Source Path | <ocs-root>/IdentityService/platformServer/lib/ocs-igd-scim-src.jar |
| Doc Path | <ocs-root>/IdentityService/platformServer/lib/ocs-igd-scim-doc.jar |

IGD Identity 12c Client**General**

| Property | Value |
|--------------|--|
| Id | oracle-igd-12c-client |
| Library Name | IGD Identity 12c Client |
| Location | User |
| Description | Oracle® provides a network-aware, Java-based application programming interface (API) that exposes Services available in Oracle® Identity Governance. This API is based on POJO's and takes care of all the plumbing required to interact with Oracle® Identity Governance. |

Path

| Property | Value |
|-------------|--|
| Class Path | <ocs-root>/IdentityService/platformServer/lib/ocs-igd-client.jar |
| Source Path | <ocs-root>/IdentityService/platformServer/lib/ocs-igd-client-src.jar |
| Doc Path | <ocs-root>/IdentityService/platformServer/lib/ocs-igd-client-doc.jar |

IGD Identity 12c Server**General**

| Property | Value |
|--------------|--|
| Id | oracle-igd-12c-server |
| Library Name | IGD Identity 12c Server |
| Location | User |
| Description | The Platform Services that are crucial to the business features offered by Oracle® Identity Governance, such as the Request Management Service, the Entity Manager Service, and the Scheduler Service. |

Path

| Property | Value |
|-------------|--|
| Class Path | <ocs-root>/IdentityService/platformServer/lib/ocs-igd-server.jar |
| Source Path | <ocs-root>/IdentityService/platformServer/lib/ocs-igd-server-src.jar |
| Doc Path | <ocs-root>/IdentityService/platformServer/lib/ocs-igd-server-doc.jar |

Platform Fusion Middleware**WLS Platform 12c Client****General**

| Property | Value |
|--------------|--|
| Id | oracle-wls-12c-client |
| Library Name | WLS Platform 12c Client |
| Location | User |
| Description | The stand-alone client is are crucial to the business features offered by Oracle® Fusion Middleware. |

Path

| Property | Value |
|-------------|---|
| Class Path | <ide-root>/wlserver/server/lib/wlfullclient.jar |
| Source Path | |
| Doc Path | |

WLS Platform 12c Core**General**

| Property | Value |
|--------------|-------------------------|
| Id | oracle-wls-12c-platform |
| Library Name | WLS Platform 12c Core |
| Location | User |
| Description | |

Path

| Property | Value |
|-------------|---|
| Class Path | <ide-root>/oracle_common/modules/oracle.javatools/javatools-nodeps.jar |
| | <ide-root>oracle_common/modules/oracle.javatools/javatools-annotations.jar |
| | <ide-root>jdeveloper/wlserver/lib/wls-classes-for-jdev.jar |
| Source Path | |
| Doc Path | https://docs.oracle.com/cd/E12839_01/apirefs.1111/e13941 |

WLS Platform 12c Groovy**General**

| Property | Value |
|--------------|-------------------------|
| Id | oracle-wls-12c-groovy |
| Library Name | WLS Platform 12c Groovy |
| Location | User |
| Description | |

Path

| Property | Value |
|-------------|---|
| Class Path | <ide-root>/oracle_common/modules/groovy-all-2.4.11.jar |
| Source Path | |
| Doc Path | https://docs.groovy-lang.org//docs/groovy-2.4.11/html/api/ |

WLS Platform 12c Json**General**

| Property | Value |
|--------------|-----------------------|
| Id | oracle-wls-12c-json |
| Library Name | WLS Platform 12c Json |
| Location | User |
| Description | |

Path

| Property | Value |
|-------------|---|
| Class Path | <ide-root>/oracle_common/modules/org.glassfish.javax.json.jar |
| Source Path | |
| Doc Path | https://javadoc.io/doc/org.glassfish/javax.json/1.1.4/ |

Identity Governance Services**IGD Platform 12c Adapter****General**

| Property | Value |
|--------------|--------------------------|
| Id | oracle-oim-12c-adapter |
| Library Name | IGD Platform 12c Adapter |
| Location | User |
| Description | |

Path

| Property | Value |
|-------------|---|
| Class Path | <ocs-root>/IdentityManager/CodeBaseServer/12.2.1.3/lib/xlLogger.jar |
| | <ocs-root>/IdentityManager/CodeBaseServer/12.2.1.3/lib/xlUtils.jar |
| | <ocs-root>/IdentityManager/CodeBaseServer/12.2.1.3/lib/xlAdapterUtilities.jar |
| | <ocs-root>/IdentityManager/CodeBaseServer/12.2.1.3/lib/xlAPI.jar |
| | <ocs-root>/IdentityManager/CodeBaseServer/12.2.1.3/lib/xlVO.jar |
| | <ocs-root>/IdentityManager/CodeBaseServer/12.2.1.3/lib/xlGenConnector.jar |
| | <ocs-root>/IdentityManager/CodeBaseServer/12.2.1.3/lib/xlDataObjects.jar |
| | <ocs-root>/IdentityManager/CodeBaseServer/12.2.1.3/lib/xlRemoteManager.jar |
| | <ocs-root>/IdentityManager/CodeBaseServer/12.2.1.3/lib/xlCache.jar |
| | <ocs-root>/IdentityManager/CodeBaseServer/12.2.1.3/lib/xlAuditor.jar |
| Source Path | |
| Doc Path | https://docs.oracle.com/middleware/12213/oig/OMJAV |

IGD Platform 12c Scheduler**General**

| Property | Value |
|--------------|----------------------------|
| Id | oracle-oim-12c-scheduler |
| Library Name | IGD Platform 12c Scheduler |
| Location | User |
| Description | |

Path

| Property | Value |
|-------------|---|
| Class Path | <ocs-root>/IdentityManager/CodeBaseServer/12.2.1.3/lib/xlScheduler.jar |
| Source Path | |
| Doc Path | https://docs.oracle.com/middleware/12213/oig/OMJAV |

IGD Platform 12c Client**General**

| Property | Value |
|--------------|---|
| Id | oracle-oim-12c-client |
| Library Name | IGD Platform 12c Client |
| Location | User |
| Description | The stand-alone client that is crucial to the business remote features offered by Oracle® Identity Governance, such as the Request Management Service, the Entity Manager Service, and the Scheduler Service. |

Path

| Property | Value |
|-------------|---|
| Class Path | <ocs-root>/IdentityManager/CodeBaseClient/12.2.1.3/lib/jrf-api.jar |
| | <ocs-root>/IdentityManager/CodeBaseClient/12.2.1.3/lib/ipf.jar |
| | <ocs-root>/IdentityManager/CodeBaseClient/12.2.1.3/lib/oimclient.jar |
| | <ocs-root>/IdentityManager/CodeBaseClient/12.2.1.3/lib/commons-logging.jar |
| Source Path | |
| Doc Path | https://docs.oracle.com/middleware/12213/oig/OMJAV |

IGD Platform 12c Server**General**

| Property | Value |
|--------------|--|
| Id | oracle-oim-12c-platform |
| Library Name | IGD Platform 12c Server |
| Location | User |
| Description | The Platform Services that are crucial to the business features offered by Oracle® Identity Governance, such as the Request Management Service, the Entity Manager Service, and the Scheduler Service. |

Path

| Property | Value |
|-------------|---|
| Class Path | <ocs-root>/IdentityManager/CodeBaseServer/12.2.1.3/lib/iam-platform-utils.jar |
| | <ocs-root>/IdentityManager/CodeBaseServer/12.2.1.3/lib/iam-platform-kernel.jar |
| | <ocs-root>/IdentityManager/CodeBaseServer/12.2.1.3/lib/iam-platform-context.jar |
| | <ocs-root>/IdentityManager/CodeBaseServer/12.2.1.3/lib/iam-platform-auth-client.jar |
| | <ocs-root>/IdentityManager/CodeBaseServer/12.2.1.3/lib/iam-platform-authopss-service.jar |
| | <ocs-root>/IdentityManager/CodeBaseServer/12.2.1.3/lib/iam-platform-pluginframework.jar |
| | <ocs-root>/IdentityManager/CodeBaseServer/12.2.1.3/lib/iam-platform-workflowservice.jar |
| | <ocs-root>/IdentityManager/CodeBaseServer/12.2.1.3/lib/iam-platform-entitymgr.jar |
| | <ocs-root>/IdentityManager/CodeBaseServer/12.2.1.3/lib/OIMServer.jar |
| Source Path | |
| Doc Path | https://docs.oracle.com/middleware/12213/oig/OMJAV |

OCS Identity 12c Foundation**General**

| Property | Value |
|--------------|-----------------------------|
| Id | oracle-oim-12c-foundation |
| Library Name | OCS Identity 12c Foundation |
| Location | User |
| Description | |

Path

| Property | Value |
|-------------|--|
| Class Path | <ocs-root>IdentityManager/oimFoundation/lib/ocs-foundation.jar |
| Source Path | <ocs-root>IdentityManager/oimFoundation/lib/ocs-foundation-src.jar |
| Doc Path | <ocs-root>IdentityManager/oimFoundation/lib/ocs-foundation-doc.jar |

OCS Identity 12c Adapter**General**

| Property | Value |
|--------------|-----------------------------------|
| Id | oracle-oim-12c-adapter-foundation |
| Library Name | OCS Identity 12c Adapter |
| Location | User |
| Description | |

Path

| Property | Value |
|-------------|--|
| Class Path | <ocs-root>IdentityManager/oimAdapter/lib/ocs-adapter.jar |
| Source Path | <ocs-root>IdentityManager/oimAdapter/lib/ocs-adapter-src.jar |
| Doc Path | <ocs-root>IdentityManager/oimAdapter/lib/ocs-adapter-doc.jar |

OCS Identity 12c Utility**General**

| Property | Value |
|--------------|--------------------------|
| Id | oracle-oim-12c-utility |
| Library Name | OCS Identity 12c Utility |
| Location | User |
| Description | |

Path

| Property | Value |
|-------------|--|
| Class Path | <ocs-root>IdentityManager/oimUtility/lib/ocs-utility.jar |
| Source Path | <ocs-root>IdentityManager/oimUtility/lib/ocs-utility-src.jar |
| Doc Path | <ocs-root>IdentityManager/oimUtility/lib/ocs-utility-doc.jar |

Identity Connector Services**ICF Platform 12c Connector****General**

| Property | Value |
|--------------|---|
| Id | oracle-icf-12c-connector |
| Library Name | ICF Platform 12c Connector |
| Location | User |
| Description | The Identity Connector Framework (ICF) provides interoperability between identity, compliance and risk management solutions. An ICF Connector enables provisioning software, such as OIM, to manage the identities that are maintained by a specific identity provider. |

Path

| Property | Value |
|-------------|---|
| Class Path | <ocs-root>/IdentityManager/CodeBaseConnector/12.2.1.3/lib/icf-oim-intg.jar <ocs-root>/IdentityManager/CodeBaseConnector/12.2.1.3/lib/connector-framework.jar <ocs-root>/IdentityManager/CodeBaseConnector/12.2.1.3/lib/connector-framework-internal.jar |
| Source Path | |
| Doc Path | https://docs.oracle.com/html/E24834_02 |

ICF Platform 12c Integration**General**

| Property | Value |
|--------------|---|
| Id | oracle-icf-12c-integration |
| Library Name | ICF Platform 12c Integration |
| Location | User |
| Description | Provides support for developing and building identity connectors by using the Identity Connector Framework (ICF). ICF decouples Oracle® Identity Governance from other applications to which it connects. |

Path

| Property | Value |
|-------------|---|
| Class Path | <ocs-root>/IdentityConnector/icfIntegration/lib/ocs-integration.jar |
| Source Path | <ocs-root>/IdentityConnector/icfIntegration/lib/ocs-integration-src.jar |
| Doc Path | <ocs-root>/IdentityConnector/icfIntegration/lib/ocs-integration-doc.jar |

ICF Platform 12c Foundation**General**

| Property | Value |
|--------------|-----------------------------|
| Id | oracle-icf-12c-foundation |
| Library Name | ICF Platform 12c Foundation |
| Location | User |
| Description | |

Path

| Property | Value |
|-------------|--|
| Class Path | <ocs-root>/IdentityConnector/icfFoundation/lib/ocs.identity.connector.foundation.jar |
| Source Path | <ocs-root>/IdentityConnector/icfFoundation/lib/ocs.identity.connector.foundation-src.jar |
| Doc Path | <ocs-root>/IdentityConnector/icfFoundation/lib/ocs.identity.connector.foundation-doc.jar |

ICF Platform 12c JES**General**

| Property | Value |
|--------------|---------------------------|
| Id | oracle-icf-12c-jesservice |
| Library Name | ICF Platform 12c JES |
| Location | User |
| Description | |

Path

| Property | Value |
|-------------|---|
| Class Path | <ocs-root>/IdentityConnector/icfRmiService/lib/ ocs.identity.connector.jes.jar |
| Source Path | <ocs-root>/IdentityConnector/icfRmiService/lib/ ocs.identity.connector.jes-src.jar |
| Doc Path | <ocs-root>/IdentityConnector/icfRmiService/lib/ ocs.identity.connector.jes-doc.jar |

ICF Platform 12c DBMS**General**

| Property | Value |
|--------------|---------------------------|
| Id | oracle-icf-12c-dbmservice |
| Library Name | ICF Platform 12c DBMS |
| Location | User |
| Description | |

Path

| Property | Value |
|-------------|---|
| Class Path | <ocs-root>/IdentityConnector/icfDbmsService/lib/ ocs.identity.dbmsservice.dbms.jar |
| Source Path | <ocs-root>/IdentityConnector/icfDbmsService/lib/ ocs.identity.dbmsservice.dbms-src.jar |
| Doc Path | <ocs-root>/IdentityConnector/icfDbmsService/lib/ ocs.identity.dbmsservice.dbms-doc.jar |

ICF Platform 12c REST**General**

| Property | Value |
|--------------|---|
| Id | oracle-icf-12c-restservice |
| Library Name | ICF Platform 12c REST |
| Location | User |
| Description | REST APIs provide a convenient and efficient way for clients to access data and functionality. This approach has thus been widely adopted, and building a REST API is a core skill for software developers working in any language, including Java. |

Path

| Property | Value |
|-------------|---|
| Class Path | <ocs-root>/IdentityConnector/icfRestService/lib/ocs.identity.connector.rest.jar |
| Source Path | <ocs-root>/IdentityConnector/icfRestService/lib/ocs.identity.connector.rest-src.jar |
| Doc Path | <ocs-root>/IdentityConnector/icfRestService/lib/ocs.identity.connector.rest-doc.jar |

ICF Platform 12c SCIM**General**

| Property | Value |
|--------------|--|
| Id | oracle-icf-12c-scimservice |
| Library Name | ICF Platform 12c SCIM |
| Location | User |
| Description | SCIM, or System for Cross-domain Identity Management, is an IETF standard that defines an extensible schema mechanism and REST API for managing users and other identity data. |

Path

| Property | Value |
|-------------|---|
| Class Path | <ocs-root>/IdentityConnector/icfScimService/lib/ocs.identity.connector.scim.jar |
| Source Path | <ocs-root>/IdentityConnector/icfScimService/lib/ocs.identity.connector.scim-src.jar |
| Doc Path | <ocs-root>/IdentityConnector/icfScimService/lib/ocs.identity.connector.scim-doc.jar |

ANT Build Library References**IAM Platform Libraries****Fusion Middleware IAM Platform****Path**

id=oracle.fmw.iam.platform

| Location |
|--|
| <i>\${fmw.base.jrf}</i> /modules/oracle.toplink/eclipselink.jar |
| <i>\${iam.server.library}</i> /lib/iam-platform-utils.jar |
| <i>\${iam.server.library}</i> /lib/iam-platform-kernel.jar |
| <i>\${iam.server.library}</i> /lib/iam-platform-context.jar |
| <i>\${iam.server.library}</i> /lib/iam-platform-auth-client.jar |
| <i>\${iam.server.library}</i> /lib/iam-platform-authopss-service.jar |
| <i>\${iam.server.library}</i> /lib/iam-platform-entitymgr.jar |
| <i>\${iam.server.library}</i> /lib/iam-platform-pluginframework.jar |
| <i>\${iam.server.library}</i> /lib/iam-platform-workflowservice.jar |
| <i>\${iam.server.library}</i> /lib/OIMServer.jar |

Dependencies

If you include this library in the project build path its required to include also:

OIG Stand-Alone Client**Path**

id=oracle.fmw.oim.client

| Location |
|---|
| <code>\${oim.client.library}/lib/commons-logging.jar</code> |
| <code>\${oim.client.library}/lib/spring.jar</code> |
| <code>\${oim.client.library}/lib/oimclient.jar</code> |

Dependencies

If you include this library in the project build path its required to include also:

OIG Scheduler Runtime

Path

```
id=oracle.fmw.oim.deploy
```

| Location |
|---|
| <code>\${oim.server.library}/lib/xlDDM.jar</code> |

Dependencies

If you include this library in the project build path its required to include also:

OIG Adapter Runtime

Path

```
id=oracle.fmw.oim.adapter
```

| Location |
|--|
| <code>\${oim.server.library}/lib/xlLogger.jar</code> |
| <code>\${oim.server.library}/lib/xlUtils.jar</code> |
| <code>\${oim.server.library}/lib/xlAdapterUtilities.jar</code> |
| <code>\${oim.server.library}/lib/xlAPI.jar</code> |
| <code>\${oim.server.library}/lib/xlVO.jar</code> |
| <code>\${oim.server.library}/lib/xlGenConnector.jar</code> |
| <code>\${oim.server.library}/lib/xlDataObjects.jar</code> |
| <code>\${oim.server.library}/lib/xlRemoteManager.jar</code> |
| <code>\${oim.server.library}/lib/xlCache.jar</code> |
| <code>\${oim.server.library}/lib/xlAuditor.jar</code> |

Dependencies

If you include this library in the project build path its required to include also:

OIG Scheduler Runtime

Path

id=oracle.fmw.oim.scheduler

| Location |
|---|
| <code>\${oim.server.library}/lib/xlScheduler.jar</code> |

Dependencies

If you include this library in the project build path its required to include also:

OIG Identity Connector Integration

Path

id=oracle.fmw.icf.integration

| Location |
|--|
| <code>\${icf.server.library}/lib/icf-oim-intg.jar</code> |
| <code>\${icf.server.library}/lib/connector-framework.jar</code> |
| <code>\${icf.server.library}/lib/connector-framework-internal.jar</code> |

Dependencies

If you include this library in the project build path its required to include also: