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Preface

Administering Oracle Integration describes how to use Oracle Integration to integrate your applications and processes.

Note:
The information in this guide applies to all of your Oracle Integration instances. It doesn’t matter which edition you’re using, what features you have, or who manages your cloud environment. You’ll find what you need here, including notes about any differences between the various flavors of Oracle Integration when necessary.

Topics:
• Audience
• Documentation Accessibility
• Related Resources
• Conventions

Audience

Administering Oracle Integration is intended for users who want to create, activate, and monitor integrations and processes.

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 Resources

For more information, see these Oracle resources:

- Oracle Integration documentation in the Oracle Cloud Library on the Oracle Help Center.

Conventions

The following text conventions are used in this document:

<table>
<thead>
<tr>
<th>Convention</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>boldface</strong></td>
<td>Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.</td>
</tr>
<tr>
<td><em>italic</em></td>
<td>Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.</td>
</tr>
<tr>
<td><code>monospace</code></td>
<td>Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.</td>
</tr>
</tbody>
</table>
Welcome to Oracle Integration

Oracle Integration combines business process automation, application integration, web and mobile application development, and integrated analytics into one unified product.

Topics:

• Learn About Oracle Integration
• Explore All You Can Do with Oracle Integration
• Assign Roles to Control Access
• Browse Oracle Help Center for Tutorials, Videos, and More

Learn About Oracle Integration

Oracle Integration is a unified platform where you can integrate your applications, automate processes, and create applications.

Specifically, with Oracle Integration, you can:

• Use integrations to design, monitor, and manage connections between your applications
• Create process applications to automate and manage your business work flows
• Build custom web and mobile applications

Critical business processes, such as those related to human capital management (HCM), customer experience (CX), and enterprise resource planning (ERP), are frequently slow and inflexible. For example, a multi-step process such as Lead to Opportunity to Quote to Order can involve four or more applications and require human exception management at every step of the process. In this scenario, the lack of integration between departments as well as the delays caused by human-based problem resolution can result in lost revenue, frustrated customers, and high costs.

Oracle Integration changes all that. It empowers you to:

• Establish connectivity between the many applications and people that are part of the entire business process life cycle.
• Assemble existing technologies into new business services to better align with the changing pace of new business demands.
• Deliver new business innovations faster by rapidly connecting diverse applications and key business roles.

Explore All You Can Do with Oracle Integration

With Oracle Integration, you have the power to automate business processes, connect your cloud and on-premises applications, build great web and mobile applications, collect advanced metrics about your business, and get real-time analytics. The feature
set for your Oracle Integration depends on two factors: which edition you’re using (Enterprise or Standard) and who’s managing your cloud environment (you or Oracle). Let’s explore all the features that may be available to you.

**Processes: Automate Business Processes**

Use Processes to rapidly design, automate, and manage business processes in the cloud.

You begin by creating a process application from scratch, by using a QuickStart App, or by importing a file. Next, you model your process flow, including the requests, approvals, decision paths, and roles for each task. Depending on the business process, you may need to create web forms, add decision models, and interact with web services to send and receive data.

At any point when you’re designing your process application, you can play your process step-by-step to test each possible scenario. When you’re ready, activate the process application to make it available, and assign roles to grant users access to your application.

**Integrations: Connect Applications**

Use Integrations to connect your applications into a continuous business flow. You can quickly develop and activate integrations between both your applications that live in the cloud and your applications that still live on premises.

- Identify the applications that you want to integrate, and configure the connection details for each application. You can also select from our portfolio of 50+ pre-built adapters to connect with Oracle and third-party applications, such as Oracle Sales Cloud, Oracle Service Cloud, Google Calendar, Salesforce, and SAP.
- Use browser-based visual tools to create integrations, and then map the data between your applications. Mappings can range from simple data assignments to complex expressions.
- Activate your integration when you’re ready.
- Monitor the dashboard to check the status and processing statistics for an integration. The dashboard also measures and tracks the performance of your transactions by capturing and reporting key information.

**Visual Builder: Develop Applications**

With Visual Builder, you can build great web and mobile applications yourself. There is no coding, no setup, and no IT resources required.

Just use the visual drag-and-drop designer and the full palette of user interface components to build applications as simple or as intricate as you need. The built-in page templates implement best practices in design. In addition, the user interface adjusts to the native look and feel of your iOS or Android operating system so building applications optimized for mobile devices is easy as well.

Visual Builder provides all the necessary tools for building and publishing a modern web application as well as providing the infrastructure for securing access to your application, data, and the Oracle Cloud services that your application consumes.
Integration Insight: Collect Advanced Metrics

Integration Insight is available in Oracle Integration Classic (user-managed) only.

Integration Insight dramatically simplifies the process of modeling and extracting meaningful business metrics.

You can quickly collect advanced metrics and gain insight into your existing processes and integrations in three steps:

• Define your most important milestones and metrics.
• Map your milestones to appropriate components in your applications. The simple web-based tools make this task easy.
• Activate Insight.

You can view the dashboards that are available immediately after you activate Integration Insight and monitor your business in real time, using charts and tables. You can search for business data that matters to you, create new customized dashboards on the fly, and drill down to see what makes your business tick.

Stream Analytics: Get Real-Time Analytics

Stream Analytics allows for the creation of custom operational dashboards that provide real-time monitoring and analyses of event streams. You can identify events of interest, execute queries against those event streams in real-time, and drive operational dashboards or raise alerts based on that analysis. The streaming data can originate from many different data sources including web applications, log files, internet of things (IoT) sensors, point-of-sale devices, automated teller machines (ATMs), and social media.

Stream Analytics is available in Oracle Integration Classic (user-managed) only.

Assign Roles to Control Access

Oracle Integration is designed to be used by any of the people involved in an end-to-end business process regardless of their skill level or job title. You control access to Oracle Integration by assigning roles to each user.

A role includes privileges that allow users to perform various tasks and to access certain features. Users can hold multiple roles depending on their responsibilities. See Oracle Integration Roles and Privileges.
Browse Oracle Help Center for Tutorials, Videos, and More

There are several other resources that you can use to learn about Oracle Integration:

- A series of tutorials that will guide you through hands-on exercises using Oracle Integration is available at Oracle Integration Tutorials.
- A growing library of videos for Oracle Integration is available at Oracle Integration Videos.
- The complete documentation set for Oracle Integration is available on the Oracle Help Center. All getting started, using, and administering guides are available in HTML and PDF formats. Documentation for REST APIs and JavaScripts is available in HTML format.
Add users and grant roles to enable them to access, administer, and use feature sets of Oracle Integration.

Topics:
- Oracle Integration Roles and Privileges
- Add a User
- Assign Roles to a User
- Add a Group
- Add Users to a Group
- Assign Roles to a Group
- Use the Service Integration Account with No Password Expiration
- Use OAuth Authentication for REST APIs
- Trigger Integrations Using OAuth Authentication

Oracle Integration Roles and Privileges

Roles define the privileges available to users and the tasks that they can perform. You can assign predefined roles to users to allow them to work with feature sets of Oracle Integration.

- Oracle Integration Roles
- WebLogic Server Roles for Oracle Integration (applies only to Oracle Integration Classic (user-managed))
  - What Users Can Do in the Navigation Pane by Role
  - What Users Can Do on the Home Page by Role
  - What Users Can Do in Integrations by Role
  - What Users Can Do in Processes by Role
  - What Users Can Do in Visual Builder by Role
  - What Users Can Do in Integration Insight and Stream Analytics by Role (applies only to Oracle Integration Classic (user-managed))

Oracle Integration Roles

Oracle Integration predefined roles govern access to various Oracle Integration features.

You can assign one or more of these predefined roles to Oracle Integration users and groups: ServiceAdministrator, ServiceDeveloper, ServiceMonitor, ServiceDeployer,
ServiceUser, ServiceInvoker, and ServiceViewer. The following table lists the predefined roles available in Oracle Integration, and the general tasks that users assigned the roles can perform.

<table>
<thead>
<tr>
<th>Oracle Integration</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ServiceAdministrator</td>
<td>A user with the ServiceAdministrator role is a super user who can manage and administer the features provisioned in an Oracle Integration instance.</td>
</tr>
<tr>
<td>ServiceDeveloper</td>
<td>A user with the ServiceDeveloper role can develop the artifacts specific to the features provisioned in an Oracle Integration instance. For example, in Integrations the user can create integrations, and in Processes the user can create process applications and decision models.</td>
</tr>
<tr>
<td>ServiceMonitor</td>
<td>A user with the ServiceMonitor role can monitor the features provisioned in an Oracle Integration instance. For example, the user can view instances and metrics, find out response times, and track whether instance creation completed successfully or failed. This role provides privileges for users with limited knowledge of Oracle Integration, but with high-level knowledge of monitoring it. This user role does not grant permissions to change anything.</td>
</tr>
<tr>
<td>ServiceDeployer</td>
<td>A user with the ServiceDeployer role can publish the artifacts developed in a feature. In Stream Analytics the user can publish draft pipelines (applies only to Oracle Integration Classic (user-managed). This role is not applicable for the Integrations feature.</td>
</tr>
<tr>
<td>ServiceUser</td>
<td>A user with the ServiceUser role has privileges to utilize only the basic functionality of a feature such as access to the staged and published applications. For example, in Integrations the user can navigate to resource pages (such as integrations and connections) and view details, but can't edit or modify anything. The user can also run integrations and start process applications.</td>
</tr>
</tbody>
</table>
| ServiceInvoker       | A user with the ServiceInvoker role can invoke any integration flow in an Oracle Integration instance that is exposed through SOAP/REST APIs or a scheduled integration. See Run an Integration Flow. A user with ServiceInvoker role cannot:  
  • Navigate to the Oracle Integration user interface or perform any administrative actions in the user interface.  
  • Invoke any of the documented Oracle Integration REST APIs. See About the REST APIs. |
| ServiceViewer        | A user with the ServiceViewer role can navigate to all Integration resource pages (for example, integrations, connections, lookups, libraries, and so on) and view details. The user cannot edit any resources or navigate to the administrative setting pages. |

In Oracle Integration, when you assign a role to a user, the user is granted that role for all Oracle Integration features provisioned on an instance. For example, when you assign the ServiceDeveloper role to a user for an instance provisioned with the Integrations, Processes, and Visual Builder feature set, the user gets developer permissions on each of these features. Further, each role grants different privileges for different features to the same user. Depending on the feature the user is accessing, the user can perform different tasks. For example, a user assigned the ServiceDeveloper role can develop process applications in Processes, whereas the same user can design integrations in Integrations. Note that not all Oracle Integration...
predefined roles are available in all features. For example, the ServiceMonitor role is not available in Visual Builder.

**Note:**

 Applies only to Oracle Integration Classic (user-managed).

If a user is granted access to multiple service instances provisioned in the Oracle Integration environment, it is a best practice to grant the same role to the user in all the instances. For example, suppose you have provisioned Integrations and Integration Insight as two separate instances in your Oracle Integration environment. If you assign the ServiceAdministrator role to a user in the Integrations instance, then assign the same role to the user in the Integration Insight instance too.

**WebLogic Server Roles for Oracle Integration**

Oracle Integration is a PaaS-layered service. There are predefined roles for the PaaS layer that govern access to WebLogic Server.

 Applies only to Oracle Integration Classic (user-managed).

The following table lists the predefined WebLogic Server roles available for Oracle Integration.

<table>
<thead>
<tr>
<th>Oracle Integration</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrators</td>
<td>A user with the Administrators role can:</td>
</tr>
<tr>
<td></td>
<td>• View the server configuration, <em>including</em> the encrypted value of some encrypted attributes</td>
</tr>
<tr>
<td></td>
<td>• Modify the entire server configuration</td>
</tr>
<tr>
<td></td>
<td>• Deploy Enterprise Applications and Web application, EJB, Java EE Connector, and Web Service modules</td>
</tr>
<tr>
<td></td>
<td>• Start, resume, and stop servers</td>
</tr>
<tr>
<td>Deployers</td>
<td>A user with the Deployers role can:</td>
</tr>
<tr>
<td></td>
<td>• View the server configuration, including some encrypted attributes related to deployment activities</td>
</tr>
<tr>
<td></td>
<td>• Change startup and shutdown classes, Web applications, JDBC data pool connections, EJB, Java EE Connector, Web Service, and WebLogic Tuxedo Connector components. If applicable, edit deployment descriptors.</td>
</tr>
<tr>
<td></td>
<td>• Access deployment operations in the Java EE Deployment Implementation (JSR-88)</td>
</tr>
<tr>
<td>Monitors</td>
<td>A user with the Monitors role can:</td>
</tr>
<tr>
<td></td>
<td>• View the server configuration, <em>except</em> for encrypted attributes</td>
</tr>
<tr>
<td></td>
<td>• Get read-only access to WebLogic Server Administration Console, WLST, and MBean APIs</td>
</tr>
<tr>
<td>Operators</td>
<td>A user with the Operators role can:</td>
</tr>
<tr>
<td></td>
<td>• View the server configuration, <em>except</em> for encrypted attributes</td>
</tr>
<tr>
<td></td>
<td>• Start, resume, and stop servers</td>
</tr>
</tbody>
</table>
# What Users Can Do in the Navigation Pane by Role

The following table lists the options in the Integration navigation pane and indicates which options you can access based on your assigned role.

<table>
<thead>
<tr>
<th>Option</th>
<th>Service Administrator</th>
<th>Service Developer</th>
<th>Service Deployer</th>
<th>Service Monitor</th>
<th>Service User</th>
<th>Service Invoker</th>
<th>Service Viewer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welcome</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Home</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>My Tasks</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Processes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Integrations</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<td></td>
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<td></td>
<td>Can’t use any</td>
<td></td>
<td>Can use all</td>
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<td></td>
<td>Monitor options.</td>
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<td>Monitor options.</td>
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<td>Can’t use any</td>
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<td>Can’t use any</td>
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<td>Designer options.</td>
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<td></td>
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<td>&quot;not authorized&quot;</td>
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<td></td>
<td></td>
<td>message.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visual Builder</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Insight*</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
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<td>Can’t access any</td>
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<td>Insight features.</td>
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<td>Note: User can</td>
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<td>click Insight,</td>
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<td>message.</td>
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<tr>
<td>Streams*</td>
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What Users Can Do on the Home Page by Role

The following table lists the tiles, sections, and buttons on the Oracle Integration Home page and indicates what you can access based on your assigned role.

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<th>Service User</th>
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* (applies only to Oracle Integration Classic (user-managed))

Note: User can click View Dashboards, but receives a "not authorized" error message.
What Users Can Do in Integrations by Role

The following tables list Oracle Integration predefined roles available in the Integrations feature, and the tasks users granted those roles can perform.

Note:
The ServiceDeployer role is not applicable in Integrations.

- Administration
- Connections
- Integrations
- Lookups
- Mappings
- Packages
- Monitoring

## Administration

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<tr>
<th>Action</th>
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<th>ServiceUser</th>
<th>ServiceInvoker</th>
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**Lookups**

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**Mappings**

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**Packages**

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What Users Can Do in Processes by Role

The following table lists the Oracle Integration predefined roles available in Processes, and the tasks users granted those roles can perform. Note that in Processes, the ServiceMonitor role and the ServiceUser role have the same privileges. In addition to these predefined roles, there is a set of roles defined for each process application. Service administrators are responsible for assigning process-specific roles to users.

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</thead>
<tbody>
<tr>
<td>View the activity stream</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Download the activity stream</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Download incident reports</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>View overall system health status</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Download database purge log</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>View file system capacity</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>View purge status</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>View database space usage</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>View design-time metrics (total integrations, connections, lookups, etc.)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Monitor integration status</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Monitor agent status</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
### What Users Can Do in Visual Builder by Role

The following table lists Oracle Integration predefined roles available in Visual Builder, and the tasks that users granted those roles can perform.

<table>
<thead>
<tr>
<th>Option</th>
<th>Actions</th>
<th>Service Administrator</th>
<th>Service Developer</th>
<th>Service Deployer</th>
<th>ServiceMonitor and ServiceUser</th>
</tr>
</thead>
<tbody>
<tr>
<td>My Tasks</td>
<td>Access Workspace (runtime), initiate requests (start applications), work on your assigned tasks, and track the status of processes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>My Tasks</td>
<td>Monitor dashboards</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Applications</td>
<td>Perform all actions to develop and manage process applications and their components, except restrictions on activating</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Applications</td>
<td>Activate process applications to a test partition</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Applications</td>
<td>Activate process applications to a production partition</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Spaces</td>
<td>View your spaces and the spaces shared with you, and create, edit, share, and delete your spaces</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Spaces</td>
<td>Administer any space (check status, control permissions, and delete)</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Management</td>
<td>Manage process applications (activate to production partition, retire, deactivate, shut down, and manage web services)</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Administration (runtime)</td>
<td>Configure connections to other services, configure process runtime and logger settings, schedule archive and purge, configure UI custom settings, assign and manage roles specific to process applications, manage credentials and certificates, and view notification logs</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Settings (design-time)</td>
<td>Administer any space (check status, control permissions, delete), administer any process application (delete, unlock), delete QuickStart Apps from the gallery, enable the application player, and use the Import utility</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
Oracle Integration Role | Tasks Users Can Perform in Visual Builder
--- | ---
ServiceAdministrator | A user with the ServiceAdministrator role can:
- Use the visual design tool
- Create, manage, and change the owners of applications
- Create associations with other services
- Configure security options for applications in an instance
- Specify error messages for Access Denied pages

ServiceDeveloper | A user with the ServiceDeveloper role can:
- Use the visual design tool
- Create, manage, secure, and publish web and mobile applications
- Design pages, work with business objects, build and test applications

ServiceMonitor | The ServiceMonitor role is not applicable in Visual Builder.

ServiceDeployer | The ServiceDeployer role is not applicable in Visual Builder.

ServiceUser | A user with the role of ServiceUser can only access staged and published applications. The default permission is enforced only when the service administrator adjusts security settings for the entire service instance to restrict all access to runtime applications to the users granted the ServiceUser role.

What Users Can Do in Integration Insight and Stream Analytics by Role

⚠ Applies only to Oracle Integration Classic (user-managed).

The following table lists the privileges provided by Oracle Integration predefined roles in Integration Insight and Stream Analytics.

<table>
<thead>
<tr>
<th>Oracle Integration Predefined Role</th>
<th>Tasks Users Can Perform in Integration Insight</th>
<th>Tasks Users Can Perform in Stream Analytics</th>
</tr>
</thead>
</table>
| ServiceAdministrator | A user with the ServiceAdministrator role can:
- Create models, and has access to all other models
- Create connections to other Oracle Integration features
- Import and export models
Additionally, the user can perform all the tasks that users with the ServiceDeveloper, ServiceDeployer, and ServiceUser roles can perform. | A user with the ServiceAdministrator role can:
- Configure Spark and Kafka for Stream Analytics
- Create Kafka and database connections |

ServiceMonitor | The ServiceMonitor role is not applicable in Integration Insight. | The ServiceMonitor role is not applicable in Stream Analytics. |
<table>
<thead>
<tr>
<th>Oracle Integration Predefined Role</th>
<th>Tasks Users Can Perform in Integration Insight</th>
<th>Tasks Users Can Perform in Stream Analytics</th>
</tr>
</thead>
<tbody>
<tr>
<td>ServiceDeveloper</td>
<td>A user with the ServiceDeveloper role can:</td>
<td>A user with the ServiceDeveloper role can:</td>
</tr>
<tr>
<td></td>
<td>• Create, import, and export models</td>
<td>• Create streams using Kafka connections</td>
</tr>
<tr>
<td></td>
<td>• Create milestones and indicators using</td>
<td>• Create references using database</td>
</tr>
<tr>
<td></td>
<td>business language</td>
<td>connections</td>
</tr>
<tr>
<td></td>
<td>• Define mapping of milestones to the</td>
<td>• Create manual GeoFences or</td>
</tr>
<tr>
<td></td>
<td>appropriate location in implementation and</td>
<td>database-based GeoFences</td>
</tr>
<tr>
<td></td>
<td>extraction of indicators</td>
<td>• Create draft pipelines</td>
</tr>
<tr>
<td></td>
<td>• Use the Events REST API</td>
<td></td>
</tr>
<tr>
<td>ServiceDeployer</td>
<td>A user with the ServiceDeployer role can:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Export models</td>
<td>• Publish draft pipelines to the Spark</td>
</tr>
<tr>
<td></td>
<td>• Create milestones and indicators using</td>
<td>cluster</td>
</tr>
<tr>
<td></td>
<td>business language</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Define mapping of the milestones to the</td>
<td></td>
</tr>
<tr>
<td></td>
<td>appropriate location in implementation and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>extraction of indicators</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Use the Events REST API</td>
<td></td>
</tr>
<tr>
<td>ServiceUser</td>
<td>A user with the ServiceUser role has access</td>
<td>A user with the ServiceUser role can:</td>
</tr>
<tr>
<td></td>
<td>to dashboards, and has permissions to</td>
<td>• view connections, streams, applications,</td>
</tr>
<tr>
<td></td>
<td>create, view, and edit dashboards. The</td>
<td>targets, references, GeoFences, patterns,</td>
</tr>
<tr>
<td></td>
<td>user can also use the Events REST API.</td>
<td>and all other resources. These users can't</td>
</tr>
<tr>
<td></td>
<td></td>
<td>create, edit, or delete resources.</td>
</tr>
</tbody>
</table>

**Add a User**

Add the users who need to use your Oracle Integration instance.

You can create and manage user accounts only if you are a cloud account administrator, an identity domain administrator, or have the user administrator role through delegated administration.

1. Sign in to the Oracle Cloud Infrastructure Console.
2. Click in the top left corner of the Oracle Cloud Infrastructure Console.
3. Select **Platform Services**, then **Integration**.
   The Oracle Integration Instances page is displayed.
4. Click **Users** in the upper right corner.
5. On the **Users** tab of the User Management page, click **Add**.
6. On the **Add User** page, enter the following information:
   - Your first name and last name.
   - Your email address, alternate email address, and mobile phone number. Note that your email address and alternate email address must be different.
• Your work information such as your title and work phone number.

7. Click **Next**, and then select roles to assign to the new user. You can also assign roles later.

8. Click **Finish**.

**Assign Roles to a User**

You can assign roles to users to specify the tasks they can perform in Oracle Integration. You can assign multiple roles to a user.

To assign roles to users, you must be a cloud account administrator, an identity domain administrator, or have the user administrator role through delegated administration. See Oracle Integration Roles and Privileges for a description of the various predefined roles available in Oracle Integration.

1. Click **in the top left corner of the Oracle Cloud Infrastructure Console.**

2. Click **Platform Services**, then **Integration**.

   The Oracle Integration Instances page is displayed.

3. Click **Users** in the top corner.

4. On the Users list page, click the user for which you want to assign roles.

5. Click the **Roles** tab.

6. Optionally, use the Filter by Service box to search for specific services, if required. By default, the **Roles** page displays all services in your cloud account. If you want to assign roles for a specific service and its instances, delete **All Services** from the Filter by Service box, then select your service from the list or enter the service name.

7. From the **Show** drop-down list, select one of the following:

   • **Only Services**: Lists all services. Select this if you want to assign roles to the user to be able to provision and administer cloud services in the Oracle Cloud Infrastructure Console.

   • **Only Instances**: Lists all instances. Select this if you want to give access to the user for specific instances.

   • **Both Services and Instances**: Lists all services and instances. If you selected a specific service in the Filter by Service box, it lists that service and all its instances.

8. In the search result, go to the service or instance for which you want to assign roles to the user.

9. For your service or instance, click the text box and select the required role.

   For example, to assign the **ServiceAdministrator** role for an instance, select **Only Instances** from the **Show** drop-down list. Then in the search result, go to your instance, click the text box below the instance name and select the **ServiceAdministrator (Service instance administrator role)** role.
Add a Group

Instead of assigning roles to each user individually, you can create groups and add users to groups to make it easier to assign roles. Each time you add a user to a group, the user automatically gets the roles defined for the group.

You can create and manage groups only if you are a cloud account administrator, an identity domain administrator, or have the user administrator role through delegated administration.

1. Click in the top left corner of the Oracle Cloud Infrastructure Console.
2. Select Platform Services, then Integration.
   The Oracle Integration Instances page is displayed.
3. Click Users in the top right corner, and then click Groups.
4. In the Groups list page, click Add.
5. Provide a name and description for your group.
6. Click Add.

The group is created and you can now add users to the newly created group.

Add Users to a Group

Add users to a group so that they automatically get the permissions defined for the group. You can add users to a group either from the Groups page or the Users page.

To add users to a group from the Groups page:

1. Sign in to the Oracle Cloud Infrastructure Console.
2. Click in the top left corner of the Oracle Cloud Infrastructure Console.
3. Select Platform Services, then Integration.
   The Oracle Integration Instances page is displayed.
4. Click Users in the top right corner, and then click Groups.
5. On the Groups list page, click the name of the group.
   Or, from the Action menu, click Edit.
6. On the Group Details page, select the Users tab.
7. Click Add to Group.
8. In the Add to Group dialog, select the users you want to add to the group.
9. Click Add.

The selected users are added to the group. You can now assign roles to all the users in the group, if required. Use the Roles tab to batch assign roles.
Assign Roles to a Group

After you create groups and add users to groups, you can assign roles and provide access to services and instances to all the members of the group at once.

Note that this action assigns the selected roles to all the users in the group in a batch. You can't assign roles individually if you select the group role assignment.

See Oracle Integration Roles and Privileges for a description of the various predefined roles available in Oracle Integration.

1. Sign in to the Oracle Cloud Infrastructure Console.

2. Click in the top left corner of the Oracle Cloud Infrastructure Console.

3. Click Platform Services, then Integration.

   The Oracle Integration Console is displayed.

4. Click Users in the top corner. Select the Groups tab.

5. On the Groups list page, click the group for which you want to assign roles.

6. Click the Roles tab.

7. Optionally, use the Filter by Service box to search for specific services, if required. By default, the Roles page displays all services in your cloud account. If you want to assign roles for a specific service and its instances, delete All Services from the Filter by Service box, then select your service from the list or enter the service name.

8. From the Show drop-down list, select one of the following:
   - **Only Services**: Lists all services. Select this if you want to assign roles to group members to be able to provision and administer cloud services in the Oracle Cloud Infrastructure Console.
   - **Only Instances**: Lists all instances. Select this if you want to give access to group member for specific instances.
   - **Both Services and Instances**: Lists all services and instances. If you selected a specific service in the Filter by Service box, it lists that service and all its instances.

9. In the search result, go to the service or instance for which you want to assign roles to group members.

10. For your service or instance, click the text box and select the required role from the drop-down list.

   For example, to assign the ServiceUser role for an instance, select Only Instances from the Show drop-down list. Then in the search result, go to your instance, click the text box below the instance name and select the ServiceUser (Service instance user role) role.
Use the Service Integration Account with No Password Expiration

Oracle Integration provides a service integration account in which the password does not expire. The service integration account consists of a generic application role created with specific predefined rules. Use this account when you need to invoke integrations and require that the account password not expire.

User credentials are typically used with the Basic Authentication security policy. Continuous use of this security policy by clients increases the performance load on the authentication service (Oracle Identity Cloud Service) because it must keep validating the same credentials repeatedly. The increased performance load is dependent on two factors.

- Repeated requests to the Oracle Identity Cloud Service server for password authenticator/asserter for the same basic authentication credentials.
- The Oracle Identity Cloud Service password policy requires accessing the ID store for each of the requests.

To reduce the performance load caused by repeated requests, you can use the service integration account without password expiration.

For Basic Authentication, you can use generic credentials: the client ID (that ends with _BASICAUTH) and the associated client secret. This section describes on how to create these credentials.

Obtain the PaaS Application Oracle Identity Cloud Service Application ID

1. Click in the top left corner of the Oracle Cloud Infrastructure Console. Any Oracle Integration user can do this.
2. Click Platform Services, then Integration.
3. In the upper right corner, click Users.
5. In the upper left corner, click .
7. Navigate to the Oracle Integration application.
8. Note the value in the Application ID field (for this example, referred to as $ {OIC_APP_ID}).

Configure the Service Administrator Application

1. Click Add and select Confidential Application to create a confidential application in Oracle Identity Cloud Service. This task must be performed by an Oracle Identity Cloud Service administrator.
The Add Confidential Application wizard is displayed.

2. Configure the confidential application.
   a. On the Details page, enter an application name.
   b. On the Client page, enable **Client Credentials** and **Refresh Token**.
   c. At the bottom of the Client page, click **Add** and select the **Identity Domain Administrator** role.

3. Click **Add**, then click **Next** until you reach the final page.
4. Click **Finish**. The Application Added dialog is displayed.

   a. Note the application ID, client ID, client secret for the confidential application (for this example, referred to as `SA_APP_ID`, `SA_CLIENT_ID`, and `SA_CLIENT_SECRET`), then click **Close**.

**Configure the Service Integration Application**

1. Create the service integration application.

   a. Get an access token to create an application (for this example, referred to as `SA_ACCESS_TOKEN`).

      ● Get access token request:

      ```
curl -X POST https://$IDCS_HOST/oauth2/v1/token -u $SA_CLIENT_ID:$SA_CLIENT_SECRET -d 'grant_type=client_credentials&scope=urn%3Aoidc%3Aresource_access' | jq .
```

      ● Get access token response:

      ```
      {
        "access_token": "eyJ4NXQjUzI1Ni6IlVFQ1RyX25Ram9XYk9.........................XV-2el4pAYV9aw66k_qL3b842qHw",
        "token_type": "Bearer",
        "expires_in": 3600
      }
      ```

   b. Create an application with the _BASICAUTH_ suffix using the above access token.

      ● Create an application request:

      ```
curl -X POST https://$IDCS_HOST/admin/v1/Apps -H 'Authorization: Bearer $SA_ACCESS_TOKEN' -H 'Content-Type: application/json' -d '{   "active": true,   "allUrlSchemesAllowed": false,   "allowAccessControl": false,   "allowedGrants": [   "client_credentials",   "urn:ietf:params:oauth:grant-type:jwt-bearer" ],   "attrRenderingMetadata": [   {     "name": "aliasApps",     "visible": false   } ],   "basedOnTemplate": {     "value": "CustomWebAppTemplateId"   },   "clientType": "confidential",   "displayName": "OICTEST_BASICAUTH",   "editableAttributes": [     {   "name": "allowedGrants" },     { "name": "protectableSecondaryAudiences" },     { "name": "asOPCService" },     { "name": "accessTokenExpiry" },     { "name": "linkingCallbackUrl" },     { "name": "isOAuthResource" },     { "name": "appIcon" },     { "name": "refreshTokenExpiry" },     { "name": "trustScope" },     { "name": "landingPageUrl" },     { "name": "audience" },     { "name": "samlServiceProvider" },     { "name": "isLoginTarget" },     { "name": "redirectUris" }
      }
```
Chapter 2
Use the Service Integration Account with No Password Expiration

Use the Service Integration Account with No Password Expiration

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Chapter 2

Use the Service Integration Account with No Password Expiration

Create an application response:

```json

{     "clientType": "confidential",     "isAliasApp": false,     "meta": {         "created": "2019-04-01T07:51:47.025Z",         "lastModified": "2019-04-01T07:51:47.025Z",         "resourceType": "App",         "location": "https://${IDCS_HOST}/admin/v1/Apps/0c228094b0f5456289b979800308"     },     "active": true,     "isLoginTarget": true,     "idcsCreatedBy": {         "display": "OIC_SI_TEST",         "type": "App",         "value": "5debb165fc6946708e2c1f27264fafb1",         "$ref": "https://${IDCS_HOST}/admin/v1/Apps/5debb165fc6946708e2c1f27264fafb1"     },     "displayName": "OICTEST_BASICAUTH",     "showInMyApps": false,     "isMobileTarget": false,     "allowOffline": false,     "isUnmanagedApp": false,     "idcsLastModifiedBy": {         "display": "OIC_SI_TEST",         "type": "App",         "value": "5debb165fc6946708e2c1f27264fafb1",         "$ref": "https://${IDCS_HOST}/admin/v1/Apps/5debb165fc6946708e2c1f27264fafb1"     },     "isOPCService": false,     "name": "OICTEST_BASICAUTH",     "isOAuthAccount": true,     "isManagedApp": false,     "isSamlServiceProvider": false,     "infrastructure": false,
```

---

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c. Note the application ID, client ID, and client secret from the response (for this example, referred to as `${SI_APP_ID}`, `${SI_CLIENT_ID}`, and `${SI_CLIENT_SECRET}`).

d. Activate the application using the above access token.

   • Activate the application request:

     ```
     ```

2. Associate the service integration application.

   a. Identify the `AppRoleID` to be granted for the Oracle Integration application. The `ServiceUser` role is assigned to the created application. Therefore, a search is performed for that role (for this example, referred to as `${OIC_APP_ROLE_ID}`).

      • Get the application role ID request:

      ```
      ```

      • Get the application role ID response:

      ```
      {
      "schemas": [
        "urn:ietf:params:scim:api:messages:2.0:ListResponse"
      ]
      ```
b. Grant the service integration application with the above role.

- Grant the role request:

```
  "app": {
    "value": "${OIC_APP_ID}"
  },
  "entitlement": {
    "attributeName": "appRoles",
    "attributeValue": "${OIC_APP_ROLE_ID}"
  },
  "grantMechanism": "ADMINISTRATOR_TO_APP",
  "grantee": {
    "value": "${SI_APP_ID}"
  },
  "schemas": ["urn:ietf:params:scim:schemas:oracle:idcs:Grant"]
}'
```

- Grant the role response:

```
{
  "app": {
    "value": "${OIC_APP_ID}"
  },
  "entitlement": {
    "attributeName": "appRoles",
    "attributeValue": "${OIC_APP_ROLE_ID}"
  },
  "grantMechanism": "ADMINISTRATOR_TO_APP",
  "grantee": {
    "value": "${SI_APP_ID}"
  }
}
```
Using the Service Integration Credentials

Once setup is complete, the credentials $\{SI\_CLIENT\_ID\}$ and $\{SI\_CLIENT\_SECRET\}$ can be used as the user name and password for authentication to an Oracle Integration endpoint as shown below.

Oracle Integration SOAP endpoint request sample:

```bash
bash
curl -X POST https://${OIC_HOST}/ic/ws/integration/v1/flows/soap/FLOW/1.0/
    <soapenv:Header>
        <wsse:Security soapenv:mustUnderstand="1" xmlns:wsse="http://
Use OAuth Authentication for REST APIs

Authentication and authorization in Oracle Integration is managed by Oracle Identity Cloud Service. Oracle Integration REST APIs as well as REST endpoints exposed in integrations are protected using the OAuth token-based authentication. OAuth is an authorization framework that enables an application or service to obtain limited access to a protected HTTP resource.

To use REST APIs with OAuth in Oracle Integration, you need to register your Oracle Integration instance as a trusted application in Oracle Identity Cloud Service. See Security, Authentication, and Authorization in REST API for Oracle Integration.

Trigger Integrations Using OAuth Authentication

Oracle Integration REST endpoints are OAuth-protected and can be triggered from a client using OAuth 2.0. You must perform several configuration steps for a client (in this example, postman) to successfully trigger an Oracle Integration REST-based integration.

See this blog.
Ready, Set Up, and Go

You use the Oracle Cloud Infrastructure Console to install instances of Oracle Integration.

Topics:

• Access Oracle Integration from the Oracle Cloud Infrastructure Console
• Assign the Correct User Roles to Create an Instance
• Create an Oracle Integration Instance
• About the User Interfaces of the Oracle Integration Oracle Cloud Infrastructure Console

Accessing Oracle Integration

Depending on how you signed up for Oracle Cloud, you’ll be directed to either the Oracle Cloud Infrastructure Console or the Infrastructure Classic Console.

Topics:

• Access Oracle Integration from the Oracle Cloud Infrastructure Console
• Access Oracle Integration from the Oracle Cloud Infrastructure Classic Console

Access Oracle Integration from the Oracle Cloud Infrastructure Console

You access Oracle Integration through a web console.

1. Sign in to your Oracle Cloud account.
   If you received a welcome email, use it to identify the URL, your user name, and your temporary password. After signing in, you are prompted to change your password.

2. Click in the top left corner of the Oracle Cloud Infrastructure Console.

3. Click Platform Services > Integration.
   The Oracle Integration Console is displayed.

4. From the Oracle Integration page, you can quickly create a service instance by clicking QuickStarts at the top of the page. See Quickly Create an Instance.
Access Oracle Integration from the Oracle Cloud Infrastructure Classic Console

On some older Oracle Cloud accounts, you access the Oracle Integration Console from the Oracle Cloud Infrastructure Classic Console.

1. Sign in to your Oracle Cloud account.
   
   If you received a welcome email, use it to identify the URL, your user name, and your temporary password. After signing in, you are prompted to change your password.

2. Click in the top left corner of the Oracle Cloud Infrastructure Classic Console.

3. Click Platform Services > Integration Classic.
   
   The Oracle Cloud Infrastructure Classic Console is displayed.

4. From the Oracle Integration page, you can quickly create a service instance by clicking QuickStarts at the top of the page. See Quickly Create an Instance.

Assign the Correct User Roles to Create an Instance

If you are the user that initially signed up and purchased universal credits for Oracle Cloud, you automatically have the necessary service entitlement roles to create Oracle Integration instances. Otherwise, the correct roles must be explicitly assigned to your user account to create Oracle Integration instances. Without the necessary roles, instance creation fails.

To successfully create Oracle Integration instances, ensure that your user account is assigned the following role for these services:

- Integration:
  
  Service Entitlement: AUTONOMOUS_INTEGRATION:
  CLOUD_ENTITLEMENT_ADMINISTRATOR (Autonomous Integration Cloud entitlement administrator role)

To know how to add new users and assign roles, see Add a User and Assign Roles to a User.

Note:

The Identity Cloud - Service Entitlement (Identity Domain Administrator) role has super user privileges for the identity domain. Users with this role can manage users, groups, applications, and system configuration settings. They can also perform delegated administration by assigning users to different administrative roles.
Create an Oracle Integration Instance

You can create the following types of Oracle Integration instances. Oracle manages your instance, including performing database management, performing backups, upgrading your instance to the next version, installing patches, and more.

- Quickly Create an Instance
- Create a Custom Instance

Both instances are created on the Oracle Cloud Infrastructure, which combines the elasticity and utility of public cloud with the granular control, security, and predictability of on-premises infrastructure to deliver high-performance, high availability, and cost-effective infrastructure services.

Quickly Create an Instance

You can create a quick start instance of Oracle Integration with a single click.

Capabilities of This Instance

You have two quick start options.

- Oracle Integration - Enterprise: Installs the Integration and Process feature set. This option enables you to integrate SaaS and on-premises applications and automate business processes.
- Oracle Integration - Standard: Installs the Integration feature set. This option enables you to integrate SaaS and on-premises applications.

Prerequisites

Ensure that you have the required user roles to create an instance. See Assign the Correct User Roles to Create an Instance.

Creating an Instance

To create a quick start instance:

1. Sign in to your Oracle Cloud account.
2. Click in the top left corner of the Oracle Cloud Infrastructure Console.
3. Click Platform Services > Integration.
4. In the upper right corner, click QuickStarts. The QuickStarts page is displayed.
5. Review the quick start instance details. See Oracle Integration Editions.
6. Note that below the QuickStarts header is a link for bringing over an existing Oracle Fusion Middleware license to the cloud for use with Oracle Integration.

7. If you do not want to use an existing license, select Click here.

8. In the Instance Name field, enter a name.

9. Click Create.

10. Wait for installation to complete.

Create a Custom Instance

You can create a custom instance in which you can specify the feature pack (Integrations only or Integrations and Processes) and the number of message packs per hour to use.

Capabilities of This Instance

This option enables you to complete a brief template that provides you with a pre-provisioned instance of Oracle Integration that enables you to get started quickly.

This option also enables you to specify a special, Oracle-provided tag for easy on-boarding of pre-approved, proof of concept instances for paid and large message pack customers. You can also use this feature for other special use cases in which you require a pre-approved instance. You specify a special, Oracle-provided tag for the
instance on the Details page during creation. If you have a need for this feature, work with your Oracle representative.

Prerequisites
Ensure that you have the required user roles to create an instance. See Assign the Correct User Roles to Create an Instance.

Creating an Instance
To create an instance:

1. Sign in to your Oracle Cloud account.

2. Click in the top left corner of the Oracle Cloud Infrastructure Console.

3. Click Platform Services > Integration.

4. Click Create Instance.
The Instance page is displayed.

5. Specify the following details:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instance Name</td>
<td>Enter an instance name that is unique within the tenant domain. The name cannot have more than 30 characters, must start with a letter, and can contain only letters and numbers.</td>
</tr>
<tr>
<td>Description</td>
<td>Enter a description to identify this new service. The description is used only in the instance list display.</td>
</tr>
<tr>
<td>Notification Email</td>
<td>Enter an email address at which to be notified of instance provisioning progress (for example, when provisioning completes).</td>
</tr>
<tr>
<td>Region</td>
<td>Select the compute region from which to perform the installation. Otherwise, select No Preference.</td>
</tr>
<tr>
<td>Tags</td>
<td>Select available tags for assignment or click the icon to define new tags and assign to the service instance. You can use tags to search for and categorize your instances.</td>
</tr>
<tr>
<td>Identity Domain</td>
<td>Select the identity domain to identify users and resources associated with the provisioned service instance.</td>
</tr>
</tbody>
</table>
| License Type        | Select an option:  
  • Select to bring an existing Oracle Fusion Middleware license to the cloud for use with Oracle Integration.  
  • Select to create a new Oracle Integration license.                                                                 |

6. When complete, click Next.

7. Specify the following details:
Note:
The options for selecting the number of 20k message and 5k message packs per hour on this page are mutually exclusive. The 5k message packs per hour option is for users who are not bringing a license over from Oracle Fusion Middleware. The 20k message packs per hour option is for users who are bringing a license over from Oracle Fusion Middleware.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feature Set</td>
<td>Displays the available feature sets. Visual Builder is automatically installed with each set.</td>
</tr>
<tr>
<td></td>
<td>• Integration: Installs the Integrations feature set.</td>
</tr>
<tr>
<td></td>
<td>• Integration and Process: Installs the Integrations and Processes feature sets.</td>
</tr>
<tr>
<td>I have special instructions from Oracle</td>
<td>Select only if you received a special tag from Oracle for creating this instance, then enter the tag in the Special Tag field when prompted.</td>
</tr>
<tr>
<td>Number of 5k Messages Per Hour Packs</td>
<td>Enter a value between 1 and 12. A single pack enables you to send up to 5000 messages per hour. This option is displayed if you selected to subscribe to a new Oracle Integration software license.</td>
</tr>
<tr>
<td>Number of 20k Messages Per Hour Packs</td>
<td>Enter a value between 1 and 3. A single pack enables you to send up to 20,000 messages per hour. This option is displayed if you selected to bring an existing Oracle Middleware software license to Oracle Integration.</td>
</tr>
</tbody>
</table>

8. When complete, click **Next**.
9. Confirm your selections, then click **Confirm**.
10. Wait for installation to complete.

About the User Interfaces of the Oracle Integration Oracle Cloud Infrastructure Console

You can perform life cycle management tasks from the Oracle Integration Oracle Cloud Infrastructure Console.

Topics:

• Explore the Oracle Cloud Infrastructure Console
• Explore the Oracle Cloud Infrastructure Console Activity Page
• Explore the Oracle Cloud Infrastructure Console Instance Overview Page

Explore the Oracle Cloud Infrastructure Console

You can use the Oracle Cloud Infrastructure Console to view all existing Oracle Integration instances.
The following table describes the key information shown in the Oracle Cloud Infrastructure Console.

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Menu Icon]</td>
<td>Click and select an option from the menu to open the service console for one of the Oracle Services to which you are subscribed.</td>
</tr>
<tr>
<td>![QuickStarts Icon]</td>
<td>Click to access the page for creating a quick start instance.</td>
</tr>
<tr>
<td>![Welcome Icon]</td>
<td>Click to display the Oracle Integration Welcome page.</td>
</tr>
<tr>
<td>![Sign In Icon]</td>
<td>Click to sign in to the services to which you are subscribed.</td>
</tr>
<tr>
<td>![Instances Summary Icon]</td>
<td>Number of instances and message packs in the identity domain.</td>
</tr>
<tr>
<td>![Search by instance name or tags Icon]</td>
<td>Enter a full or partial service instance name or tags to filter the list of service instances to include. You can create a tag of a service instance when installing Oracle Integration with the stack templates.</td>
</tr>
<tr>
<td>![Create Instance Icon]</td>
<td>Create a new service instance. This option lets you customize the number of message packs and select the region from which to provision your instance.</td>
</tr>
<tr>
<td>![Create Instance Icon]</td>
<td>Service instance icon for a created instance. Click this icon to view more details.</td>
</tr>
<tr>
<td>![Status Icon]</td>
<td>Status icon indicating that the instance is being created.</td>
</tr>
<tr>
<td>![Status Icon]</td>
<td>Status icon indicating the service instance is undergoing maintenance or terminating.</td>
</tr>
<tr>
<td>Element</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>!</td>
<td>Status icon indicating that the service instance has failed to be created. This icon can also indicate that the service instance has stopped. See the Activity page.</td>
</tr>
<tr>
<td>service-name</td>
<td>Name of the service instance. Click the name to view more details.</td>
</tr>
<tr>
<td>Created On</td>
<td>When provisioning is complete, the date and time in UTC at which the instance was created.</td>
</tr>
<tr>
<td>Message Packs</td>
<td>The number of message packs available with the instance.</td>
</tr>
<tr>
<td></td>
<td>Click to select one of the following options:</td>
</tr>
<tr>
<td></td>
<td>•   Open Oracle Integration Home Page</td>
</tr>
<tr>
<td></td>
<td>•   Start</td>
</tr>
<tr>
<td></td>
<td>•   Stop</td>
</tr>
<tr>
<td></td>
<td>•   Add Tags</td>
</tr>
<tr>
<td></td>
<td>•   Scale Instance</td>
</tr>
<tr>
<td></td>
<td>•   Change License Type</td>
</tr>
<tr>
<td></td>
<td>•   Delete</td>
</tr>
</tbody>
</table>

**Instance Create and Delete History**

Shows details about created or deleted service instances.

- **Range**—Specifies a range for which you are interested in viewing created and failed service instances.
- **Show only failed attempts**—Check this box if you want to see failed attempts only.
- **Details**—Displays system messages logged during the creation or deletion process. Messages include information about auto-retry attempts.

---

**Explore the Oracle Cloud Infrastructure Console Activity Page**

You can use the Activity page to search for and review cloud service activities that have occurred in your identity domain. To access this page, click the Activity tab.

![Activity Page Screenshot](image)

The Activity page is divided into the following sections:

- **The Search Activity Log section,** from which you can specify search details that determine which services you see. These details include:
  - Date and time range
  - Operation status

---

Chapter 3

About the User Interfaces of the Oracle Integration Oracle Cloud Infrastructure Console

3-8
– Instance name and service type
– Operation type

• The **Results** pane, which shows the results of the search operation. You can limit the number of results to return, per page, to 5, 10, 50, or 100.

The following table describes the key information shown on the Activity page.

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Time Range</td>
<td>Filters activity results to include only operations started within a specified time range. The range defaults to the previous 24 hours.</td>
</tr>
<tr>
<td>Operation Status</td>
<td>Filters operations by status of the operation:</td>
</tr>
<tr>
<td></td>
<td>• All (default value)</td>
</tr>
<tr>
<td></td>
<td>• Scheduled</td>
</tr>
<tr>
<td></td>
<td>• Running</td>
</tr>
<tr>
<td></td>
<td>• Succeeded</td>
</tr>
<tr>
<td></td>
<td>• Failed</td>
</tr>
</tbody>
</table>

You can select any subset of status types.

<table>
<thead>
<tr>
<th>Instance Name</th>
<th>Filters the activity results to include operations only for the specified service instance. You can enter a full or partial service instance name.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Type</td>
<td>Filters the activity results to include operations only for instances of the specified service type. The default value is the current cloud service.</td>
</tr>
<tr>
<td>Operation</td>
<td>Filters the activity results to include selected types of operations. You can select any subset of the given operations. The default value is All.</td>
</tr>
<tr>
<td>Search</td>
<td>Searches for activities by applying the filters specified by the Start Time Range, Status, Service Name, Service Type, and Operation fields, and displays activity results in the table.</td>
</tr>
<tr>
<td>Reset</td>
<td>Clears the Start Time Range and Service Name fields, and returns the Status and Operation fields to their default values.</td>
</tr>
<tr>
<td>Results per page</td>
<td>Specifies the number of results you want to view per page. The default value is 10. You can sort the columns in ascending or descending order.</td>
</tr>
<tr>
<td>Operation</td>
<td>Shows the type of operation performed on the service instance.</td>
</tr>
<tr>
<td>Instance Name</td>
<td>Shows the name of the service instance and its identity domain: service_instance:identity_domain</td>
</tr>
<tr>
<td>Service Type</td>
<td>Shows the type of cloud service for this instance.</td>
</tr>
<tr>
<td>Operation Status</td>
<td>Shows the status of the operation performed on the service instance.</td>
</tr>
<tr>
<td>Start Time</td>
<td>Shows the time the operation started.</td>
</tr>
<tr>
<td>End Time</td>
<td>Shows the time the operation ended, if the operation is complete.</td>
</tr>
<tr>
<td>Initiated By</td>
<td>Shows the user that initiated the operation. The user can be any user in the identity domain who initiated the operation or, for certain operations such as automated backup, the system.</td>
</tr>
</tbody>
</table>
Explore the Oracle Cloud Infrastructure Console Instance Overview Page

You can use view overview information for a specific instance. To access this page, click an instance name or icon in the Oracle Cloud Infrastructure Console.

Instance Overview

The following table describes the key information shown on the Overview page.

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manage this instance (adjacent to the service instance name)</td>
<td>Click to select one of the following options:</td>
</tr>
<tr>
<td></td>
<td>• Open Oracle Integration Home Page</td>
</tr>
<tr>
<td></td>
<td>• Start</td>
</tr>
<tr>
<td></td>
<td>• Stop</td>
</tr>
<tr>
<td></td>
<td>• Add Tags</td>
</tr>
<tr>
<td></td>
<td>• Scale Instance</td>
</tr>
<tr>
<td></td>
<td>• Change License Type</td>
</tr>
<tr>
<td></td>
<td>• Delete</td>
</tr>
</tbody>
</table>
### Oracle Integration for Oracle SaaS

Oracle Integration for Oracle SaaS, a streamlined version of Oracle Integration, gives you the features and benefits of Oracle Integration with a focus on SaaS.

**Topics:**
- Differences between Oracle Integration and Oracle Integration for Oracle SaaS
- Create an Oracle Integration for Oracle SaaS Instance
- View Message Consumption for Oracle Integration for Oracle SaaS

### Differences between Oracle Integration and Oracle Integration for Oracle SaaS

Oracle Integration for Oracle SaaS, a streamlined version of Oracle Integration, gives you the features and benefits of Oracle Integration with a focus on SaaS. Here are the key differences:

- **Purpose-built for connecting and extending Oracle SaaS.** Specifically, every integration you create has an endpoint in an Oracle Cloud SaaS application, every Visual Builder application you create uses at least one business object or API call from an Oracle Cloud SaaS application, and every process application you create includes at least one business object or API call from an Oracle Cloud SaaS application.

- **Flexibility for hourly bursting.** Oracle Integration for Oracle SaaS is offered as a monthly subscription in packs of one million messages per month, which keeps costs predictable even when you have unpredictable hourly volumes. Usage is reported monthly instead of hourly.
Provisioning. Creating an instance for Oracle Integration for Oracle SaaS is slightly different from creating an instance for Oracle Integration, and Bring Your Own License (BYOL) is not available in Oracle Integration for Oracle SaaS. For more details, see Create an Oracle Integration for Oracle SaaS Instance.

Other than those differences, the product functionality, graphical user interface, and documentation are the same.

Create an Oracle Integration for Oracle SaaS Instance

You can create Standard and Enterprise editions of Oracle Integration for Oracle SaaS instances. Oracle manages your instance, including performing database management, performing backups, upgrading your instance to the next version, installing patches, and more.

Prerequisites:

- Ensure that you have the required user roles to create an instance. See Assign the Correct User Roles to Create an Instance.
- If you are planning to create both Standard and Enterprise instances of Oracle Integration for Oracle SaaS, you will need to create and use separate accounts.

Note:

You cannot create Standard and Enterprise instances under the same account.

When you create an instance, you have two options:

- Integration and Process: Installs Oracle Integration for Oracle SaaS Enterprise edition. This option installs the Integration and Process feature set enabling you to integrate SaaS and on-premises applications and automate business processes.
- Integration: Installs Oracle Integration for Oracle SaaS Standard edition. This option installs the Integration feature enabling you to integrate SaaS and on-premises applications.

For additional details on the differences between Standard and Enterprise editions, see Oracle Integration Editions.

To create an instance:

1. Sign in to your Oracle Cloud account.
2. Click in the top left corner of the Oracle Cloud Infrastructure Console.
3. Click Services > Integration for Oracle SaaS.
4. Click Create Instance.
5. In the **Create Instance** page, specify instance details and click **Next**.

Specify an instance name that is unique within the tenant domain and the compute region from which to perform the installation. It's also useful to provide your email address to be notified of instance provisioning progress.

6. In the **Create Instance Details** page, specify the feature set for which you are subscribed and the number of packs of 1 million messages per month that you require.
WARNING:

Although both options are displayed, ensure that you select the feature set **Integration** or **Integration and Process** for which you have entitlement. Otherwise, your account will be suspended. For additional details, see Resume Use of a Suspended Oracle Integration for Oracle SaaS Account.

7. In the Create Instance Confirm page, check the details of your instance.

8. Click **Create** to start creating your instance.
When instance creation completes, Sign in to Oracle Integration for Oracle SaaS. See Sign In to Oracle Integration.

To view your message pack information, see View Message Consumption for Oracle Integration for Oracle SaaS.

View Message Consumption for Oracle Integration for Oracle SaaS

In the Resource Quotas page, you can view the number message packs you have and how many are remaining.

1. Sign in to your Oracle Cloud account.

2. Click in the top left corner of the Oracle Cloud Infrastructure Console.

3. Click Dashboards > Infrastructure Classic.

4. Click Integration for Oracle SaaS in the graph to display information about your instance.

5. Select the Resource Quotas tab to view how many message packs you have, how many you have used, and how many are remaining.
Navigate and Explore

After your system is provisioned and user roles are assigned, begin exploring the rich features of Oracle Integration.

Topics:

• Sign In to Oracle Integration
• What You Can Do on the Home Page
• Use Features Together

Sign In to Oracle Integration

Before you can sign in, you must have a user account that defines your user name, password, and identity domain, and access rights to the service. You also need the web address (URL) for your instance.

When a service is activated, it sends the sign-in credentials and URL to the designated administrators. An administrator then creates an account for each user who needs access to the service. Check your email or contact your administrator for your account credentials and service URL.

To sign in:

1. Open your web browser and go to the service URL given to you either in an email or by your administrator. The Sign In page opens.
2. Enter your identity domain, user name (user ID), and password.
3. Click Sign In.
   
   If you’re signing in for the first time, you’re prompted to create a new password for security reasons. Follow the instructions on the screen to complete this task.
   
   After you sign in, the Welcome page opens. Select any item on this page to learn more about Oracle Integration and its features.
4. Click Home.

What You Can Do on the Home Page

Use the Home page as your launch pad and high-level dashboard. Return to it at any point, and depending on your assigned role, launch features, return to previous work, monitor instances, and drill down to troubleshoot as needed.
The Home page includes two main areas: the navigation pane and the adjacent main pane that displays tiles for viewing, developing, performing actions, and monitoring.

What you see on the Home page depends on:

- Your assigned role
  For example, users assigned the ServiceAdministrator role are superusers that see all available options on the Home page. Users assigned the ServiceDeveloper role see options to develop for all features but not administer. See Grant Access and Manage Security.

- The features available for your instance
  For example, your instance might include the Integrations and Visual Builder features, or it might include the Integrations, Processes, and Visual Builder features. If you’re using Oracle Integration Classic (user-managed), your instance might include the Integrations, Processes, and Visual Builder features, and be registered with an analytics instance that includes the Integration Insight feature. See Register an Integration Analytics Instance to Connect Integration Insight to Integrations.

Use the Home page to:

- Navigate Anywhere
- View and Drill Down by Status
- Open Recently Worked on Items
- Start Process Applications as a User
- Start Developing by Feature
- Monitor Health and Drill Down to Troubleshoot
Navigate Anywhere

Use the navigation pane to launch features or drill down to specific options.

The links in the navigation pane change, depending on your location in Oracle Integration.

- When the Home page is displayed, the navigation pane lists all the features available to you. (Administrators use the Registration link to register additional features.)
When you select a feature link, the navigation pane changes to list available options for the feature. For example, after you click Processes in the navigation pane, process-specific links display in the pane. Click Home to return to the Home page.

- Depending on your assigned role and available features, the following links may display on the Home page.

<table>
<thead>
<tr>
<th>Links</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welcome</td>
<td>Learn about Oracle Integration's features.</td>
</tr>
<tr>
<td>Home</td>
<td>Access the launch pad and high-level dashboard for Oracle Integration. You can return to the Home page at any time.</td>
</tr>
<tr>
<td>Links</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| ![My Tasks](image) | Launch the runtime environment for process tasks. Start process applications, work on tasks as a user, view dashboards, and perform runtime administration such as mapping process roles.  
   See Quick Tour of the Tasks Page in *Using Processes in Oracle Integration*.                                                                                                                                                                                                 |
| ![Processes](image) | Launch the design-time environment for process applications. Create process applications from scratch or by using QuickStart Apps. Model processes in the process editor, and create web forms and decisions. Perform design-time administration such as playing, testing, and deploying applications.  
   See Quick Tour of the Processes Page in *Using Processes in Oracle Integration*.                                                                                                                                                                                                 |
| ![Integrations](image) | Launch the design-time environment for integrations. Create and activate integrations, as well as their connections and orchestrations. Work with lookups, packages, agents, and adapters.  
   See Getting Started with Integrations in *Using Integrations in Oracle Integration*.                                                                                                                                                                                                 |
| ![Visual Builder](image) | Create and publish web and mobile applications.  
   See Getting Started with Visual Builder in *Using Oracle Visual Builder - Classic Applications*.                                                                                                                                                                                                 |
| ![Insight](image) | Create models of your business processes. Create connections to other Oracle Integration features. Activate models to start collecting data. View metrics for your business processes in preconfigured and custom dashboards.  
   This link may display if you’re using Oracle Integration Classic (user-managed).  
   See Introduction to Integration Insight in *Using Integration Insight in Oracle Integration Classic*.                                                                                                                                 |
| ![Streams](image) | Create real-time analytics applications. Work with streams, references, connections, and targets. Get up to speed quickly using patterns.  
   This link may display if you’re using Oracle Integration Classic (user-managed).  
   See Getting Started with Stream Analytics in *Using Stream Analytics in Oracle Integration Classic*.                                                                                                                                 |
| ![Registration](image) | Link features and data in other pods to your current instance.  
   See Register an Integration Analytics Instance to Connect Integration Insight to Integrations.                                                                                                                                                                                                 |
| ![Settings](image) | Change logging levels and download logs for Oracle Integration.  
   See Configure Settings for Error Logs.                                                                                                                                                                                                                                                                                                     |

**View and Drill Down by Status**

Status tiles provide a quick view of key artifacts. Click any item for more information.

- **My Tasks**: See which process tasks are in progress. If needed, drill down to tasks.
  - **Overdue**: Includes tasks whose due date has passed.
  - **Open**: Includes tasks that are assigned.
  - **On Track**: Includes tasks due in more than two days and those without a due date.
  - **Due**: Includes tasks due within the next two days.
• **Integrations:** See the number of active integrations and drill down to scheduled integrations.

• **Connections:** See the number of active connections used in integrations and drill down if needed.

• **Visual Applications:** See the number of developed, staged, and published applications and drill down if needed.

• **Insight:** See the number of active models and drill down if needed. This tile may display if you’re using Oracle Integration Classic in a user-managed environment.

Status tiles display to all users.

---

Open Recently Worked on Items

The Recents tile lists feature artifacts created or edited recently. For example, select a recent integration to quickly begin editing it. From the tabs, select a feature, then select a recent item.

The display of the Recents tile depends on the role assigned to you.
Start Process Applications as a User

The Actions tile lists process applications ready to start. This tile provides one of several ways for end users to start process applications, and also allows developers to try out process applications after activating them. (Users can also click My Tasks in the navigation pane and then click Initiate Request to start an application.)

The Actions tile displays to all users. To display in the Actions tile, the process application must be activated and its roles must be mapped.

Start Developing by Feature

The Develop tile lets you quickly get started creating artifacts for selected features.

- **Processes**: Create an application from scratch or select from the QuickStart gallery of completed applications that you can customize or activate as is.
- **Integrations**: Create connections and an integration that uses them or activate a ready-to-use sample integration.
- **Insight**: View dashboards to see metrics for activated models or create a new model. This feature may display if you’re using Oracle Integration Classic (user-managed).
- **Streams**: View or create resources used to build your streaming data pipelines. This feature may display if you’re using Oracle Integration Classic (user-managed).

The Develop tile is displayed depending on the roles assigned to you.
Monitor Health and Drill Down to Troubleshoot

The Monitor tiles provide quick access to dashboard and monitoring information.

- **Process Health** displays the number of processes that are suspended, recoverable, and alerted. Click **Tracking** to view specific instances. Click **Dashboard** to view process instance health or create your own dashboards.

- **Integrations Health** displays details about the overall system health of integrations, where green indicates that system health is acceptable and red indicates that errors are occurring that can impact your active integrations. The total numbers of received messages, processed messages, successful messages, and failed messages are also provided. Click **Monitoring** to drill down to troubleshoot.

- **Insight Models** displays the number of active and completed business process instances for the last five days for each model. Hover over a grouping to view more details. Click the Insight Model’s title to view the model’s console.

The Insight Models pane is available only when you’re using Oracle Integration Classic (user-managed).

The Monitor tiles that are displayed depend on your assigned roles.
Use Features Together

You can use Oracle Integration features together in a number of ways.

- Use Integrations in Process Applications
- Use Process Applications in Integrations
- Use Processes in Visual Builder Applications
- Map Integrations to Insight Milestones

Use Integrations in Process Applications

You can incorporate integrations into processes directly from the process editor. Drag and drop an integration element from the palette to the process flow, and select the active integration to call.

See Configuring Integrations in *Using Processes in Oracle Integration*.

Use Process Applications in Integrations

You can invoke a process from an orchestrated integration. When you drag the process node into an integration, the Select Process wizard prompts you to select an application, process, and operation to invoke.

See Connecting to Processes in *Using Integrations in Oracle Integration*.

Use Processes in Visual Builder Applications

You can use processes in Visual Builder applications to automate task assignment and create task lists. After you associate a Visual Builder custom business object with a process, you can add triggers, UI actions, and UI components to pages to start processes and enable user tasks to be completed.

**Map Integrations to Insight Milestones**

If you’re using Oracle Integration Classic (user-managed), you can map milestones to an integration to indicate where significant business events transpire.

When an action mapped to a milestone is passed, identifier and indicator information is extracted from the message payload and the milestone is considered passed. Integration Insight collects this information and displays it on relevant dashboards in the model’s console.

See Map Milestones to Integrations in *Using Integration Insight in Oracle Integration Classic*.
Move Design-Time Metadata Between Environments

Use automated tools to bring metadata from other instances to Oracle Integration.

Topics:

• Export and Import Oracle Integration Design-Time Metadata Between Instances
• Migrate Process Design-Time Metadata into Oracle Integration

Oracle encourages you to migrate your existing instances of Oracle Integration Cloud Service, Oracle Process Cloud Service, and Oracle Integration Classic to Oracle Integration on Oracle Cloud Infrastructure. You can gain several advantages by doing so.

• Migrate Oracle Integration Cloud Service and Process Cloud Service to Oracle Cloud Infrastructure
• Migrate Oracle Integration Classic Instances to Oracle Cloud Infrastructure

Export and Import Oracle Integration Design-Time Metadata Between Instances

You can export an Oracle Integration instance to another Oracle Integration instance (for example, when moving from a test or development environment to a production environment).

Export Oracle Integration Design-time Metadata from One Instance

Perform the following command to export Oracle Integration design-time metadata to an archive.

1. To export the Integrations design-time metadata to another Oracle Integration instance, invoke the REST API. This action asynchronously creates an archive that includes all above-mentioned objects.

Headers
Authorization : Basic
Content-Type : application/json

payload
{
    "storageInfo": {
        "storageUrl": "https://swiftobjectstorage.us-region-1.oraclecloud.com/v1/paasdevociclonerepo",
        "storageUser": "myemail@company.com",
        "storagePassword": "generated_token"}
For example, use a postman or curl (as shown below) command to export all Integrations design time metadata to an Oracle Storage Cloud Service instance that you specify:


where:
- storageInfo: Is the URL of the storage container.
- storageUser: Is the storage user name.
- storagePassword: Is the storage password.

Possible sample output from this command is as follows:

```json
{
  "archiveFilename": "archive_Local_Suite_Instance-d1e4295f-e17a-498a-a96e-44dcb417dfb4.zip",
  "jobID": "d1e4295f-e17a-498a-a96e-44dcb417dfb4",
  "location": "https://swiftobjectstorage.us-region-1.oraclecloud.com/v1/paasdevocloneRepo",
  "status": "Starting"
}
```

2. Check the status of the export operation using a postman or curl (as shown below) command:

curl -k -v -X GET -u admin:password https://host/ic/api/common/v1/exportServiceInstanceArchive/{jobId}

Possible sample output from this command is as follows:

```json
{
  "status": "COMPLETED"
}
```

The archive is created in the Oracle Storage Cloud Service instance of Oracle Integration.

3. If the status is completed, you are now ready to import the archive.

**Import the Design-Time Metadata into Another Oracle Integration Instance**

After exporting Integrations design-time metadata to a zip archive file, import the file to another Oracle Integration instance.
When imported into Oracle Integration, the archive is referenced in the payload.

```json
{
  "archiveFile": "archive_file_name",
  "importActivateMode": "ImportActivate",
  // options are "ImportOnly" || "ActivateOnly" || "ImportActivate"
  "storageInfo": {
    "storageUrl": "https://swiftobjectstorage.us-region-1.oraclecloud.com/v1/paasdevoic/cloneRepo",
    "storageUser": "myemail@company.com",
    "storagePassword": "generated_token"
  }
}
```

1. To import the archive, go to the Oracle Integration instance and invoke the REST API. This action retrieves the archive from the Oracle Storage Cloud Service instance where the archive was created.

   **Headers**
   - Authorization : Basic
   - Content-Type : application/json
   - payload

   ```json
   {
     "archiveFile": "archive_Local_Suite_Instance-67e7358b-077b-420f-9e04-e9b9e8374b68.zip",
     "importActivateMode": "ImportActivate",
     // options are "ImportOnly" || "ActivateOnly" || "ImportActivate"
     "storageInfo": {
       "storageUrl": "https://swiftobjectstorage.us-region-1.oraclecloud.com/v1/paasdevoic/cloneRepo",
       "storageUser": "myemail@company.com",
       "storagePassword": "generated_token"
     }
   }
   }
   ```

   For example, use a `postman` or `curl` (as shown below) command to import the archive of design time objects into Oracle Integration. You can set `importActivateMode` to the following values:

   - **ImportOnly**: Imports, but does not activate, integrations.
   - **ActivateOnly**: Activates previously imported integrations. This enables you to update connection parameters before activating integrations.
   - **ImportActivate**: Imports and activates integrations.

   ```sh
curl -k -v -H "Content-Type: application/json" -X POST -d '{"archiveFile": "archive_Local_Suite_Instance-67e7358b-077b-420f-9e04-e9b9e8374b68.zip", "importActivateMode": "ImportOnly", "storageInfo": { "storageUrl": "https://swiftobjectstorage.us-region-1.oraclecloud.com/v1/paasdevoic/cloneRepo", "storageUser": "myemail@company.com", "storagePassword": "generated_token" }}'
   ```
swiftobjectstorage.us-region-1.oraclecloud.com/v1/paasdevoic/cloneRepo","storageUser":"myemail@company.com", "storagePassword":"generated_token})" -u admin:password https://host/ic/api/common/v1/importServiceInstanceArchive

Possible sample output from this command is as follows:

```
{
"jobId":"554",
"status":"NOT_STARTED"
}
```

2. Check the status of the import operation using a postman or curl (as shown below) command:

```bash
curl -k -v -X GET -u admin:password https://host/ic/api/common/v1/importServiceInstanceArchive/554
```

Possible sample output from this command is as follows. Other potential output includes RUNNING, COMPLETED, and FAILED.

```
{
"jobId":"5108",
"overallStatus":"RUNNING",
"componentStatus":[
{
"component":"Integration",
"status":"RUNNING"
}
]
}
{
"jobId":"5108",
"overallStatus":"COMPLETED",
"componentStatus":[
{
"component":"Integration",
"status":"COMPLETED",
"percentage":100
}
]
}
```

3. Log in to your Oracle Integration instance.

4. Browse the pages and note that the design-time metadata you exported from your Oracle Integration Classic instance are now visible. For example, for Integrations, look for integrations, connections, lookups, and more.
Migrate Process Design-Time Metadata into Oracle Integration

As an administrator, you can import your Process design-time metadata (process applications and decision models) into Oracle Integration. The import tool provides migration flexibility: choose to migrate the entire instance, a selected space, or individual items.

- Import Process Design-Time Metadata
- Import Using the Import Command Line Utility

Import Process Design-Time Metadata

Use the Process import tool to automatically move Process and decision design-time metadata from one instance to another. The tool moves process applications and active decision models from a selected source (an Oracle Process Cloud Service instance or Oracle Integration instance) to a selected Oracle Integration destination, and activates the decision models.

Note:
Run the import tool once only for a specified scope. (Running the tool multiple times for a scope can cause unpredictable results.) Avoid refreshing or closing the tool during the import.

1. On the Oracle Integration Home page, click Processes in the navigation pane.
2. Click Settings in the navigation pane, then Import from the top options on the Administration page.
3. On the Import Administration page, specify a source for the import.
   a. In the Identify the instance to import from fields, specify whether to import from an Oracle Process Cloud Service instance or another Oracle Integration instance.
   b. In the Host Name field, enter the host, using the format https://host:port.
   c. Enter a user name and password to sign in to the instance as an administrator.
4. Identify a destination for the import.
   - To import to your current instance, skip the Import to the current Oracle Integration instance field.
   - To import to another Oracle Integration instance than your current instance, click Edit and complete the host, user name, and password fields for the instance you want to import to.
   - To select importing to the current instance, click Reset.
5. In the Scope field, identify what you want to import.
• Choose **Entire Instance** to import all process applications and decision models from all spaces located on the instance.
• Choose **Space** to import a selected source only. Select the space in the **Source Space** field that displays.
• Choose **Process Application or Decision Model** to import a selected application or decision model only. In the additional fields that display, select the source space, process application or decision model to import, and the destination space.

6. Click **Import**.
7. Review the import log.

![Note:](image)

You MUST check the logs and make sure there are no errors before proceeding with post migration steps.

Click **Download Import Log** in the import dialog to download a zip file containing the import log. It lists any errors that might have occurred along with a summary of the number of spaces or items (process applications or decision models) imported.

8. In Oracle Integration, change space settings as needed.

Return to the design-time Administration screen, and share the space(s) you migrated to Oracle Integration and change their permissions.

**Import Using the Import Command Line Utility**

Optionally use an import command line to move Process and decision design-time metadata from one instance to another. (Using the import tool, however, is strongly recommended.) The utility moves process applications and active decision models from a selected source (an Oracle Process Cloud Service or Oracle Integration instance) to a Oracle Integration destination, and activates decision models.

![Note:](image)

Run the import utility once only for a specified scope. (Running the utility multiple times for a scope can cause unpredictable results.)

![Note:](image)

The import utility requires Java version 8 or later. In addition, both the source and target instances must return a ping response.

1. On the Oracle Integration Home page, click **Processes** in the navigation pane.
2. Click **Settings** in the navigation pane, then **Import** on the Administration page.
3. Click the **Download Utility** button and save it to a selected location.
4. Sign in to the Oracle Process Cloud Service (source system) and Oracle Integration (target) environments.

5. Run the ImportTool utility from the command line. Use arguments to import an entire Oracle Process Cloud Service instance, one or more of its spaces, or one or more process applications or decision models.

**Format**

```java
$java -jar ImportTool.jar srcType=PCS srcHost=http://host:port srcUser=user srcPass=password oicHost=http://host:port oicUser=user oicPass=password scope=scope
```

**Example: Import the entire Oracle Process Cloud Service instance**

```bash
$java -jar ImportTool.jar srcType=PCS srcHost=http://abc01xyz.example.com:7001 srcUser=user1 srcPass=password1 oicHost=http://def02uvw.example.com:7001 oicUser=user1 oicPass=password1 scope=SPACE srcSpace="123456789"
```

**Example: Import process applications (delimit items by pipe line)**

```bash
$java -jar ImportTool.jar srcType=PCS srcHost=http://abc01xyz.example.com:7001 srcUser=user1 srcPass=password1 oicHost=http://def02uvw.example.com:7001 oicUser=user1 oicPass=password1 scope=PROJECT srcSpace="132457689" srcProject="Loan Application|Travel Application" oicSpace="123456789"
```

6. Review the import log.

**Note:**

You MUST check the logs and make sure there are no errors before proceeding with post migration steps.

A zip file containing the import log is created in the SRC_TO_OIC folder. It lists any errors that might have occurred along with a summary of the number of spaces or items (process applications or decision models) imported.

7. In Oracle Integration, change space settings as needed.

   Return to the design-time Administration screen, and share the space(s) you migrated to Oracle Integration and change their permissions.
Manage Oracle Integration

Oracle is responsible for maintaining the infrastructure on which Oracle Integration is built.

An administrator can increase or decrease the number of message packs for an instance, delete an instance, view activity for an instance and can export diagnostic information if problems occur in Oracle Integration.

Note:

Life cycle management tasks such as starting an instance, stopping an instance, and so on may fail if the host is being upgraded or backed up. Retry the life cycle management tasks in two hours. Any ongoing design-time/runtime functionality is not impacted.

Topics:

• Scale an Oracle Integration Instance
• Start or Stop an Oracle Integration Instance
• Manage Integrations and Errors
• Manage SSL Certifications
• Manage Instance History
• Configure Settings for Error Logs
• Delete an Oracle Integration Instance
• Change the BYOL Metering Option of an Existing Instance
Note:

Oracle Integration takes regular internal backups on your managed instance to restore it in the event of a failure of underlying infrastructure resources. You cannot request an explicit backup checkpoint or restore an instance to a prior state. Oracle recommends that you use the integration level export commands to take periodic copies of your design-time metadata and configuration and use the corresponding import APIs to restore. You can also use resource level APIs to perform the same tasks depending on whether you want to use storage or source control for backups, need to back up specific/critical resources, and so on.

See:

- Export and Import Oracle Integration Design-Time Metadata Between Instances
- REST API for Oracle Integration
- Import and Export Integrations
- Manage Packages

Scale an Oracle Integration Instance

You can increase or decrease the number of message packs for your instance based on the demand. The maximum number of message packs for an instance is based on your license type. For a bring your own license type (BYOL), the instance can have a maximum of 3 message packs and each message pack adds 20K Messages per Hour Pack to your instance. If you don’t have a BYOL license type, the instance can have a maximum of 12 message packs and each message pack adds 5K Messages per Hour Pack to your instance.

To increase or decrease the message pack:

1. Sign in to the Oracle Cloud Infrastructure Console.

2. Click in the top left corner of the Oracle Cloud Infrastructure Console.

3. Select Platform Services, then Integration.

4. In the Oracle Integration console, identify the name of your Oracle Integration instance.

5. Click adjacent to the instance name and select Scale Instance. The Scale Instance dialog opens.

6. In the Scale Instance dialog, specify the following options:
   - **Type of change, increase or decrease**: Select Increase capacity to add message pack to your instance or select Decrease capacity to remove the message pack from your instance.
   - **Enter the number of 20K Messages Per Hour Packs**: Enter a number of message packs that you want to increase or decrease. This is an example of BYOL license and thus shows 20K Messages Per Hour Packs.
7. Click **Scale Instance**.
   For a successful scaling request, you'll see the following message in the Service Overview page:
   
   *Your scaling request was accepted.*

8. After a few moments, click **Refresh** to update the page.
   You might need to click the icon more than once to see any change to the page.

9. Note the change in the number of message packs in the Overview page has changed as per your scaling request.

## Start or Stop an Oracle Integration Instance

You can start or stop all nodes in an Oracle Integration instance cluster. Billing is stopped for the duration that the instance is stopped.

To start or stop all nodes in an instance cluster:

1. Sign in to the Oracle Cloud Infrastructure Console.

2. Click **in the top left corner of the Oracle Cloud Infrastructure Console.**

3. Select **Platform Services**, then **Integration**.

4. Identify the instance to start or stop.

   To start all nodes in an instance cluster:
   
   a. From the menu to the right of the instance name, select **Start**.
   b. Click **Yes** when prompted to confirm your selection.

   To stop all nodes in an instance cluster:
   
   a. From the menu to the right of the instance name, select **Stop**.
   b. Click **Yes** when prompted to confirm your selection.

   This action causes the following:
   
   • Billing is stopped for the duration that the instance is stopped.
   • Integration endpoints are quiesced.
   • Process instances are quiesced.
• Runtime is quiesced.
• Scheduled integrations do not execute.
• Database purging continues to run.
• REST APIs are available for use.
• Design time is available for use.

Manage Integrations and Errors

You can manage integration and process errors in Oracle Integration.

Activate the service in Oracle Integration when the integration is ready to go live and you can deactivate an active Integration. You can modify or clone the integration. Delete an integration that is no longer needed. See Managing Integrations in Using Integrations in Oracle Integration.

You can manage errors from the Errors pages in Oracle Integration at the integration level, connection level, or specific integration instance level. See Managing Errors in Using Integrations in Oracle Integration.

Manage SSL Certifications

You can upload and update security certificates in Oracle Integration to validate external connections.

Certificates are used to validate outbound SSL connections. If you make an SSL connection in which the root certificate does not exist in Oracle Integration, an exception is thrown. In that case, you must upload the appropriate certificate. A certificate enables Oracle Integration to connect with external services. If the external endpoint requires a specific certificate, request the certificate and then upload it into Oracle Integration. You can update or delete certificates you uploaded into Oracle Integration.

For more information about managing SSL certificates in Integrations, see Managing Security Certificates in Using Integrations in Oracle Integration.

For more information about managing SSL certificates in Processes, see Manage Security Certificates during Runtime and Manage Security Certificates during Design Time in Using Processes in Oracle Integration.

Manage Instance History

You can determine when to purge the data in your database. You can also view the notification and quiesced thresholds for your database and the percentage of the database that has been used.

Instance history is automatically purged periodically, based on settings in Oracle Integration. See Archive and Purge Data in Using Processes in Oracle Integration.
Configure Settings for Error Logs

Need to troubleshoot errors? As an administrator, you can change logging levels and download logs for Oracle Integration.

Use caution when changing logging levels because increasing them can affect performance. Reset logging levels back to default settings after troubleshooting.

1. From the Home page, select Settings, then Logging.

   The Logging screen is displayed. By default, loggers are contained within folder containers, and the number of loggers contained (collapsed) within the folder is listed after the folder name.

2. Filter and sort the logging list.

   You can filter in several ways:

   - **Show Only**: Select one or more options to limit the list. Note that loggers or folders must meet all selected options to be listed.
     - **Oracle Integration Cloud**: Displays loggers related to Oracle Integration components.
     - **Top Containers**: Displays the two top levels of folder containers.
     - **Unsaved Changes**: Displays loggers whose levels you have changed but haven't saved, as indicated by an Unsaved icon.

   - **Filters Menu**: Select Open Filters Menu to view loggers by their status (at default, or increased or decreased) or by their selected logging level. Filter settings display below the search field as you specify search criteria.

3. Search for logs.

   In the Search field, enter a logger name (or partial name) and press Enter. Searching is case sensitive. For example, enter oracle.bpm to list all loggers that begin with those characters. Note that searching is performed within the filtered
list. For example, if the Top Containers filter is selected, only the top containers are searched.

4. Change logging levels as needed.
   - Use the up and down icons in the **Logging Level** column to change a logger level. As you increase or decrease, an unsaved icon displays adjacent to the new logging level to indicate unsaved changes. The **Status** column indicates whether you increased or decreased the level and lists the default level.
   - When a logging level lists **Inherited**, this indicates that its own current level is inherited from its parent package because it doesn’t have a default level set. Children packages may have a different level. Changing a package level will automatically change the logging level of its children if they inherit from it (if they don’t have a specific logging level set).
   - To return to previous settings, click **Revert** and revert to either the last saved configuration or set all levels back to their default level.

5. Save your changes. Download logs as needed.
   Click **Download Logs** and save the entire logging file to a zip file.

## Delete an Oracle Integration Instance

You can delete an Oracle Integration instance. To do so, you must delete the stack of which the instance is a part.

When an Oracle Integration instance is deleted, the Oracle Database Cloud Service database deployment is deleted.

If you want to delete an instance in an Oracle Integration Classic (user-managed) environment, see [Delete an Oracle Integration Classic (User-Managed) Instance](#).

To delete an instance:

1. Sign in to the Oracle Cloud Infrastructure Console.

2. Click in the top left corner of the Oracle Cloud Infrastructure Console.

3. Select **Platform Services**, then **Integration**.

4. In the Oracle Integration Instances console, identify the instance you want to delete.

5. Click adjacent to the instance name and select **Delete**.

6. In the **Delete** dialog that opens, select the **Force service deletion** check box, if you want the service instance to be deleted even if the database deployment cannot be reached to delete the database schemas.

7. Click **Delete**.
Change the BYOL Metering Option of an Existing Instance

The bring your own license (BYOL) metering option enables you to bring your existing Oracle Fusion Middleware license to use with Oracle Integration or other cloud services. You can change the BYOL metering option of an already existing instance, as necessary.

This feature is useful for the following scenarios:

- You selected the wrong option when creating a new Oracle Integration instance and need to change it.
- You need to shift the location of an on-premises license in the cloud. For example, you need to move the license from one Oracle Integration instance to another or even to a different type of cloud service instance such as Oracle SOA Cloud Service.

1. Sign in to the Oracle Cloud Infrastructure Console.
2. Click **in the top left corner of the Oracle Cloud Infrastructure Console.**
3. Select **Platform Services**, then **Integration** or **Integration Classic**.
4. Click **adjacent to the instance you want to change and select Change License Type.**
5. Select the option required for your environment.
   - The first option enables you to select to bring an existing Oracle Fusion Middleware license to the cloud for use with Oracle Integration.
   - The second option enables you to select the regular billing rate (non-BYOL), which is a regular cloud subscription as if you did not own any on-premises licenses.

![Change License Type]

In this example, which may have been metering as BYOL, the license is now switched to non-BYOL (the regular subscription rate). This action eliminates the need to recreate and upgrade your data to a new instance for a simple change such as the billing rate. In your next hourly metering report, this instance reflects the new billing rate. If you toggle back and forth within an hour, you most likely do not see any change because it is only reported once per hour.
Troubleshoot Oracle Integration

Topics:
• Resume Use of a Suspended Oracle Integration for Oracle SaaS Account

Resume Use of a Suspended Oracle Integration for Oracle SaaS Account

Your Oracle Integration for Oracle SaaS account can be suspended under the following scenarios:

• When you create an instance using an Oracle Integration for Oracle SaaS account, you see options for Integration (Standard Edition) and Integration and Process (Enterprise Edition). If you create the instance without the corresponding entitlement, the account is suspended.

• Nothing prevents you from creating instances or scaling instances to increase capacity that exceeds your account quota limit. When this occurs, your account is suspended.

If your account gets suspended, here are some procedures to follow to resume use of your account.

• If you create an instance that is not entitled (for example, you created an Integration and Process instance when using a Standard Oracle Integration for Oracle SaaS account, you can delete the instance and wait for an hour or so to refresh your billing metrics, at which time the account is resumed.

• If your account has the correct entitlement, but uses more resources than the quota limit, you can:
  – Order more resources to expand the account.
  – Stop some instances so that the total number of message packs in the running instances in the account stay within account quota. After an hour or so, the account can be resumed. Then, scale an instance to decrease capacity until the total usage is no more than the account quota. Then, start the previously stopped instance, as needed.
  – Delete an instance that is no longer needed to bring usage below the quota limit.
Part I

Administer Oracle Integration Classic (User-Managed)

This part describes tasks that are unique to provisioning, administering, and troubleshooting in Oracle Integration Classic (user-managed).

Topics:

• Ready, Set Up, Go in Oracle Integration Classic (User-Managed)
• Manage Oracle Integration Classic (User-Managed)
• Troubleshoot Oracle Integration Classic (User-Managed)
Ready, Set Up, Go in Oracle Integration Classic (User-Managed)

You use the Oracle Cloud Infrastructure Console to install instances of Oracle Integration Classic (user-managed).

Topics:
- Assign the Correct User Roles to Create an Instance
- Provision Oracle Integration Classic (User-Managed) on an IP Network
- Create an Oracle Integration Classic (User-Managed) Instance
- Perform Post-Provisioning Tasks for Integration Analytics Instances
- About the User Interfaces of the Oracle Cloud Infrastructure Console for Oracle Integration Classic (User-Managed)
- Support the Minimum Version of Oracle Integration Classic (User-Managed)

Assign the Correct User Roles to Create an Instance

If you are the user that initially signed up and purchased universal credits for Oracle Cloud, you automatically have the necessary service entitlement roles to create Oracle Integration Classic (user-managed) instances. Otherwise, the correct roles must be explicitly assigned to your user account to create Oracle Integration Classic instances. Without the necessary roles, creation fails.

To successfully create Oracle Integration Classic instances, ensure that your user account is assigned the following roles for these services:
- Compute Classic - Service Entitlement (Compute.Compute_Operations)
- Container Classic - Service Entitlement (OCCS_ADMINISTRATOR) (Unless someone else with this role initializes the replication policy.)
- Database - Service Entitlement (DBaaS_Administrator)
- Database Backup - Service Entitlement (DatabaseBackup_Administrator)
- IntegrationCloud - Service Entitlement (INTEGRATIONCLOUD_ENTITLEMENT_ADMINISTRATOR)
- Load Balancer Classic - Service Entitlement (LBAAS_ADMINISTRATOR)

To know how to add new users and assign roles, see Add a User and Assign Roles to a User.
**Note:**

The Identity Cloud - Service Entitlement (Identity Domain Administrator) role has super user privileges for the identity domain. Users with this role can manage users, groups, applications, and system configuration settings. They can also perform delegated administration by assigning users to different administrative roles.

---

**Provision Oracle Integration Classic (User-Managed) on an IP Network**

If you want to provision Oracle Integration Classic (user-managed) on an IP network, follow the steps described in this section.

**Note:**

There is support for only one public, dedicated, virtual Oracle Load Balancer as a Service at a time. You cannot create multiple services at a time.

**Prerequisites**

- Start the Oracle Integration Classic provisioning wizard and check the value in the **IP Network** drop-down list. See [Create a Complete Production Instance that Uses Your Existing Database](#). If the **Region** and **IP Network** lists are not visible, contact Oracle Support Services. This value is required when creating the JSON file used to create the virtual Oracle Load Balancer as a Service.

- Obtain the compute site value. This value is required when creating the JSON file used to create the virtual Oracle Load Balancer as a Service.

1. On the Dashboard page, select **Open Service Console** from the hamburger menu in the **Compute Classic** tile.

2. Click the **Sites** value at the top of the page.

3. Copy the value in the **Site** field.
• Obtain the tenant name value. This value is required when creating the virtual Oracle Load Balancer as a Service.

1. On the Dashboard page, click the **Identity Cloud** tile.

2. In the **Additional Information** section, copy the value from the **Identity Service Id** field.

Create an IP Network

To complete this task, you must have the Compute_Operations role. If you do not have this role, ask your system administrator to assign you this role. See Modifying User Roles in *Managing and Monitoring Oracle Cloud*.

1. Sign in to the Compute Classic Console. If your domain spans multiple sites, select the appropriate site. To change the site, click the **Site** menu near the top of the page.

2. Click the **Network** tab.

3. In the **Network** drop-down list, expand **IP Network**, then click **IP Networks**.
4. Click Create IP Network.

5. Select or enter the required information:

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Enter a name for the IP network.</td>
</tr>
</tbody>
</table>
IP Address Prefix

Enter the IP address prefix for this IP network, in CIDR format. When you create instances, you can associate a vNIC on the instance with an IP network. That vNIC on the instance is then allocated an IP address from the specified IP network.

Select the IP address prefix for your IP networks carefully. Consider the number of instances that you may want to add to the network. This helps determine the size of the subnet required.

If you create multiple IP networks and you may want to add these IP networks to the same IP network exchange, then ensure that you do not allocate overlapping address ranges to these IP networks.

Similarly, if you plan to connect to your IP networks using VPN, ensure that the addresses you specify for your IP networks do not overlap with each other or the IP addresses used in your on-premises network.

Note: RFC 6598 addresses are not supported.

IP Exchange

Specify the IP network exchange to which you want to add this IP network. An IP network can belong to only one IP network exchange. Before you specify an IP network exchange for an IP network, ensure that the IP addresses in this IP network do not overlap with the IP addresses in any other network in the same IP network exchange. If you do not specify an IP network exchange while creating an IP network, you can do so later by updating an IP network.

If you want to connect IP networks using an IP network exchange, do this before creating instances with an interface on those IP networks. This ensures that routes are appropriately configured on instances by the DHCP client during instance initialization.

Description

Enter a meaningful description for your IP network, if required.

Tags

Enter a list of the tags that you want to associate with your IP network, if required.

6. Click Create

The IP network is created and added to the specified IP network exchange.

Find the Oracle Load Balancer as a Service URL for Your Account

You must identify the Oracle Load Balancer as a Service URL.

1. Activate your account after receiving your welcome email. When you log in to Oracle Cloud Infrastructure Console, you must reset the password.
2. Go to the Dashboard.

3. In the upper right corner, click **Customize Dashboard**.

4. Find **Load Balancer Classic**, and click **Show**.

5. Close the Customize Dashboard dialog.
   This enables **Load Balancer Classic** to be displayed in your Dashboard.

6. Click **Load Balancer Classic**.

7. In the **Additional Information** section, find the **REST Endpoint** field.

8. Copy the value in the **REST Endpoint** field.
   You need this REST endpoint value to run the REST API that creates the public and private virtual Oracle Load Balancer as a Service.

**Create the Public Virtual Oracle Load Balancer as a Service**

1. Create a JSON file (for this example, named `creatdvibr.json`) with content similar to the following. You specify this file when creating the virtual load balancer.

   ```json
   {
     "name": "public-explicit-oic",
     "disabled": "false",
     "scheme": "INTERNET_FACING",
     "compute_site": "uscom-central-1",
     "ip_network_name": "/Compute-99999999/my.name@company.com/IPNetworkOIC",
   }
   ``

   where:
   
   • **name**: Specify any name you want to use.
   
   • **disabled**: Set to `false`.
   
   • **scheme**: Specify `INTERNET_FACING`.
   
   • **compute_site**: Specify the value you copied in Prerequisites.
   
   • **ip_network_name**: Specify the name of the IP network you copied in Prerequisites. The name conforms to the following format:
     
     `compartment_name/user_name/subnet_name`
     
     For example:
     
     `/Compute-99999999/my.name@company.com/IPNetworkOIC-IPN`

2. Create the virtual Oracle Load Balancer as a Service from the command prompt on your on-premises host.

   ```bash
   curl -i -X POST -u "username:password" -d @creatdvibr.json
   -H "Content-type:application/vnd.com.oracle.oracloud.lbaas.VLBR+json"
   ```
where:

- **-u**: Specify the account username and password you received in the welcome mail. You changed the password upon initial login.
- **-d**: Specify the payload file name you created in Step 1. For this example, named `creatdvibr.json`, but this name can be any name you choose.
- **-H (first one)**: Specify `Content-type: application/vnd.com.oracle.oracloud.lbaas.VLBR+json`.
- **-H (second one)**: Specify your unique `TENANT-NAME` value you copied in Prerequisites and the REST endpoint value you copied in Find the Oracle Load Balancer as a Service URL for Your Account. The REST endpoint value must have `/vlbrs` appended to the end.

See Troubleshoot cURL Command Issues When Configuring an IP Network.

3. Get the status for the virtual Oracle Load Balancer as a Service. This command should result in a **HEALTHY** state response for a successful creation.

```bash
```

Note that the region (for this example, `uscom-central-1`) and load balancer name (for this example, `public-explicit-oic`) are appended to the end of the REST endpoint URL.

You can also check that the status is healthy from the Oracle Cloud Infrastructure Console.

4. From the hamburger menu in the upper left corner, select **Platform Services > Compute Classic**.

5. Click the **Network** tab.

6. In the left navigation pane, click the **Load Balancers** arrow, then select **Load Balancers**.

   The table shows the created load balancer. If it is in a healthy state, the icon on the left appears as follows.

7. Click the name to display specific details about the load balancer.
Provision Oracle Database Cloud Service

You must provision Oracle Database Cloud Service before using the provisioning wizard to create an Oracle Integration Classic instance.

**Note:**

When you provision Oracle Database Cloud Service, specify the same IP network value that you created in Create an IP Network.

Provision an Instance

1. Follow the steps in Create a Complete Production Instance that Uses Your Existing Database to invoke the Oracle Integration Classic provisioning wizard.

2. In the **IP Network** field, specify the IP network you created in Create an IP Network.

3. Understand the following details about IP networks:
   - **Oracle Database Cloud Service Behavior:**
     - When you do not choose Region/IP Network in the provisioning wizard pages, the Oracle Integration Classic provisioning screens allow you to choose Oracle Database Cloud Service instances that are not in the IP network. This is equivalent to non-IP network functionality.
     - When you choose the Regions/IP Network option in Oracle Integration Classic provisioning screens:
       * The Oracle Integration Classic provisioning wizard pages list all Oracle Database Cloud Service entries from all IP networks.
       * The Oracle Integration Classic provisioning wizard pages list Oracle Database Cloud Service entries from the same subnet.
       * The provisioning wizard pages do not list Oracle Database Cloud Service entries from non-IP networks.
       * Ensure that you use an Oracle Database Cloud Service instance from an IP network with which your Oracle Integration Classic instance can exchange packets. In other words, Oracle Integration Classic and DBaaS should be in the same IP network or in IP networks that are connected with an IP exchange.
       * Internal IP addresses from the IP network subnet are assigned to VMs when provisioning completes.
   - **Updating IP Networks:**
     - When you update IP networks:
       * Ensure that you do not change the IP address of a subnet, only change the IP prefix.
       * Change the IP prefix to expand the current IP network (for example, to change the prefix from /27 to /8 to expand the network).
* Restart VMs from the Oracle Integration Classic Oracle Cloud Infrastructure Console as soon as you update an IP network prefix. Failing to restart the VMs causes console URLs not to work properly during backup.

- Deleting IP Networks:
  - If you plan to delete the IP network/IP exchange, make sure all VMs and instances are deleted.
  - Instances are no longer functional when the IP networks are deleted. Therefore, the Oracle Enterprise Manager Fusion Middleware Control, Oracle WebLogic Administration Server, and other consoles are not accessible.
  - To re-enable instances, you can recreate the IP networks/IP exchange with the exact same name and IP subnet (with a similar prefix).
  - Every time an instance is deleted, the private IP address is reclaimed by the subnet.

**Support for Multiple IP Networks Using Only One Created Oracle Virtual Load Balancer as a Service**

If you attempt to create more than one Oracle Virtual Load Balancer as a Service (either public or private) with different IP networks, the REST API request is rejected with the following warnings:

Only 1 VLBRs can be created with the scheme INTERNAL in a non Oracle Managed Service https://lbaas-****  (for private vlbr creation)

and

*Only 1 VLBRs can be created with the scheme INTERNET_FACING in a non Oracle Managed Service https://lbaas-****

If you want to create multiple IP networks that use only one virtual Oracle Load Balancer as a Service, you must create an IP exchange connecting multiple IP networks.

1. Create IPNetwork1.
2. Create a virtual Load Balancer as a Service with IPNetwork1.
3. Create IPNetwork2.
4. Create an IP exchange.
5. Add IPNetwork1 and IPNetwork2 into the IP exchange.
6. Provision an Oracle Integration Classic instance with IPNetwork2. The provision succeeds through with IPNetwork2.
Create an Oracle Integration Classic (User-Managed) Instance

You can create the following type of Oracle Integration Classic (user-managed) instance.

- **Create a Complete Production Instance**

**Recommended Minimum Values for Creating an Instance**

The recommended minimum values for creating service instances that include Integrations, Processes, and Integration Analytics are as follows:

- Managed servers: Two (for high availability)
- Enterprise Edition Database:
  - Shape: 1 OCPU (OC1M) for each pair of managed servers. Therefore, OC1M for up to two managed servers, OC2M for up to four managed servers, OC3M for up to six managed servers, and so on.
  - Usable Database Storage: 125 GB per managed server
- Cloud storage: 1 TB

**Note:**

Oracle Integration Classic does not support the use of an Oracle Real Application Clusters (RAC) database.

Create a Complete Production Instance

You can create a complete production environment instance that provides Integrations, Processes, Integration Analytics, and Visual Builder. There are two options. The option to select is based on whether you want Oracle to create a database for you or you have an existing database that you want to use.

**Topics:**

- **Create a Complete Production Instance that Automatically Creates Your Database**
- **Create a Complete Production Instance that Uses Your Existing Database**
Create a Complete Production Instance that Automatically Creates Your Database

You can create an Oracle Integration Classic (user-managed) instance that automatically creates an Oracle Database Cloud Service instance with the Oracle Cloud Stack template.

What are the Capabilities of this Instance

This option enables you to complete a template that automatically provisions the required set of services together (Oracle Integration Classic, preconfigured Oracle Database Cloud Service, and Oracle Cloud Infrastructure Object Storage Classic container). A stack is an actual provisioned instance of a template.

The template provides two options for provisioning an instance:

- Use the Oracle-provided template directly without modifications. This option creates an Oracle Cloud Infrastructure Object Storage Classic container and Oracle Database Cloud Service instance with default settings.
- Create your own customized template by exporting an existing template, customizing the database and storage container settings, and importing it back into the Oracle Cloud Stack. You can configure specific details such as the shape (number of nodes), number of CPUs, amount of memory, database version, database edition (standard (SE) or enterprise (EE), database administrator password, and more.

See Oracle Cloud Stack Manager.

Prerequisites

An Oracle Cloud Infrastructure Object Storage Classic account name is automatically created for you when you purchase your universal credits. You must copy this storage account name from within the Storage Classic tile of your Dashboard page before provisioning Oracle Integration Classic.

1. Click the menu on the Storage Classic tile.

2. Select View Details.

3. On the Overview tab, scroll to the Additional Information section at the bottom and copy the entire storage account name URL value from the REST Endpoint field. You enter this value when creating an instance with the stack template.
Creating an Instance

1. Sign in to your Oracle Cloud account.

2. In the Oracle Cloud Infrastructure Console, click in the top left corner of the page.

3. Click Platform Services > Cloud Stack.

4. Click the Templates tab.

5. Find the Oracle Integration Classic template named Oracle-IntegrationCloud-CM-Template in the list. You can also search for the name.

There are two types of templates available. The template icon identifies the type of template:

- : Template was created and automatically provided by Oracle.

- : Template was created by a user and imported into the Oracle Cloud Stack. For example, you exported the Oracle-provided template, customized the database and storage container settings, and imported it back into the Oracle Cloud Stack.

6. To view a graphical representation of the components in a template (for example, Oracle Integration Classic, Oracle Database Cloud Service, and Oracle Cloud Infrastructure Object Storage Classic), click the template icon or the template name. You can perform the following tasks from the graphic:

   a. Click the Template tab to view the contents of the template in YAML format. This is the stack template file used to create your instance. This template provides configuration information such as backup and recovery, database backup container, backup container, and database details.
b. If you want to export the file for customizing, click **Export**. When customizing is complete, click **Import** on the Templates page to import the file back into the Oracle Cloud Stack.

**Tutorial**

c. Click **Done** when complete.

7. To create a stack from an Oracle-provided or custom template, click the icon at the far right of the template to use. This example describes how to edit the Oracle-provided template.

   In the Provision New Oracle Cloud Stack page, the template is prepopulated with information for automatically provisioning Oracle Database Cloud Service and the Oracle Cloud Infrastructure Object Storage Classic container during stack template provisioning.
8. Specify the following details:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stack Details</strong></td>
<td><strong>Service Name</strong>: Enter a stack name. Upon Oracle Integration Classic creation, the stack name points to all instances created and the database created.</td>
</tr>
<tr>
<td></td>
<td><strong>Description</strong>: Enter a description.</td>
</tr>
<tr>
<td></td>
<td><strong>Template</strong>: Displays the template used to create the stack. This field cannot be edited.</td>
</tr>
<tr>
<td></td>
<td><strong>Notification Email</strong>: Enter an email address at which to be notified of instance provisioning progress (for example, when provisioning completes).</td>
</tr>
<tr>
<td></td>
<td><strong>Tags</strong>: Select available tags for assignment or click the icon to define new tags and assign to the service instance. You can use tags to search for and categorize your instances.</td>
</tr>
<tr>
<td></td>
<td><strong>On Failure Retain Resources</strong>: Select to retain all services, even if a failure occurs during provisioning. For example, if selected and Oracle Database Cloud Service was successfully provisioned, but the Oracle Cloud Infrastructure Object Storage Classic container was not, both are retained. This action enables you to debug service failures. If not selected, no services are retained if a failure occurs, even those services that were provisioned successfully.</td>
</tr>
</tbody>
</table>
**Field** | **Description**
--- | ---
**Backup and Recovery Configuration** | Enter the following details to automatically create an Oracle Cloud Infrastructure Object Storage Classic container instance for backup and recovery.  
- **Cloud Storage Account Name**: Enter the storage account name URL value (for example, https://storage_url/Storage-bjones) that you copied from the REST Endpoint field of the Overview tab. This storage account name URL is automatically created when you purchase your universal credits. Do not enter the actual storage container name because the storage container is automatically created during stack template provisioning.  
  **Note**: See the Prerequisites section to copy the automatically-created storage account name from the Storage Classic tile of your Oracle Cloud Infrastructure Console page.  
- **Cloud Storage User Name**: Enter the storage container user name.  
- **Cloud Storage User Password**: Enter the password for the user name.

**Configuration Parameters** | Select the compute region.

**Service** |  
- **SSH Public Key**: Create a new key or upload an existing key.  
- **Feature Set**: Select the feature set that you want to provision. Visual Builder is automatically installed with each feature set.  
  - **Integration**: Provisions only the Integrations feature of Oracle Integration Classic.  
  - **Integration and Process**: Provisions the Integrations and Processes features of Oracle Integration.  
  - **Integration and Process + Integration Analytics**: Provisions the Integrations, Processes, and Integration Analytics features of Oracle Integration Classic. This selection creates two Oracle Integration Classic services, each having many nodes. Each node shares the same database.  
  **Note**: When provisioning is complete, you must link these two instances together in the Registration page of Oracle Integration Classic. See Register an Integration Analytics Instance to Connect Integration Insight to Integrations.  
- **Bring Your Own License**: Select to bring an existing Oracle Fusion Middleware license to the cloud for use with Oracle Integration Classic.  
- **Initial Number of Nodes**: Enter the number of nodes. You can add nodes (scale out) and remove nodes (scale in) later in the Oracle Integration Classic Oracle Cloud Infrastructure Console.

**Database Administrator Password** |  
- **Database Administrative Password**: Enter the password to administer the database. The password must be between 8 and 30 characters with at least one lower case letter, one upper case letter, one number, and one special character (_, #). For example, Ach1z0#d.  
- **Confirm Database Administrative Password**: Enter the same password again.

9. When complete, click **Next**.
10. Confirm your selections, then click **Confirm**. If you used the Oracle-provided template instead of a custom template, a database with the following default settings is automatically created.

- Service name: db
- Database Edition: Enterprise Edition
- Subscription type: Hourly
- SID: ORCL
- Failover database enabled: No
- Disaster Recovery enabled: No
- RAC enabled: No

**Note:**

You *must* change the default database password listed in the YAML file for the `SYS` administrator after provisioning completes.

When provisioning completes, a stack is displayed, a new database is displayed, and one or two new Oracle Integration Classic instances are displayed, each in their own respective Oracle Cloud Infrastructure Console. You must go to these consoles to perform life cycle management operations such as scaling out, scaling in, and other tasks.

**Note:**

To delete the stack, you must use the Oracle Cloud Stack Oracle Cloud Infrastructure Console to delete all of the related services. For example, if you delete a stack, the Oracle Database Cloud Service, Oracle Cloud Infrastructure Object Storage Classic container, and Oracle Integration Classic instances are all deleted. These instances cannot be deleted individually.

**Create a Complete Production Instance that Uses Your Existing Database**

You can create an Oracle Integration Classic (user-managed) instance that uses your existing database with the provisioning wizard.

**What are the Capabilities of this Instance?**

This option provides a simple wizard in which to specify Oracle Database Cloud Service, Oracle Cloud Infrastructure Object Storage Classic, and other details.

This option requires that you first provision Oracle Database Cloud Service *before* using the wizard. An Oracle Cloud Infrastructure Object Storage Classic subscription and storage account are needed. A storage container can be provisioned before or during use of the provisioning wizard.
Prerequisites

You must complete certain prerequisites before using the provisioning wizard.

<table>
<thead>
<tr>
<th>Prerequisite</th>
<th>Description</th>
<th>For More Information...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create an Oracle Database Cloud Service instance.</td>
<td>All Oracle Database Cloud Service configurations are possible.</td>
<td>Tutorial</td>
</tr>
</tbody>
</table>

This is because during Oracle Integration Classic creation, you are prompted to specify the Oracle Database Cloud Service login credentials and service name.

Obtain the Oracle Cloud Infrastructure Object Storage Classic account name. An Oracle Cloud Infrastructure Object Storage Classic account name is automatically created for you when you purchase your universal credits. You must copy this storage account name from within the Storage Classic tile of your Dashboard page before provisioning Oracle Integration Classic. You then specify the Oracle Cloud Infrastructure Object Storage Classic account name when prompted in the provisioning wizard. This action automatically creates an Oracle Cloud Infrastructure Object Storage Classic instance for you.

1. Click the menu on the Storage Classic tile.

2. Select View Details.

3. On the Overview tab, scroll to the Additional Information section at the bottom and copy the entire storage account name URL value from the REST Endpoint field. You enter this value when creating an instance in the provisioning wizard.

Creating an Instance

- Create a Service Instance
- Specify Service Instance Information
- Specify the Feature Set and Database and Storage Details
- Confirm Your Selections
Create a Service Instance

Start the provisioning process by creating a new instance:

1. Sign in to your Oracle Cloud account.

2. In the Oracle Cloud Infrastructure Console, click in the top left corner of the page.

3. Click **Platform Services > Integration Classic**.
   The Oracle Integration Oracle Cloud Infrastructure Console page is displayed.

4. Click **Create Instance**.
   The Instance page appears.

Specify Service Instance Information

Provide basic information about your new Oracle Integration instance.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Instance Name** | Specify a name to identify the new service instance. The name must be unique within the tenant domain. You cannot have two instances with the same name at the same time; one instance must be deleted. The service name must meet the following conditions:  
  • Must start with a letter [a-zA-Z][a-zA-Z0-9].  
  • Cannot be longer than 30 characters. |
| **Description**   | Optionally add a description to help identify the purpose of this new service. The description is only used during service list display. |
| **Notification Email** | Enter an email address at which to be notified of instance provisioning progress (for example, when provisioning completes). |
| **Region**        | Select the region in which to provision your instance. Otherwise, select **No Preference**. |
| **Tags**          | Select available tags for assignment or click + to create new tags to assign to the service instance. You use tags to search for and categorize your instances. |
| **SSH Public Key**| Select an option for accessing service host access. This key is used for authentication when connecting to the instance using a secure shell (SSH) client. The same public key is used for all VMs configured for this service instance.  
  • Browse for the file containing the VM public key file.  
  • Provide a value for an existing VM public key.  
  • Create a new private/public key pair. A new key is generated for you. When prompted, save the key as a file on your hard drive. |
| **License Type**  | Select an option:  
  • Select to bring an existing Oracle Fusion Middleware license to the cloud for use with Oracle Integration.  
  • Select to create a new Oracle Integration license. |

Specify the Feature Set and Database and Storage Details

Specify the Oracle Integration feature set, Oracle Database Cloud Service details, and Oracle Cloud Infrastructure Object Storage Classic container details.
**Field** | **Description**
--- | ---
**Feature Set** | Select the feature set:
- **Integration**: Installs the Standard Edition of Oracle Integration. This feature set includes Integrations and Visual Builder. This selection uses Standard Edition pricing.
- **Integration and Process**: Installs the Enterprise Edition of Oracle Integration. This feature set includes Integrations, Processes, and Visual Builder. This selection uses Enterprise Edition pricing.
- **Integration Analytics**: Installs Integration Analytics, which includes Stream Analytics and Integration Insight.

**Backup and Recovery Configuration** | Specify the Oracle Cloud Infrastructure Object Storage Classic container in which to store backups. You can specify an existing storage container or automatically create a new storage container during this Oracle Integration provisioning session.
- **Cloud Storage Container**: Specify the container name using the following format:

  Storage-storage_account_name/container_name

  For example:

  Storage-jsmith/JaasBackup

  where:
  - **Storage-storage_account_name**: Storage container account name. This account is automatically created when you purchase your universal credits.
    **Note**: See the Prerequisites section to copy the automatically-created storage account name from the **Storage Classic** tile of your Oracle Cloud Infrastructure Console.
  - **container_name**: Storage container name of an existing storage container or the name to use to create a new storage container.

- **Cloud Storage User Name**: Specify the username.
- **Cloud Storage User Password**: Specify the password.
- **Create Cloud Storage Container**: Select this check box to automatically create a storage container during Oracle Integration provisioning. If you have already provisioned an Oracle Cloud Infrastructure Object Storage Classic container, leave this check box deselected.
### Field Description

**Database Configuration**

Specify Oracle Database Cloud Service details.

**Note:** You must provision Oracle Database Cloud Service before you can use this wizard. Otherwise, no databases are available for selection from the **Service Name** list and you cannot proceed with Oracle Integration provisioning.

- **Service Name:** Select the service name of the database you want to use. Only the service name is displayed. The type of database is not displayed (for example, data guard). For specific details about the database, go to the Oracle Database Cloud Service Oracle Cloud Infrastructure Console and look for the service name.

- **Pluggable Database Service name:** Optionally specify the service name of the pluggable database (PDB). This field is only for version 12c databases. A PDB is a multitenant container database (CDB) consisting of a portable collection of schemas, schema objects, and nonschema objects that appear to an Oracle Net client as a non-multitenant container database (CDB). A non-CDB is a traditional Oracle database that cannot contain PDBs.

- **Database Administrator User Name:** Specify the user name. This value must be set to a database user with SYSDBA system privileges. You can use the default user **SYS** or any user that has been granted the SYSDBA privilege.

- **Database Administrator User Password:** Specify the password for the administration user. The administrator password was specified when the Oracle Database Cloud Service instance was created.

**Note:** Do not specify a password that includes a hyphen.

**Instance Administrator Responsibility Acknowledgment**

Click to acknowledge that you are responsible for provisioning and administering your own instance, including:

- Patching
- Starting stopping instances and individual VMs
- Starting/stopping Oracle WebLogic Server
- Scaling in/scaling out
- Backups
- Database management
- Operating system management, including ensuring that you have enough swap space

See [Manage Oracle Integration](#).

### Confirm Your Selections

The confirmation page displays the configuration values you selected in the provisioning wizard.

Review the service details and make a copy or a screen capture. If you need to change the service details, use the navigation bar or **Previous** button at the top of the wizard to step back through the pages in the wizard. Click **Cancel** to cancel out of the wizard without creating a new service instance. If you are satisfied with your choices on the Confirmation page, click **Create**.
Perform Post-Provisioning Tasks for Integration Analytics Instances

After creating an Integration Analytics instance of Oracle Integration Classic, you may need to complete the following post-provisioning tasks. The features you want to use determine the tasks you need to complete.

You do not have to perform these tasks if you’ve only created instances with the Integrations and Process feature set.

Topics:

- Register an Integration Analytics Instance to Connect Integration Insight to Integrations
- Post-Provisioning Tasks for Stream Analytics

Register an Integration Analytics Instance to Connect Integration Insight to Integrations

Use Registration to link more Oracle Integration features to your current instance. For example, you might receive another URL for an Integration Analytics instance with the Insight and Streams features. You can register it with your current server containing Visual Builder, Processes, and Integrations to see all of their content together.

Integration Analytics instances include Integration Insight and Streams. If want to use Integration Insight to collect and monitor business-level metrics from an Integrations instance, you must register the Integration Analytics instance to the Integrations instance and vice versa. Registration is not required to use Streams.

Only users assigned the ServiceAdministrator role can access registration.

1. On the Home page, click **Registration** in the navigation pane.
   
   The Registration page opens. The Current Instance section lists the features available in your instance.

2. Click **Register**.

3. In the Register Integration Instance dialog, enter the URL and administrator credentials of the instance you want to register with your current instance, and click **Discover**.

   The dialog displays information about features discovered.
4. In the **Name** field, enter a name for the discovered instance, and click **Register**.
   - The URLs are linked and the newly registered features display on the Registration page.
   - The navigation pane reflects the newly registered features.
   - The Home page now displays tiles for the newly registered features.

5. Repeat steps 1–4 on the other server, so that features are registered on each server.
   
   You must perform registration on both servers to see all content on both servers.
Post-Provisioning Tasks for Stream Analytics

You must complete the following tasks, in sequence, to use the Stream Analytics feature after creating an Integration Analytics instance of Oracle Integration Classic.

You don't have to complete these tasks if you have not created any Integration Analytics or if you are not using Stream Analytics.

Topics:

• Enable Direct Access to Stream Analytics
• Add Access Rules
• Configure Yarn Resource Manager
• Identify Kafka and Yarn Resource URLs
• Configure System Settings in Stream Analytics

Enable Direct Access to Stream Analytics

Stream Analytics is included with Integration Analytics. You can bypass the load balancer to access Stream Analytics by disabling redirection to the load balancer URL and providing access rules to access the port listening to the managed server on which Stream Analytics is deployed.

Configure the Frontend Host and HTTPS Port

1. Log in to the Oracle WebLogic Server Administration Console. You can access this console from the Oracle Cloud Infrastructure Console. See Explore the Oracle Cloud Infrastructure Console.
2. In the navigation pane, select Environment > Clusters > cluster_name > HTTP.
3. Click Lock and Edit.
4. Leave the Frontend Host field blank.
5. Enter 0 in the Frontend HTTPS Port field.
6. Click View changes and restarts.
7. Click Restart Checklist.
8. Select Server Restart Checklist.
9. Click Restart.
10. Log out of Oracle WebLogic Server Administration Console.

Access Stream Analytics Directly with the Oracle WebLogic Server Public IP Address

2. Log in using the Oracle Identity Cloud Service (IDCS) user name.
Add Access Rules

The access rules allow you to access Stream Analytics. You can use access rules to control network access to service components.

To add access rules:

1. Log in to the PaaS Service Manager Console.
2. Click **Manage this service** and select **Access Rules**.
3. Launch the Oracle Big Data Cloud Service application.
4. Select **Access Rules** under **Stream BDCSE** within **Platform Services**.
5. Click **Create Rule** and fill in all the required details.

You can see the rule you have added in the list of access rules.

Configure Yarn Resource Manager

Update and modify the configuration variables in BDCSCE Cluster (Spark + Hadoop) to complete the Yarn Resource Manager configuration.

To configure Yarn Resource Manager:
1. Launch the Ambari application. Enter the URL of the application in the browser in the form: `http://active-bdcscce-MASTER-1-node-ipaddress:8080`. This is the IP Address of the master node of Spark.

2. Click **YARN** in the left pane.

![Ambari Interface](image)

3. Go to the **Configs** tab.

4. Go to the **Advanced** tab.

5. Choose the relevant category.

6. Add, update, or delete the required properties.

7. Click **Save**.

While saving, restart all the affected components when prompted.

Identify Kafka and Yarn Resource URLs

You need to identify and obtain Kafka and Yarn resourcemanager URLs.

One of the BDCS instances will be running Yarn resourcemanager user interface on port 8088. There is no definite way to find which instance is running this user interface, so you must adopt a trial and error strategy by providing BDCS instance IP:8088. Click the configuration to open the XML page that has address for the Yarn resourcemanager.

Look for the `yarn.resourcemanager.address` property to get the YARN resourcemanager URL. This property contains the instance and port details.
Configure System Settings in Stream Analytics

After you provision Stream Analytics, configuring system settings is another important step to complete before you can start using Stream Analytics.

To configure system settings:

1. Launch Stream Analytics. See Enable Direct Access to Stream Analytics.
2. Log in to the application.
3. Click the User Name in the top-right corner and select System Settings.

The System Settings are not auto-configured. You can get these details from the BDCS and OEHPCS instances.
4. Enter Kafka Zookeeper Connection details.

The IP address is the public IP used for OEHCS. Obtain the port from the Access Rules screen by looking for the zookeeper port entry in the list.


5. Select the Runtime Server. Select either Yarn or Spark Standalone based on your requirement.

If you select Yarn as the server, specify the following parameters:

a. Enter YARN Resource Manager URL.

One of the BDCS instances will be running Yarn resourcemanager user interface on port 8088. There is no definite way to find which instance is running this user interface, so you must adopt a trial and error strategy by providing BDCS instance IP:8088. Click the configuration to open the XML page that has address for the Yarn resourcemanager. Look for the property yarn.resourcemanager.address to get the YARN resourcemanager URL.

b. Enter the Storage details.

Try the BDCS instance public IP with port 50070 to get the web hdfs explorer. The named node marked as active can be configured for storage.

c. Enter the Path.

- **WebHDFS**: IP_Address:50070/directory_name
- **HDFS**: IP_Address/directory_name

d. Select the Hadoop Authentication mode and enter the required credentials.

e. Set the HA Namenodes.

If you select Spark Standalone as the server, you need to specify the following parameters:

a. Enter the Spark REST URL.

b. Select the applicable Storage. NFS is the default option for Spark Standalone.

c. Specify the Path for the storage.

6. Click Save.
About the User Interfaces of the Oracle Cloud Infrastructure Console for Oracle Integration Classic (User-Managed)

You can perform life cycle management tasks from the Oracle Integration Classic (user-managed) Oracle Cloud Infrastructure Console.

Topics:

- Explore the Oracle Cloud Infrastructure Console
- Explore the Oracle Cloud Infrastructure Console Instance Overview Page
- Explore the Oracle Cloud Infrastructure Console Activity Page
- Explore the Oracle Cloud Infrastructure Console SSH Access Page
- Explore the IP Reservations Page

Explore the Oracle Cloud Infrastructure Console

You can use the Oracle Cloud Infrastructure Console to view all existing Oracle Integration Classic (user-managed) instances and to create and delete instances.

The following table describes the key information shown in the Oracle Integration Classic Oracle Cloud Infrastructure Console.
### Element Description

Click and select an option from the menu to open the service console for one of the Oracle Cloud Services to which you are subscribed.

(Next to the word ORACLE in the upper left corner of the page)

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integration Cloud</td>
<td>Click to sign in to the services to which you are subscribed.</td>
</tr>
<tr>
<td>Welcome!</td>
<td>Click to display the Oracle Integration Classic Welcome page.</td>
</tr>
<tr>
<td>Instances (Summary panel)</td>
<td>Number of instances in the identity domain.</td>
</tr>
<tr>
<td>OCPUs (Summary panel)</td>
<td>Total number of Oracle Compute Units (OCPUs) allocated across all instances.</td>
</tr>
<tr>
<td>Memory (Summary panel)</td>
<td>Total amount of memory in GBs allocated across all instances.</td>
</tr>
<tr>
<td>Storage (Summary panel)</td>
<td>Total amount of block storage in GBs allocated across all instances.</td>
</tr>
<tr>
<td>Public IPs (Summary panel)</td>
<td>Total number of IP reservations allocated across all instances.</td>
</tr>
<tr>
<td>Instances (heading)</td>
<td>All instances in the identity domain.</td>
</tr>
<tr>
<td>Search by service name</td>
<td>Enter a full or partial service instance name to filter the list of service instances to include only the services that contain the string in their service name.</td>
</tr>
<tr>
<td>Create Instance</td>
<td>Create a new service instance. See <a href="#">Create a Service Instance</a>.</td>
</tr>
<tr>
<td><img src="cloud/icon.png" alt="Create Instance Icon" /></td>
<td>Service instance icon for a created instance. Click this icon to view more details such as patch availability and backup status.</td>
</tr>
<tr>
<td><img src="cloud/status-created.png" alt="Status Created" /></td>
<td>Status icon indicating that the instance is being created.</td>
</tr>
<tr>
<td><img src="cloud/status-maintenance.png" alt="Status Maintenance" /></td>
<td>Status icon indicating the instance is undergoing maintenance or terminating.</td>
</tr>
<tr>
<td><img src="cloud/status-failed.png" alt="Status Failed" /></td>
<td>Status icon indicating that the instance has failed to be created. This icon can also indicate that the service instance has stopped. See the Activity page.</td>
</tr>
<tr>
<td>service-name</td>
<td>Name of the instance. Click the name to view more details.</td>
</tr>
<tr>
<td>Version</td>
<td>Version of Oracle WebLogic Server configured for the instance.</td>
</tr>
<tr>
<td>Nodes</td>
<td>Number of nodes allocated for the instance.</td>
</tr>
<tr>
<td>Created On</td>
<td>When provisioning is complete, the date and time in UTC at which the instance was created.</td>
</tr>
<tr>
<td>OCPUs</td>
<td>Number of OCPUs allocated for the instance.</td>
</tr>
<tr>
<td>Memory</td>
<td>Amount of memory in GBs allocated for the instance.</td>
</tr>
<tr>
<td>Storage</td>
<td>Amount of storage in GBs allocated for the instance.</td>
</tr>
<tr>
<td>Element</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Manage this service</td>
<td>Click to select one of the following options based on the service types you have provisioned:</td>
</tr>
<tr>
<td></td>
<td>• Open WebLogic Server Administration Console</td>
</tr>
<tr>
<td></td>
<td>• Open Fusion Middleware Control Console</td>
</tr>
<tr>
<td></td>
<td>• Open Integration Home Page</td>
</tr>
<tr>
<td></td>
<td>• Start—Start Oracle Integration Classic.</td>
</tr>
<tr>
<td></td>
<td>• Stop—Stop Oracle Integration Classic.</td>
</tr>
<tr>
<td></td>
<td>• Access Rules—Open the Access Rules page, which enables you to create and manage access rules for selected sources and destinations.</td>
</tr>
<tr>
<td></td>
<td>• SSH Access—Add public SSH keys to the VMs that make up this service instance.</td>
</tr>
<tr>
<td></td>
<td>• Delete—Delete the service instance. In the Delete Service dialog box that opens, set the following options and click <strong>Delete</strong>:&lt;br&gt;− Force service deletion—(Optional) Select this checkbox if you want the service instance to be deleted even if the database deployment cannot be reached to delete the database schemas. If enabled, you may need to delete the associated database schemas manually on the database deployment if they are not deleted as part of the service instance delete operation.&lt;br&gt;− Database Administrator User Name—Enter the name of the database administrator user that was specified when the database deployment was created. This user owns the instance's repository and schemas. If you have specified two databases, specify the name of the administrator for the database deployment for the Oracle required schema.&lt;br&gt;− Database Administrator User Password—Enter the database administrator user password for the database deployment that contains the Oracle required schema.&lt;br&gt;• Skip Backup—Select to skip the backup of the terminated instance.</td>
</tr>
<tr>
<td>Instance Create and Delete History</td>
<td>Shows details about created or deleted service instances.</td>
</tr>
<tr>
<td></td>
<td>• Range—Specifies a range of days for which you are interested in viewing created and failed service instances.</td>
</tr>
<tr>
<td></td>
<td>• Show only failed attempts—Check this box if you want to see failed attempts only.</td>
</tr>
<tr>
<td></td>
<td>• Details—Displays system messages logged during the creation or deletion process. Messages include information about auto-retry attempts.</td>
</tr>
</tbody>
</table>

**Explore the Oracle Cloud Infrastructure Console Instance Overview Page**

You can use view overview information for a specific instance. To access this page, click an instance name or icon in the Oracle Cloud Infrastructure Console.

The instance overview page consists of the following sections:

- **Overview Tile**
- **Administration Tile — Backup Tab**
- **Administration Tile — Patching Tab**

**Overview Tile**
The following table describes the key information shown on the Instance Overview tile.

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Overview** | The Overview tile displays information about the service instance. It contains the following four sections:  
  • Service Overview — Overview information about the service instance  
  • Oracle Load Balancer — Information about the Oracle Load Balancer  
  • Associations — Information about the Oracle Database Cloud Service database deployment used by the service instance |
| **Integration Cloud / service name** | Expand the turner icon to expose the following information about the service instance:  
  • Location  
  • Description  
  • Service Level  
  • Edition  
  • Metering Frequency  
  • Identity Domain  
  • Created By  
  • Created On  
  • Entitlement ID  
  • Click the text **Oracle Integration Classic** to return to the main Oracle Cloud Infrastructure Console page.  
  • Lists the name of the selected service instance. |
<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
</table>
| Manage this service                                    | Click to select one of the following options based on the service types you have provisioned:  
  • Open WebLogic Server Administration Console — Open the Oracle WebLogic Server Administration Console to administer your application environment.  
  • Open Fusion Middleware Control Console — Open Fusion Middleware Control to administer your application environment.  
  • Open Oracle Integration Home Page — Open the Oracle Integration home page.  
  • Start — Start the Oracle Integration instance.  
  • Stop — Stop the Oracle Integration instance.  
  • Scale in — Remove nodes from the Oracle Integration instance.  
  • Scale out — Add nodes to the Oracle Integration instance.  
  • Access Rules — Opens the Access Rules page, which enables you to create and manage access rules for selected sources and destinations.  
  • SSH Access — Add public SSH keys to the VMs that make up this service instance.  
  • View Activity — View activities that have occurred in your identity domain. |
|                                                        | Click the start/stop/scale/monitor icons to:  
  • Start the VMs for the administration server, managed servers, and load balancer.  
  • Stop the VMs for the administration server, managed servers, and load balancer.  
  • Add a node.  
  • Display monitoring data:  
    — Date and time each node was last started.  
    — For each server, the percent of heap space used as compared to the total heap space in GBs available. If you click the percentage number, the heap usage graph is displayed. |
| Refresh                                                | Click to refresh the page. The date and time the page was last refreshed are displayed adjacent to this button.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Instance Overview section                              | Overview information about the instance.  
  • Nodes: Total number of Oracle CPUs allocated for the instance.  
  • OCPUs: Total number of Oracle Compute Units (OCPUs) allocated across all instances.  
  • Memory: Total amount of memory in GBs allocated for the instance.  
  • Storage: Total amount of block storage in GBs allocated for the instance. |
| Other overview information                             | Status — The service instance’s status (for example, ready).  
  • Content Endpoint — The endpoint address.  
  • Integration Edition — The topology you selected when you provisioned the service instance.  
  • Service Identifier — Service identifier.  
  • Version — The version of Oracle WebLogic Server configured for the instance.  
  • Feature Set — The provisioned feature set.  
  • JDK — The supported Java Developer Kit version.  
  • iIDCS Application — Click the link to open the Oracle Identity Cloud Service Console to add users and assign roles. See Grant Access and Manage Security.                                                                                                                                                                                                                                                                                                                                 |

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### Element Description

**Resources**

Information about the administration server or managed server(s):
- Host Name
- Public IP address
- Instance name (managed server)
- Instance name (administration server)
- Number of Oracle CPUs allocated (OCPU)
- The amount of memory allocated to the node
- The amount of storage available to the node

**Manage this service**

Displays operations such as **Remove Node**, **Start**, **Stop**, and **Restart**.

**Load Balancer**

Information about the Oracle Load Balancer URL and type.

**Associations section**

Information about the Oracle Database Cloud Service database deployment used by the instance. If the instance is based on two database deployments (one for the Oracle required schema and the second for the application schema), information for both database deployments is displayed.

- Service Name — The name of the Oracle Database Cloud Service database deployments used by the instance. The name was specified during the process of creating the instance.
- Service Type — Specifies the connect string for the database deployment.
- Type — The only available value is Oracle Database Cloud Service.
- Status — The status of the database deployment.

---

**Administration Tile — Backup Tab**

You can use the **Backup** tab of the Administration tile on the Instance page to view the backup status and access backup configuration tasks for a specific instance. The **Backup** tab provides the following details.
The following table describes the key information shown on the **Backup** tab of the Administration tile.

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
<td>Click the Administration tile to back up an instance. See <a href="#">Back Up and Restore an Oracle Integration Classic (User-Managed) Instance</a>.</td>
</tr>
</tbody>
</table>
| Incremental Backups         | Displays the time at which incremental backups occur. For example:  

  
  - Daily at 11:40:00 AM UTC  
  
  The amount of MB backed up to Oracle Cloud Infrastructure Object Storage Classic is displayed. |
| Full Backups                | Displays the time at which the full backup occurs. For example:  

  
  - Every Saturday at 11:40:00 AM UTC  
  
  The volume of backup space used is also displayed. |
| Last Successful Backup      | The time at which the last successful backup occurred. For example:  

  
  - Tuesday at 11:40:00 AM UTC  
  
  The percentage of the backup volume used is also displayed. |
| Most Recent Backup          | Displays the time of the last backup. If a red icon is displayed, click it for backup failure details. |
| Available Backups           | Click Manage backups on this service to display the following options:  

  
  - Backup Now  
  
  - Configure Backups  
  
  - Disable Backups  
  
  See [Back Up and Restore an Oracle Integration Classic (User-Managed) Instance](#). |
| Restore History             | The restoration operations history for this service instance. |

**Administration Tile — Patching Tab**

You can use the **Patching** tab of the Administration tile on the Instance page to view patching information and install patches for a specific instance.
The following table describes the key information shown on the **Patching** tab of the Administration tile.

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Available Patches</strong></td>
<td>Displays details about any available patches:</td>
</tr>
<tr>
<td></td>
<td>• Patch name</td>
</tr>
<tr>
<td></td>
<td>• Patch release date</td>
</tr>
<tr>
<td></td>
<td>• Whether patch installation requires a restart</td>
</tr>
<tr>
<td></td>
<td>• Readme link that displays information about the patch</td>
</tr>
<tr>
<td></td>
<td>See Patch and Upgrade Oracle Integration Classic (User-Managed).</td>
</tr>
<tr>
<td><strong>Patch and Rollback</strong></td>
<td>Displays the history of patch installation and rollback.</td>
</tr>
<tr>
<td><strong>History</strong></td>
<td></td>
</tr>
</tbody>
</table>

Explore the Oracle Cloud Infrastructure Console Activity Page

You can use the Activity page to search for and review cloud service activities that have occurred in your identity domain. To access this page, click the Activity tab in the Oracle Cloud Infrastructure Console.
The Activity page is divided into the following sections:

- **The Search Activity Log section**, from which you can specify search details that determine which services you see. These details include:
  - Date and time range
  - Operation status
  - Instance name
  - Service type
  - Operation
- **The Results pane**, which shows the results of the search operation. You can limit the number of results to return, per page, to 5, 10, 50, or 100.

The following table describes the key information shown on the Activity page.

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Start Time Range</strong></td>
<td>Filters activity results to include only operations started within a specified time range. The range defaults to the previous 24 hours.</td>
</tr>
</tbody>
</table>
| **Operation Status** | Filters operations by status of the operation:  
  - **All** (default value)  
  - **Scheduled**  
  - **Running**  
  - **Succeeded**  
  - **Failed**  
  You can select any subset of status types. |
| **Instance Name** | Filters the activity results to include operations only for the specified service instance. You can enter a full or partial service instance name. |
| **Service Type** | Filters the activity results to include operations only for instances of the specified service type. The default value is the current cloud service. |
| **Operation**    | Filters the activity results to include selected types of operations. You can select any subset of the given operations. The default value is **All**. |
### Explore the Oracle Cloud Infrastructure Console SSH Access Page

You can use the SSH Access page to view and manage public SSH keys from the Oracle Integration Classic Oracle Cloud Infrastructure Console.

The SSH Access page is divided into the following two sections:

- The Search Activity pane, from which you can specify the service name and service type when you want to see SSH information for a specific service or group of services.
- The Results pane, which shows the results of the search operation. You can limit the number of results to return, per page, to 5, 10, 50, or 100.

The following table describes the key information shown on the SSH Key Access page.

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Search</td>
<td>Searches for activities by applying the filters specified by the Start Time Range, Status, Service Name, Service Type, and Operation fields, and displays activity results in the table.</td>
</tr>
<tr>
<td>Reset</td>
<td>Clears the Start Time Range and Service Name fields, and returns the Status and Operation fields to their default values.</td>
</tr>
<tr>
<td>Results per page</td>
<td>Specifies the number of results you want to view per page. The default value is 10. You can sort the columns in ascending or descending order.</td>
</tr>
<tr>
<td>Operation</td>
<td>Shows the type of operation performed on the service instance.</td>
</tr>
<tr>
<td>Instance Name</td>
<td>Shows the name of the service instance and its identity domain: <code>service_instance:identity_domain</code></td>
</tr>
<tr>
<td>Service Type</td>
<td>Shows the type of cloud service for this instance.</td>
</tr>
<tr>
<td>Operation Status</td>
<td>Shows the status of the operation performed on the service instance.</td>
</tr>
<tr>
<td>Start Time</td>
<td>Shows the time the operation started.</td>
</tr>
<tr>
<td>End Time</td>
<td>Shows the time the operation ended, if the operation is complete.</td>
</tr>
<tr>
<td>Initiated By</td>
<td>Shows the user that initiated the operation. The user can be any user in the identity domain who initiated the operation or, for certain operations such as automated backup, the system.</td>
</tr>
</tbody>
</table>

---

**Chapter 8**

About the User Interfaces of the Oracle Cloud Infrastructure Console for Oracle Integration Classic (User-Managed)

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Element | Description
--- | ---
Results per page | Specifies the number of results you want to view per page. The default value is 10.
Expand | Displays a description of an item in the results table. Clicking the resulting downward arrow hides the description.
Instance Name | Shows the name of the service instance.
Service Type | Shows the type of cloud service for this instance.
Last Update | Shows the most recent time the SSH keys for this instance were updated. When the credential update is in progress, an hourglass icon is displayed before the date/time, indicating that the service instance is in maintenance mode.
Actions | Click the Add New Key button to add a new SSH public key to this instance. This button is grayed out when the key is in the process of being added.

Explore the IP Reservations Page

If your identity domain is enabled for regions, you can reserve IP addresses. After you create an IP reservation, you can use it when provisioning Oracle Integration Classic.

The following table describes the key information shown in the Oracle Integration Classic IP Reservations page.

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create</td>
<td>Click to access the page for creating an IP reservation.</td>
</tr>
</tbody>
</table>
| Welcome! | Click to display the Oracle Integration Classic Welcome page.  
- **Region**: Displays the region.  
- **Status**: Displays whether the IP reservation is currently in use.  
- **Service Entitlement ID**: Displays the service entitlement ID.  
- **IP Address**: Displays the IP address.  
- **Created On**: Displays the creation date. |

Support the Minimum Version of Oracle Integration Classic (User-Managed)

Oracle Integration Classic (user-managed) only provides maintenance fixes on top of the latest software release. Therefore, when a software upgrade is available at the beginning of a month, it is your responsibility to manually upgrade any existing Oracle Integration Classic instances to the latest release by applying software upgrade patches. If you are not on the latest release, you must patch your instance to be at the latest software release before you can apply any additional maintenance fixes. For example, if you provisioned Oracle Integration Classic 17.4.1, and there have been several software upgrades since then, you must first upgrade to the latest software release before you can apply any additional maintenance fixes. Note that the latest software release patch always includes the previous software releases. Therefore, you only need to apply that single patch to be upgraded to the latest release.

This situation does not apply to newly provisioned instances. For Oracle Integration Classic instances that are provisioned after the maintenance fixes are announced and
available, they are automatically applied and available in the newly provisioned instance.

For information about applying patches from the Oracle Integration Classic Oracle Cloud Infrastructure Console, see Patch and Upgrade Oracle Integration Classic (User-Managed).
Manage Oracle Integration Classic (User-Managed)

In Oracle Integration Classic (user-managed), an administrator is responsible for maintaining the infrastructure on which Oracle Integration Classic is built. An administrator can apply a patch, initiate on-demand backups, schedule automated backups, add or remove nodes for increased or reduced load on an Oracle Integration Classic instance. In addition, an administrator can monitor the instance and export diagnostic information to resolve problems.

![Note:](#)

Oracle does not possess the credentials for consoles such as Enterprise Manager (EM), WebLogic Server console, and Service Bus console. Therefore, a user is not blocked from performing tasks from these consoles. However, Oracle highly recommends that users **DO NOT** use these consoles.

See Unsupported Tasks.

Topics:

- Unsupported Tasks
- Patch and Upgrade Oracle Integration Classic (User-Managed)
- Stop and Start Oracle Integration Classic (User-Managed) Instances and Nodes
- Scale an Oracle Integration Classic (User-Managed) Instance
- Manage Database Issues
- Back Up and Restore an Oracle Integration Classic (User-Managed) Instance
- Manage Integrations and Errors
- Manage SSL Certifications
- Manage Instance History
- Configure Settings for Error Logs
- Use SSH to Sign In to Oracle Integration Classic (User-Managed)
- Diagnose Oracle Integration Classic (User-Managed) Problems
- Delete an Oracle Integration Classic (User-Managed) Instance
Unsupported Tasks

Oracle does not possess the credentials for consoles such as WebLogic Server or Enterprise Manager. Therefore, a user is not blocked from performing tasks from these consoles. However, Oracle highly recommends that users **DO NOT** use these consoles.

The following lists some of the tasks that are not supported in Oracle Integration Classic (user-managed). **DO NOT** perform these tasks unless recommended by Oracle.

- Changing load balancer (LBaaS) settings
- Changing or removing CloudGate policies through Oracle Identity Cloud Service REST API
- Changing WebLogic Server topology, including adding or deleting managed servers
- Configuring SOA engine properties
- Configuring SOA MBean settings
- Changing the WebLogic JVM settings
- Configuring WebLogic resources including data sources, connection pools, JMS servers, work managers, and partitions
- Configuring WebLogic MBean settings
- Deploying composites or service bus projects
- Deleting files including temporary files
- Deploying new Java EE applications to WebLogic
- Installing or uninstalling Linux programs
- Modifying date and metadata using SQL
- Modifying or deleting the Oracle Identity Cloud Service Applications, Application ID, and roles that are created by default in Oracle Identity Cloud Service administration console.
- Modifying firewall rules (iptables)
- Modifying Linux operating system privileges
- Modifying MDS metadata
- Modifying OPSS permissions
- Modifying SSH keys
- Patching Oracle Linux with unsupported updates
- Restarting WebLogic Server, Managed Server, or Node Managers through WebLogic Server Console.
- Tuning Linux operating system settings
- Using compute console to modify security rules or reserve IP address
- Viewing, modifying, or deleting suite-generated composites, service bus projects, and folders.
Patch and Upgrade Oracle Integration Classic (User-Managed)

In Oracle Integration Classic (User-Managed), you can apply a patch to an Oracle Integration Classic instance.

Topics:
- About Patching an Oracle Integration Classic (User-Managed) Instance
- Typical Workflow for Patching an Oracle Integration Classic (User-Managed) Instance
- Quick Tour of the Patching Page
- View Details About the Available Patches
- Perform Prechecks Before Applying a Patch
- Complete Prerequisites Before Applying a Patch
- Apply a Patch

About Patching an Oracle Integration Classic (User-Managed) Instance

You can quickly and easily apply patches to an Oracle Integration Classic (user-managed) instance, without any command-line intervention.

Once you navigate to the Patching page in the Oracle Integration Classic user interface, applying a patch to service instance is a one-click operation.

When to Apply Patches?

New approved patches are available and displayed on the Patching page. Apply the most recent patches promptly to ensure new features and fixes are available.

What Happens to the Service During Patching?

Patching operations are rolling operations, so the service functions with very little interruption during the patch process. The patching operation shuts down one virtual machine at a time and the patching operation continues patching the servers on one virtual machine at a time until all servers are patched. Patching restarts virtual machines. For example, if you have a two-node, each node exists on a separate machine, and one node keeps running while the other is being patched.

The user sessions that are running on a specific node can be lost during patching operation. We recommend you to plan your patching operation during a time when there are minimal user changes happening.

During patching, request for any administration task using REST API will be denied, and administrative requests will not be accessible from the Integration Console.

What Happens When Patching is Not Fully Successful or Fails?

If the patching operation fails, then the patch is automatically reverted back.
Typical Workflow for Patching an Oracle Integration Classic (User-Managed) Instance

Consider the typical workflow for patching an Oracle Integration Classic (user-managed) instance, as described in the following table.

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
<th>More Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learn about approved patches</td>
<td>View approved patches displayed on the Patching page periodically.</td>
<td>View Details About the Available Patches</td>
</tr>
<tr>
<td>Perform optional prechecks</td>
<td>Learn about problems that would cause patching to fail, so you can address those problems before you try to apply a patch.</td>
<td>Perform Prechecks Before Applying a Patch</td>
</tr>
<tr>
<td>Apply a patch</td>
<td>Initiate a patching operation.</td>
<td>Apply a Patch</td>
</tr>
</tbody>
</table>

Quick Tour of the Patching Page

You can use the Patching page to view the available patch, initiate a patching process.

To access the Patching page, click the Administration tile on the Service Overview page, then click the Patching tab.

The following table describes the key information shown on the Patching page.

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scheduled Patches</td>
<td>Displays details about any scheduled patches. Oracle handles all patch installations:</td>
</tr>
<tr>
<td></td>
<td>• Patch name</td>
</tr>
<tr>
<td></td>
<td>• Status</td>
</tr>
<tr>
<td></td>
<td>• Patched By</td>
</tr>
<tr>
<td></td>
<td>• Notes</td>
</tr>
<tr>
<td></td>
<td>• Readme link that displays information about the patch</td>
</tr>
<tr>
<td></td>
<td>Represents an available patch.</td>
</tr>
<tr>
<td></td>
<td>This menu has two choices:</td>
</tr>
<tr>
<td></td>
<td>• Precheck—Performs prechecks without attempting to patch, and reports any errors found so that you can address them before you patch.</td>
</tr>
<tr>
<td></td>
<td>• Patch—Performs prechecks, then patches the Oracle Integration Classic (user-managed) instance with the selected patch.</td>
</tr>
<tr>
<td></td>
<td>Represents a successful patching precheck operation.</td>
</tr>
<tr>
<td></td>
<td>Represents a failed patching precheck operation.</td>
</tr>
<tr>
<td></td>
<td>Represents a patching operation in progress.</td>
</tr>
<tr>
<td>Patch and Roll Back History</td>
<td>Displays the history of patch installation.</td>
</tr>
<tr>
<td>Element</td>
<td>Description</td>
</tr>
<tr>
<td>--------</td>
<td>-------------</td>
</tr>
<tr>
<td><img src="image" alt="Patch Success" /></td>
<td>Indicates a successful patching operation. Appears in the Patch History section. Click this icon to obtain more information about the patching operation.</td>
</tr>
<tr>
<td><img src="image" alt="Warning" /></td>
<td>Displayed on a tools patch, indicates that the patch version for your existing Oracle Integration Classic (user-managed) instance is older than the current version. You will also see a warning stating that the service is on a deprecated tools version. To address this issue, apply the latest tools patch to your Oracle Integration Classic instance.</td>
</tr>
</tbody>
</table>

### View Details About the Available Patches

You can use the Patching page to view the information about the available patches and service patch history.

To view details of available patches:

1. Sign in to the Oracle Cloud Infrastructure Console.
2. In the Oracle Integration Classic (user-managed) console, click the name of your Oracle Integration Classic instance.
3. In the Service Overview page, check the **Administration** tile to see the number of available patches, and the date and time of the previous backup.
4. If patches are available, click the **Administration** tile, then click the **Patching** tab.

5. On the Patching page, check the information in the Available Patches section.

### Perform Prechecks Before Applying a Patch

The patching process performs prechecks before applying a patch, but you can perform an optional precheck operation before patching to identify and remedy issues first.

Prechecks occur automatically once you make a selection from the menu, then produce messages letting you know the results.

Prechecks check for the following conditions:

- Disk space shortage
• Missing database connectivity
• Servers not running
• Storage access failure

Prechecks do not check whether another administration task (backup, restoration, or scaling) is in progress, which prevents patching.

If prechecks pass or you address all the issues identified by prechecks, you can run a patching operation that will not encounter these issues.

You can only request prechecks for an approved patch that is listed on the patching page.

1. Navigate to the Patching page.

2. On the Patching page, click to the right of the patch you want to check and select Precheck.

   A message appears beneath the patch name: Prechecks in progress.

3. Click Refresh to check whether prechecks are done.

   When prechecks are done, a link appears: Precheck results.
   • If prechecks pass, a green check mark icon appears.
   • If prechecks fail, a red exclamation mark icon appears.

4. Click the Precheck results link.

   The Patch Precheck Results dialog appears.
   • If the prechecks succeed, the following message appears in the dialog: Precheck succeeded for patch patch_name_and_version on date_and_time. No conflicts found.
   • If the prechecks fail, the following message appears in the dialog: Precheck failed for patch patch_name_and_version on date_and_time.

   Error messages appears in the dialog as well. If there are precheck failures, check the error messages to learn about the problems that you need to address.

   The Precheck results link remains after prechecks complete.

Complete Prerequisites Before Applying a Patch

Every patch in an Oracle Integration Classic (user-managed) instance has a Readme, which provides information required to apply the patch. Be sure to read the instructions carefully and contact Oracle Support for any questions before applying the patch.
Note:

These prerequisite steps are required only if you are upgrading a 17.4.1 or “new” 17.4.5 Oracle Integration instance to 18.1.x. They are not required if you previously upgraded a 17.4.1 instance to 17.4.5 and are now upgrading to 18.1.x, or if you already have an 18.1.x instance provisioned.

To view the history of your patch, see the Patch and Rollback History section in the Patching page. 🔄 indicates a successful patching operation.

Expand the Readme to read the instructions.

If required (see Note above), complete the following one-time prerequisites for each Oracle Integration instance:

1. Access the Oracle Integration Oracle Cloud Infrastructure Console Overview page using your browser and make a note of the administration server IP address.

See Explore the Oracle Cloud Infrastructure Console Instance Overview Page.
2. Use an SSH client to connect to the Oracle Integration instance:
   
   ```
   ssh -i private_key_file opc@admin_ip_address
   
   where admin_ip_address is the IP address of the administration server.
   ```

3. Switch to the user oracle:
   
   ```
   sudo su oracle
   ```

4. Delete the `rexDataBag.json` file, if it exists:
   
   ```
   rm /u01/data/domains/rexDataBag.json
   ```

5. Access the Oracle Integration Oracle Cloud Infrastructure Console Overview page using your browser and make a note of the database server details.
   
   See Explore the Oracle Cloud Infrastructure Console Instance Overview Page.
6. Connect to the database as a DBaaS Database Administrator. See Connecting Remotely to the Database by Using Oracle SQL Developer and Connecting Remotely to the Database by Using Oracle Net Services in Administering Oracle Database Cloud Service.

7. After you connect to the database, execute the following query to list all owners in your current installation.

```sql
SELECT OWNER from "SYSTEM"."SCHEMA_VERSION_REGISTRY" where COMP_ID = 'SOAINFRA';
```

A list of owners that are currently created in the database is displayed. Here is the sample output and you'll find one entry for each Oracle Integration instance.

```
OWNER
1 SP670824491_SOAINFRA
2 SP679285178_SOAINFRA
3 SP611124268_SOAINFRA
```

8. For each owner listed in the database (see step 7), execute the following command to set the status to VALID:

```sql
UPDATE "SYSTEM"."SCHEMA_VERSION_REGISTRY" SET STATUS = 'VALID' where STATUS='INVALID' and OWNER='OWNER';
```

where `OWNER` is the name of the owner or schema user.

For example, `UPDATE "SYSTEM"."SCHEMA_VERSION_REGISTRY" SET STATUS = 'VALID' where STATUS='INVALID' and OWNER='SP670824491_SOAINFRA';`
9. For each owner listed in the database (see step 7) execute the following command to grant the SELECT and UPDATE permissions to the database table:

   GRANT SELECT,UPDATE on "SYSTEM"."SCHEMA_VERSION_REGISTRY$" to OWNER;

   For example, GRANT SELECT,UPDATE on "SYSTEM"."SCHEMA_VERSION_REGISTRY$" to 'SP670824491_SOAINFRA';

10. For each owner listed in the database (see step 7) execute the following command to grant the SELECT and UPDATE permissions to the database view:

   GRANT SELECT,UPDATE on "SYSTEM"."SCHEMA_VERSION_REGISTRY" to OWNER;

   For example, GRANT SELECT,UPDATE on "SYSTEM"."SCHEMA_VERSION_REGISTRY" to 'SP670824491_SOAINFRA';

11. For each owner listed in the database (see step 7) execute the following command to provide access to DBA_TABLESPACE_USAGE_METRICS:

   GRANT SELECT ON sys.DBA_TABLESPACE_USAGE_METRICS to OWNER;

   For example, GRANT SELECT ON sys.DBA_TABLESPACE_USAGE_METRICS to SP670824491_SOAINFRA;

**Apply a Patch**

You can use the Patching page to apply a patch of an Oracle Integration Classic (user-managed) instance.

To apply a patch:

1. Navigate to the Patching page.

2. In the Available Patches section, click to the right of the patch you want to apply and select Patch.

3. In the Patch Service dialog, enter the following information:
   - **Additional Note** (optional): Type notes pertaining to the patch.
   - **Database Schema Password**: You can either leave the field blank or enter the correct database schema password only if you've changed the password since the last time a patch was applied.

   **Note:**

   If you've not changed the database schema password, leave the Database Schema Password field blank.

4. In the Patch Service dialog, click Patch.
Stop and Start Oracle Integration Classic (User-Managed) Instances and Nodes

In Oracle Integration Classic (user-managed), you can stop and start an Oracle Integration Classic instance and, when the instance is running, start, stop, and restart individual nodes.

Topics:
- About Stopping and Starting Instances and Nodes
- Stop and Start Your Instance
- Stop and Start the Nodes in Your Instance

About Stopping and Starting Instances and Nodes

You can stop and start an Oracle Integration Classic (user-managed) instance and stop, start and restart virtual machines (nodes) when the instance is running.

Why Stop an Oracle Integration Classic (User-Managed) Instance?

Stopping an Oracle Integration Classic instance frees up compute resources used by the instance's nodes. Metering for those resources stops.

Storage volumes remain intact when the instance is stopped, and are reattached when your start the instance. IP address reservations are retained when the instance is stopped, so the nodes will have the same public IP addresses as before when you start the instance.

What Happens When an Oracle Integration Classic (User-Managed) Instance is Stopped or Started?

Stopping and starting an Oracle Integration Classic instance has the following results:

- **Stopping the instance:** The nodes on which the Administration Server and Managed Servers are running are stopped.
- **Starting the instance:** All nodes on which the Administration Server and Managed Server are running are started. You can restart the Managed Servers individually.

Why Stop, Start, or Restart Managed Server?

If an Oracle Integration Classic (user-managed) instance is running:

- You can restart the nodes on which the Managed Server are running if you are experiencing problems with the server that would warrant a reboot.
- You can stop the nodes on which the Managed Server is running to free up resources and stop metering those resources. You might also want to stop the instance instead of scaling, keeping the server ready for a later time.
- You can start a Managed Server if it is stopped and you want to use it again. Metering begins again.
How Do I Monitor the Stop, Start, or Restart Operation?

You can monitor progress of a stop, start, or restart operation on the Activity page.

What Happens When an Instance Is Stuck in Maintenance Mode While Stopping?

When you try to stop an Oracle Integration Classic (user-managed) instance, on rare occasions it might become stuck in maintenance mode due to some problem with the instance.

For six hours, the software will continue to attempt to stop the instance, then change the instance status from maintenance state to error state. At this point, you can debug the problem causing the error and attempt to stop the instance again.

Stop and Start Your Instance

You can stop and start an Oracle Integration Classic (user-managed) instance using the Oracle Cloud Infrastructure Console.

To stop or start an Oracle Integration Classic instance:

1. Sign in to the Oracle Cloud Infrastructure Console.
2. Click in the top left corner of the Oracle Cloud Infrastructure Console.
3. Select Platform Services, then Integration Classic.
   
   The Oracle Integration Classic Instances page is displayed.

4. In the Oracle Integration Classic console, identify the name of your Oracle Integration Classic instance.
5. Complete one of the following actions:
   
   • Click adjacent to the service name and select Start or Stop.
   • Click Start Instance or Stop Instance.

   Note:

   The Start and Stop options remain active while the operation is in progress so that, if the operation gets stuck, you can try to start or stop again.

A confirmation dialog opens.

6. Click OK in the confirmation dialog.

   A yellow status icon appears adjacent to the service instance icon while the service instance is in the process of stopping or starting.

   When the operation completes, the Oracle Integration Classic instance stops or stops. A red icon displays when the service instance is stopped. On the Activity page, the entry for the service shows that the stop or start operation has ended.
Stop and Start the Nodes in Your Instance

You can stop, start, and restart a node in an Oracle Integration Classic (user-managed) instance.

To stop, start, or restart a node:

1. Sign in to the Oracle Cloud Infrastructure Console.
2. In the Oracle Integration Classic console, click the name of your Oracle Integration Classic instance.
3. On the page, click Manage this node to the right of the node and select Stop, Start, or Restart.
4. Click OK in the confirmation dialog.

The node stops, starts, or restarts.

Scale an Oracle Integration Classic (User-Managed) Instance

In Oracle Integration Classic (user-managed), scaling lets you add or remove resources for an Oracle Integration Classic instance on demand in response to changes in load on the instance.

Topics:
- About Scaling Your Instance
- Overview of Scaling Tasks for Your Instance
- Scale Out an Oracle Integration Classic (User-Managed) Instance
- Scale In an Oracle Integration Classic (User-Managed) Instance
- Check Status of Scaling Requests
About Scaling Your Instance

You can scale an Oracle Integration Classic (user-managed) instance by scaling a cluster, a node in the instance.

About Scaling Out an Oracle Integration Classic (User-Managed) Cluster

Scaling out an Oracle Integration Classic cluster adds one node to the cluster.

Before scaling out an Oracle Integration Classic cluster, ensure that all these conditions are met:

- You have the Oracle Identity Cloud Service Administrator role.
- The instance is not under maintenance, such as during patching or backing up.

If any of these conditions is not met, the scaling operation fails and Oracle Integration Classic logs an error message.

Oracle Integration Classic logs a message when scaling out is started or completed, or when a failure is detected.

If an attempt to scale out a cluster fails, Oracle Integration Classic does the following:

- Logs any diagnostic information.
- Sets the status of the instance to RUNNING to allow other operations to continue.
- Returns the instance to its original shape.
- Deletes the node that it created to run the additional Managed Server instance.

About Scaling In an Oracle Integration Classic (User-Managed) Cluster

Scaling in an Oracle Integration Classic cluster removes the selected node from the cluster.

Before scaling in an Oracle Integration Classic cluster, ensure that the cluster contains at least one Managed Server node in addition to the node for the Administration Server and first Managed Server. You cannot scale in a cluster that contains only the node for the Administration Server and first Managed Server. If you no longer require that node, you must delete the entire instance.

By default, Oracle Integration Classic scales in a cluster gracefully by shutting down the Managed Server instance before removing the Managed Server instance from the cluster and terminating its node. To ensure that the node is removed even if the Managed Server instance is unresponsive, you can choose to forcibly scale in a cluster.

If an attempt to scale in a cluster fails, Oracle Integration Classic does the following:

- Logs any diagnostic information.
- Sets the status of the instance to RUNNING to allow other operations to continue.
- Cleans up any stale resources.
Overview of Scaling Tasks for Your Instance

You perform scaling tasks for an Oracle Integration Classic (user-managed) instance as required.

The following table provides information about how to perform each task by using the web-browser-based Oracle Integration Classic administration console.

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
<th>More Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scale out an Oracle Integration Classic</td>
<td>Scale out an Oracle Integration Classic cluster to add one node to the cluster.</td>
<td>Scale Out an Oracle Integration Classic (User-Managed) Instance</td>
</tr>
<tr>
<td>cluster</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scale in an Oracle Integration Classic</td>
<td>Scale in an Oracle Integration Classic cluster to remove a selected node from the cluster.</td>
<td>Scale In an Oracle Integration Classic (User-Managed) Instance</td>
</tr>
<tr>
<td>instance cluster</td>
<td></td>
<td></td>
</tr>
<tr>
<td>View scaling requests</td>
<td>View scaling requests to check the status of ongoing scaling requests, and the success or failure of previous requests.</td>
<td>Check Status of Scaling Requests</td>
</tr>
</tbody>
</table>

Scale Out an Oracle Integration Classic (User-Managed) Instance

You can scale out an Oracle Integration Classic (user-managed) instance to add one node to the cluster. When you scale out, Oracle Integration Classic instance creates a new node running a WebLogic Server Managed Server instance.

**Note:**

Oracle Integration Classic allocates two threads per server to process scheduled integrations. You can scale out Oracle Integration Classic (add nodes) to increase the number of scheduled integrations that can run in parallel in a user-managed environment.

To scale out an Oracle Integration Classic instance cluster:

1. Sign in to the Oracle Cloud Infrastructure Console.
2. In the Oracle Integration Classic console, click the name of your Oracle Integration Classic instance.
3. Click 
   ![Manage this service](image) and select Scale Out. The Scale Out dialog opens.
4. To confirm you want to scale out the cluster, click Scale Out.
5. After a few moments, click Refresh 
   ![Refresh](image) to update the page.

You might need to click the icon more than once to see any change to the page.

After a few moments of processing, the new node appears on the Overview page. The Overview tile shows the number of nodes increased by one.
Scale In an Oracle Integration Classic (User-Managed) Instance

You can scale in an Oracle Integration Classic (user-managed) instance to remove a selected node from the cluster. When you scale in, Oracle Integration Classic removes the selected WebLogic Server Managed Server instance and the virtual machine that it is running on.

1. Sign in to the Oracle Cloud Infrastructure Console.
2. In the Oracle Integration Classic Console, click the name of your Oracle Integration Classic instance.
3. In the Oracle Cloud Infrastructure Console, click Manage this node next to the node you want to remove and select Remove node.
   The Remove Node dialog box opens.
4. In the Remove Node dialog box, click Remove Node.
5. After a few moments, click Refresh to update the page.
   You might need to click the icon more than once to see any change to the page.

After a few moments of processing, the node is removed from the Overview page. The Overview tile will show the number of nodes decreased by one.

Check Status of Scaling Requests

You can view scaling requests to check the status of ongoing Oracle Integration Classic (user-managed) scaling requests, and the success or failure of previous requests.

To view ongoing or past scaling requests:

1. Sign in to the Oracle Cloud Infrastructure Console.
2. Click in the top left corner of the Oracle Cloud Infrastructure Console.
4. Click the name of your Oracle Integration Classic instance.
5. On the page, click **Manage this service** at the top of the page and select **View Activity**.

The Activity page of the Platform Services Console opens.

6. In the Search Activity Log panel, enter the necessary search criteria:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Time Range</td>
<td>The date and time range within which you want to see scaling activity.</td>
</tr>
<tr>
<td>Operation Status</td>
<td>The status of the scaling activity you want to view. This option will filter out all scaling activity <strong>not</strong> in this status. To see all status, select <strong>All</strong>.</td>
</tr>
<tr>
<td>Instance Name</td>
<td>The name of the service instance for which you want to see scaling activity.</td>
</tr>
<tr>
<td>Service Type</td>
<td>This should be <strong>Oracle Integration</strong>.</td>
</tr>
<tr>
<td>Operation</td>
<td>The operation for which you want to see activity. In the case of scaling, select any or all of these options:</td>
</tr>
<tr>
<td></td>
<td>• <strong>Scale Application</strong></td>
</tr>
<tr>
<td></td>
<td>• <strong>Scale In</strong></td>
</tr>
<tr>
<td></td>
<td>• <strong>Scale Out</strong></td>
</tr>
<tr>
<td></td>
<td>• <strong>Scale Up/Down</strong></td>
</tr>
</tbody>
</table>

7. Click **Search**.

All scaling activity that meets the search criteria appears in the results table. The Status column will indicate whether the scaling operation succeeded or failed. To see more details about a specific operation, click its drop-down control.

### Manage Database Issues

A service administrator can manage passwords for database schemas, set alerts based on performance metrics, and perform other database-related monitoring and management tasks.

**Topics:**

- Update the Database Schema Password in Oracle Integration Classic
- Managing Alerts

#### Update the Database Schema Password in Oracle Integration Classic

When you create an instance in Oracle Integration Classic, relevant database schemas are created in the associated Oracle Database Cloud Service (DBaaS) instance. These database schemas are required for Oracle Integration Classic to function properly.

Some of these database schemas are associated with:

- The core Oracle Integration Classic functionality (such as Integration, Process, Visual Builder, and Insight),
- The non-Oracle Integration Classic-specific functionality such as OPSS and other critical services that Oracle Integration Classic depends on.
These database schemas are used within the data sources defined for the Oracle Integration Classic instance.

For security reasons, the password for the database schemas expires after 180 days. If the password expires, it disrupts the functionality of the Oracle Integration Classic instance and potentially leads to system downtime. It is highly recommended that you update the database schema password within 180 days of the instance creation as described below in this section.

We strongly recommend that you note the new password. It will be required for subsequent instance patching attempts.

**Note:**

If you actively use Visual Builder, file a service request to get help from Oracle Support to complete the standard operating procedures required for the Visual Builder specific schemas.

Change the Database Schema Password

This topic does not apply to Oracle Cloud at Customer.

Use Oracle Java Cloud Service to change the Oracle schema password in the database deployment, and to also update your service instance to use the new password.

1. Access your service console.
2. Click the name of the service instance whose schema password you want to change.
3. At the bottom of the Overview page, expand **Associations**.
4. From the list of associations for this service instance, identity the association with these characteristics:
   - **Service Type** - Oracle Database Cloud Service
   - **Type** - Depends On
5. Click **Manage Association** for this association, and then select **Update Database Credentials**.
6. Complete the following input fields:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database Administrator</td>
<td>Enter the name of the system administrator for the selected database</td>
</tr>
<tr>
<td>Username</td>
<td>deployment.</td>
</tr>
<tr>
<td>Database Administrator</td>
<td>Enter the password for the database administrator.</td>
</tr>
<tr>
<td>Password</td>
<td></td>
</tr>
<tr>
<td>New Schema Password</td>
<td>Enter a new password for the Oracle schemas in the selected database</td>
</tr>
<tr>
<td></td>
<td>deployment.</td>
</tr>
</tbody>
</table>

7. Click **Update**.
You can monitor the operation’s progress from this page or from the Activity page.

Managing Alerts

Service administrators can configure rules to generate alerts when metrics exceed or are under specified thresholds for a specific time period. Service administrators will receive the alert notifications. See Setting an Alert for a Performance Metric of Managing and Monitoring Oracle Cloud.

To monitor and manage the Oracle database deployed on Oracle Database Cloud Service, you can use the standard management tool provided with the version of the database. See Monitoring and Managing Oracle Database on Database Cloud Service of Administering Oracle Database Cloud Service.

Back Up and Restore an Oracle Integration Classic (User-Managed) Instance

In Oracle Integration Classic (user-managed), you can back up and restore your Oracle Integration Classic instances to return their software and data to a particular state.

Topics:

• About Backing Up and Restoring an Oracle Integration Classic (User-Managed) Instance
• Typical Workflow for Backing Up and Restoring an Oracle Integration Classic (User-Managed) Instance
• Quick Tour of the Backup Page
• Configure an Automatic Backup
• Initiate an On-Demand Backup
• Delete a Backup
• Disable or Enable Backups
• Restore a Backup

About Backing Up and Restoring an Oracle Integration Classic (User-Managed) Instance

By backing up your Oracle Integration Classic (user-managed) instances, you can preserve them in a particular state.

When you create an Oracle Integration Classic instance, you can choose whether or not to enable backups. These backups are recorded to local node storage as well as to an Oracle Cloud Infrastructure Object Storage Classic container.

What a Backup Contains

The contents of a backup depend on whether it is a full backup or an incremental backup.
A full backup contains all the runtime artifacts required to restore the instance’s configuration data. An incremental backup contains changes to configuration data on all nodes since the last scheduled full backup.

**Note:**

All incremental backups are automated scheduled backups. You cannot create an incremental backup on demand.

### Contents of a Database Backup

A database backup contains Oracle database instance Oracle Fusion Middleware component schemas, and application data for an Oracle Integration Classic instance.

**Note:**

Only scheduled automated backups of an Oracle Integration Classic back up the database instance. On-Demand backups do not perform a database backup. Alternatively, you can back up your database using the associated Oracle Database Cloud Service database used by the instance. See Backing Up and Restoring Databases on Database Cloud Service in Administering Oracle Database Cloud Service.

### Where Backups Are Stored

Oracle Integration Classic stores all backups in an Oracle Cloud Infrastructure Object Storage Classic container. To speed up restorations from recent backups, Oracle Integration Classic also keeps a local copy of any backup it has recently created.

**Note:**

Do not attempt to download the backup files generated by Oracle Integration Classic. These files are encrypted and not accessible offline. You must use Oracle Integration Classic to restore an instance from a backup.

By default, Oracle Integration Classic stores backups in the container that was specified when the instance was created.

Oracle Integration Classic automatically deletes a backup when the retention period for the backup has elapsed.

### How Local Copies of Backups Are Stored

Oracle Integration Classic stores local copies in a dedicated volume mounted on the block storage attached to the node where the Administration Server is running.

- For an incremental backup, Oracle Integration Classic stores the local copy for seven days before deleting it.
• For a full backup, Oracle Integration Classic stores the local copy for seven days, or as long as the local copy of its last related incremental backups was stored, whichever is longer.

**How Backups and Local Copies Are Deleted Automatically**

After completing the day’s scheduled backup, Oracle Integration Classic deletes any backups or local copies that are due to be deleted that day. If the scheduled backup fails because of insufficient space, backups and local copies that are due to be deleted will still be deleted.

**Note:**

When an Oracle Integration Classic instance is deleted, all its backups are deleted.

**What Happens During a Backup**

During a backup of an Oracle Integration Classic instance, the instance continues to run and all applications deployed to the instance remain available. To prevent configuration changes during a backup, Oracle Integration Classic locks the Oracle WebLogic Server domain if the administration server is running. After locking the domain, Oracle Integration Classic backs up files on each node.

While the backup is in progress, you cannot start any other management operation on the instance. Similarly, if the administration server is not running at the time a backup is started, do not attempt to start this server until the backup completes.

When the backup is complete, Oracle Integration Classic unlocks the Oracle WebLogic Server domain. If the backup is a scheduled backup, Oracle Integration Classic also cleans up older backups as follows:

• From local storage it deletes all backups old enough to be stored only in the Oracle Integration Classic container.
• From all storage locations it deletes any remaining copies of backups whose retention period has elapsed. The default is 30 days.

**What Happens When an Instance Is Restored**

When restoration of an instance is initiated, Oracle Integration Classic shuts down the servers in the instance. After the restoration is complete, Oracle Integration Classic restarts these servers.

If the instance contains any managed server nodes that are not in the backup, Oracle Integration Classic warns you that it cannot restore these nodes.

Before trying to restore again, you can scale in the instance to delete these nodes.

If you choose to continue without scaling in the instance, Oracle Integration Classic asks you to confirm that you understand that the instance will be scaled in automatically.

If the backup contains any managed server nodes that are not currently in the instance, Oracle Integration Classic does **not** attempt to remove these managed servers from the Oracle WebLogic Server domain. You must use the WebLogic Server
to manually remove these managed servers from the domain configuration after restoring the instance.

Oracle Integration Classic does not automatically remove any existing Oracle WebLogic Server transaction records after restoring an instance from a backup.

Typical Workflow for Backing Up and Restoring an Oracle Integration Classic (User-Managed) Instance

To back up and restore an Oracle Integration Classic (user-managed) instance, consider this typical workflow.

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
<th>More Information</th>
</tr>
</thead>
</table>
| Configure backups for an Oracle Integration Classic instance | Customize the following properties of backups for a service instance:  
• When automated backups are performed  
• Where backups are stored  
• How long new backups are retained | Configure an Automatic Backup |
| Initiate an on-demand backup of an Oracle Integration Classic instance | Create a backup immediately without having to wait for the next scheduled backup. | Initiate an On-Demand Backup |
| Delete a backup | Delete a backup that you no longer require to release storage or prevent an Oracle Integration Classic instance from being restored from the backup. | Delete a Backup |
| Restore an Oracle Integration Classic instance from a backup | Undo configuration changes you don’t want by returning an Oracle Integration Classic instance to a particular state. | Restore a Backup |

Quick Tour of the Backup Page

You can use the Backup page to back up and restore an Oracle Integration Classic (user-managed) instance, and to manage backups for the service instance.

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backups on Cloud Storage</td>
<td>The total amount of space, in megabytes or gigabytes, that backups are occupying in the Oracle Cloud Infrastructure Object Storage Classic container for storing backups. This amount includes space that is occupied by backups that have been manually uploaded to the container, if any, in addition to the space occupied by backups that Oracle Integration Classic has moved there.</td>
</tr>
<tr>
<td>Backup Volume Used</td>
<td>The total amount of space, in megabytes or gigabytes, that local copies of backups are occupying in the backup volume on the block storage of the node where the Administration Server is running.</td>
</tr>
<tr>
<td>Backup Volume Used (%)</td>
<td>The percentage of the available space that backups are occupying in the backup volume on the block storage of the node where the Administration Server is running.</td>
</tr>
</tbody>
</table>
### Element | Description
--- | ---
Incremental Backups | Indicates the schedule for running incremental backups.
Full Backups | Indicates the schedule for running full backups.
Most Recent Backup | Indicates that the most recent backup failed and the time of its failure.
Last Successful Backup | Indicates the time of the last successful backup.
Backup Now | Click this button to create an on-demand backup of the Oracle Integration Classic instance.
Configure Backups | Click this button to update the backup schedule and where backups are stored.
Disable Backups or Enable Backups | Click this toggle button to disable/enable automated and on-demand backups.
Available Backups | List of available backups. By default, only backups for the last seven days are listed. Use the search field to specify a range of dates for which you want backups returned.

Enter the start date of the period for which you want to filter the list of available backups or the restoration history. By default, the start date is set to seven days before the current date.

Enter the date in the format `mm/dd/yyyy`.
- `mm` is a one-digit or two-digit month number, for example, 2 for February or 10 for October.
- `dd` is a number in the range 1–31 for the day of the month.
- `yyyy` is a four-digit year number, for example, 2104.
Alternatively, click the calendar icon to select the date from a calendar.

Enter the end date of the period for which you want to filter the list of available backups or the restoration history. Enter the date in the format `mm/dd/yyyy`.
- `mm` is a one-digit or two-digit month number, for example, 2 for February or 10 for October.
- `dd` is a number in the range 1–31 for the day of the month.
- `yyyy` is a four-digit year number, for example, 2104.
Alternatively, click the calendar icon to select the date from a calendar.

**Note:**
The end date must not be earlier than the start date.

Click to filter the list of available backups or the restoration history to show only backups or restorations from within the period specified by the Search From Date field and the Search To Date field.
<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="In-progress backup" /></td>
<td>In-progress backup for the Oracle Integration Classic instance. The backup will not be available for use in restoring the service instance until it is completed. The backup is identified by the date and time when the backup operation was started, which is displayed adjacent to the icon that represents the backup. Click the icon to see additional information about the backup.</td>
</tr>
<tr>
<td><img src="image" alt="Completed backup" /></td>
<td>Completed backup for the Oracle Integration Classic instance. The backup is available for use in restoring the service instance. The backup is identified by the date and time when the backup was created, which is displayed adjacent to the icon that represents the backup. Click the icon to see additional information about the backup, including its start date, complete date, expiration date, and size. If a database backup is included, its tag or timestamp is also displayed.</td>
</tr>
<tr>
<td><img src="image" alt="Completed backup with a warning message" /></td>
<td>Completed backup with a warning message. Oracle Integration Classic instance tried but failed to move or delete one or more older backups. For information about when and why Oracle Integration Classic instance moves or deletes older backups. The backup is still available for use in restoring the service instance. To find out why Oracle Integration Classic instance could not move or remove the older backup, place the cursor over the icon. The presence of the older backup may cause future backups to fail because of insufficient space. The backup is identified by the date and time when the backup was created, which is displayed adjacent to the icon that represents the backup. Click the icon to see additional information about the backup.</td>
</tr>
<tr>
<td><img src="image" alt="Backup in the process of being deleted" /></td>
<td>The backup is in the process of being deleted. Click the icon to see additional information about the backup.</td>
</tr>
</tbody>
</table>

| Type | A comma-separated pair of words that describes the type of the backup. The first word in the pair describes the extent of the backup:  
• Full—The backup contains all the runtime artifacts required to restore the service instance’s configuration data.  
• Incremental—The backup contains changes to configuration data on all nodes since the last scheduled full backup.  
The second word in the pair indicates how the backup was initiated:  
• If the backup was initiated automatically at the scheduled time, the text “scheduled” is displayed.  
• If the backup was initiated by a user, the user name of the user who initiated the backup is displayed.  
• If the backup was initiated in response to another management operation by a user, the name of the user is displayed. |
<p>| Available Until | The date and time until which the backup will be retained. |</p>
<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contains</td>
<td>A row of up to two icons that indicates the content of the backup:</td>
</tr>
<tr>
<td></td>
<td>• ![Icon] — Indicates that the backup contains configuration files.</td>
</tr>
<tr>
<td></td>
<td>• ![Icon] — Indicates that the backup contains database files. Place your mouse over this icon for additional database information.</td>
</tr>
<tr>
<td>Notes</td>
<td>Click the link to display the notes that were provided when the backup was created or the restoration was performed.</td>
</tr>
<tr>
<td></td>
<td>![Icon] Click to select the following options:</td>
</tr>
<tr>
<td></td>
<td>• <strong>Restore</strong>— Restore the Oracle Integration Classic instance from the backup.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Delete</strong>— Delete the backup.</td>
</tr>
<tr>
<td>Restore History (Last 7 Days)</td>
<td>Click the triangle adjacent to this label to display a list of all the restoration operations on this service instance. By default, only restoration operations for the last seven days are listed. Use the search field to specify a range of dates for which you want restoration operations returned. Click <strong>Select to include unsuccessful restore attempts</strong> to include the unsuccessful restoration operations in the list.</td>
</tr>
<tr>
<td></td>
<td>![Completed icon] Completed restoration operation for the Oracle Integration Classic instance.</td>
</tr>
<tr>
<td></td>
<td>The restoration operation is identified by the date and time when it was started, which is displayed adjacent to icon that represents the restoration operation.</td>
</tr>
<tr>
<td></td>
<td>Click the icon to see additional information about the restoration operation.</td>
</tr>
<tr>
<td></td>
<td>![In-progress icon] In-progress restoration operation for the Oracle Integration Classic instance.</td>
</tr>
<tr>
<td></td>
<td>The restoration operation is identified by the date and time when it was started, which is displayed adjacent to icon that represents the restoration operation.</td>
</tr>
<tr>
<td></td>
<td>Click the icon to see additional information about the restoration operation.</td>
</tr>
<tr>
<td></td>
<td>![Unsuccessful icon] Unsuccessful restoration attempt for the Oracle Integration Classic instance.</td>
</tr>
<tr>
<td></td>
<td>The restoration attempt is identified by the date and time when it was started, which is displayed adjacent to icon that represents the restoration attempt.</td>
</tr>
<tr>
<td></td>
<td>Click the icon to see additional information about the restoration attempt.</td>
</tr>
<tr>
<td>From Backup</td>
<td>The date and time when the backup from which the service instance was restored was created.</td>
</tr>
<tr>
<td>Status</td>
<td>The status of the restoration operation:</td>
</tr>
<tr>
<td></td>
<td>• Completed</td>
</tr>
<tr>
<td></td>
<td>• In-Progress</td>
</tr>
<tr>
<td></td>
<td>• Failed</td>
</tr>
<tr>
<td></td>
<td>Click the text to see detailed status messages for the operation.</td>
</tr>
</tbody>
</table>
Configure an Automatic Backup

You can configure backups for an instance to customize when the Oracle Integration Classic (user-managed) instance is automatically backed up and how backups are stored.

Because the changes affect only one service instance, you can configure different values for these properties for each of your service instances. Specifically, you can customize the following properties of the service instance:

To configure automated backups for an Oracle Integration Classic instance:

1. Sign in to the Oracle Cloud Infrastructure Console.
2. Click in the top left corner of the Oracle Cloud Infrastructure Console.
3. Select **Platform Services**, then **Integration Classic**.
   
The Oracle Integration Classic Instances page is displayed.
4. In the Oracle Integration Classic console, click the name of your Oracle Integration Classic instance.
5. In the Service Overview page, click the **Administration** tile.
6. Click the **Backup** tab.
   
The Backup page opens.
7. Click **Manage backups on this service** next to **Available Backups** and select **Configure Backups**.

8. In the Configure Backups dialog, set the options to configure automated backups for the service instance.

   a. In the Schedule section, set options to configure when automated backups are performed:

      - **Note:**
        
        All times must be for the Coordinated Universal Time (UTC) time zone, not your local time zone.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Backup</td>
<td>From the drop-down lists, select the day of the week and the time of day UTC when you want full backups to be performed.</td>
</tr>
<tr>
<td>Incremental Backup</td>
<td>From the drop-down list, select the time of day UTC when you want incremental backups to be performed.</td>
</tr>
</tbody>
</table>

   b. In the **Set new retention period to** field, enter the number of days that you want new incremental backups and full on-demand backups to be retained.
Note:

If you decrease the retention period, any existing backups that are older than this period will automatically be deleted during the next scheduled backup.

Full scheduled backups are retained until their last linked incremental backup is no longer available. The additional retention period for full scheduled backups is fixed and you cannot change it.

9. Click **Save**.

Initiate an On-Demand Backup

You can create a full backup immediately without having to wait for the next scheduled automatic backup.

Create a backup when making major changes to your Oracle Integration Classic (user-managed) instance, for example, in these situations:

- Before any configuration changes that you may need to undo
- Before deploying an application
- After deploying an application

Note:

Do not attempt to start the administration server while a backup is in progress.

To initiate an on-demand backup of an Oracle Integration Classic instance:

1. Sign in to the Oracle Cloud Infrastructure Console.
2. In the Oracle Integration Classic console, click the name of your Oracle Integration Classic instance.
3. In the Service Overview page, click the **Administration** tile.
4. Click the **Backup** tab.
   
The Backup page opens.
5. Click Manage backups on this service next to Available Backups and select Back Up Now.

6. In the Back Up Now dialog, enter the notes up to 255 characters of free-form text to provide additional information about the backup.

   This text is displayed in the Notes field for the backup in the list of available backups.

7. Click Back Up.

   The Backup page is updated to show that the backup is in progress.
   While the backup is in progress, you cannot start any other management operation on the service instance.

   When the backup is complete, it is added to the list of available backups on the Backup page.

**Disable or Enable Backups**

Backups in a Oracle Integration Classic (user-managed) instance are enabled by default on a new service instance but you can disable and enable this feature as required.

After disabling backups for a service instance:

- Scheduled backups will not run.
- Automated backups will not run prior to patching or scaling operations.
- You cannot take an on-demand backup.

Disabling backups for a service instance does not affect any backups that were taken previously.
1. Sign in to the Oracle Cloud Infrastructure Console.
2. In the Oracle Integration Classic console, click the name of your Oracle Integration Classic instance.
3. In the Service Overview page, click the Administration tile.
4. Click the Backup tab.
5. Click Manage backups on this service next to Available Backups and select Disable Backups.
6. When prompted for confirmation click Disable Backups.
7. To enable backups again at a later time, return to the Backup page and click Enable Backups.

### Restore a Backup

You can restore an Oracle Integration Classic (user-managed) instance from a backup to return the service instance to a particular state or recover the service instance after a loss of data.

---

**Note:**

If you restore a service instance's configuration files from a backup in which the hosts do not match the hosts in the service instance, Oracle Integration Classic handles the mismatch as follows:

- If the service instance contains any managed server hosts that are not in the backup, Oracle Integration Classic warns you that it cannot restore the managed server hosts that are not part of the backup.

Before trying to restore again, you can scale in the service instance to delete the nodes that correspond to these managed server hosts. See [Scale In an Oracle Integration Classic (User-Managed) Instance](#).

If you choose to continue without scaling in the service instance, Oracle Integration Classic asks you to confirm that you understand that the service instance will be scaled in automatically.

- If the backup contains any hosts that are not in the service instance, Oracle Integration Classic does not attempt to remove the managed servers on these hosts from the administration server configuration. You must use Oracle WebLogic Server to remove the managed servers on these hosts from the administration server configuration.

After you restore a service instance’s configuration files from a backup that does not match the service instance, you might need to modify the restored service instance to return it to the state you require.

You can restore a service instance from an incremental backup without the need to restore the full backup to which the incremental backup is linked. In this situation, you are responsible for ensuring that the service instance is in a consistent state after the service instance is restored.
Restoration from a backup that is stored on block storage is faster than restoration from a backup that is stored in an Oracle Cloud Infrastructure Object Storage Classic container.

Before restoring an Oracle Integration Classic instance from a backup, you must disable the load balancer for the service instance.

The applications deployed to your instance will be unavailable during the restoration process.

To restore an Oracle Integration Classic instance from a backup:

1. Sign in to the Oracle Cloud Infrastructure Console.
2. In the Oracle Integration Classic console, click the name of your Oracle Integration Classic instance.
3. In the Service Overview page, click the **Administration** tile.
4. Click the **Backup** tab.
5. Click **Manage backups on this service** next to **Available Backups** and select **Restore**.

You can restore an instance from an incremental backup without the need to restore the full backup to which the incremental backup is linked. Oracle Integration Classic instance restores all the data from the linked full backup required for a complete restoration of the instance.

**Note:**

If you choose to restore from an incremental backup, you are responsible for ensuring that the service instance is in a consistent state after the service instance is restored.

6. Enter Notes up to 255 characters of free-form text to provide additional information about the restoration, such as why you are restoring the instance.
7. Click **Restore**.

The Backup page is updated to show that the restoration is in progress. While the restoration is in progress, you cannot start any other management operation on the instance.

When the restoration is complete, it is added to the restoration history in the Backup page.
Delete a Backup

You can delete a backup that you no longer require to release storage or prevent an Oracle Integration Classic (user-managed) instance from being restored from the backup.

**Note:**

You can't delete a full backup with linked incremental backups without deleting the incremental backups. If the backup you're deleting has linked incremental backups, Oracle Java Cloud Service asks if you want to delete both the full backup and its linked incremental backups.

To delete a backup:

1. Sign in to the Oracle Cloud Infrastructure Console.

2. Click in the top left corner of the Oracle Cloud Infrastructure Console.

3. Select **Platform Services**, then **Integration Classic**.

4. In the Oracle Integration Classic console, click the name of your Oracle Integration Classic instance.

5. In the Service Overview page, click the **Administration** tile.

6. Click the **Backup** tab.

   The Backup page is displayed.

7. Click **Manage backups on this service** next to **Available Backups** and select **Delete**.

8. When prompted, confirm that you want to delete the backup.

   If the backup you're deleting has linked incremental backups, Oracle Integration Classic asks if you want to delete both the full backup and its linked incremental backups.

Manage Integrations and Errors

You can manage integration and process errors in Oracle Integration Classic (user-managed).

Activate the service in Oracle Integration Classic when the integration is ready to go live and you can deactivate an active Integration. You can modify or clone the integration. Delete an integration that is no longer needed. See Managing Integrations in Using Integrations in Oracle Integration.

You can manage errors from the Errors pages in Oracle Integration Classic at the integration level, connection level, or specific integration instance level. See Managing Errors in Using Integrations in Oracle Integration.
Manage SSL Certifications

You can upload and update security certificates in Oracle Integration Classic (user-managed) to validate external connections.

Certificates are used to validate outbound SSL connections. If you make an SSL connection in which the root certificate does not exist in Oracle Integration Classic, an exception is thrown. In that case, you must upload the appropriate certificate. A certificate enables Oracle Integration Classic to connect with external services. If the external endpoint requires a specific certificate, request the certificate and then upload it into Oracle Integration Classic. You can update or delete certificates you uploaded into Oracle Integration Classic.

For more information about managing SSL certificates in Integrations, see Managing Security Certificates in Using Integrations in Oracle Integration.

For more information about managing SSL certificates in Processes, see Manage Security Certificates during Runtime and Manage Security Certificates during Design Time in Using Processes in Oracle Integration.

Manage Instance History

You can determine when to purge the data in your database. You can also view the notification and quiesced thresholds for your database and the percentage of the database that has been used.

Instance history is automatically purged periodically, based on settings in Oracle Integration Classic (user-managed). See Archive and Purge Data in Using Processes in Oracle Integration.

Configure Settings for Error Logs

Need to troubleshoot errors? As an administrator, you can change logging levels and download logs for Oracle Integration Classic (user-managed).

Use caution when changing logging levels because increasing them can affect performance. Reset logging levels back to default settings after troubleshooting.

1. From the Home page, select Settings, then Logging.

   The Logging screen is displayed. By default, loggers are contained within folder containers, and the number of loggers contained (collapsed) within the folder is listed after the folder name.
2. Filter and sort the logging list.

You can filter in several ways:

- **Show Only**: Select one or more options to limit the list. Note that loggers or folders must meet all selected options to be listed.
  - **Oracle Integration**: Displays loggers related to Oracle Integration Classic components.
  - **Top Containers**: Displays the two top levels of folder containers.
  - **Unsaved Changes**: Displays loggers whose levels you have changed but haven’t saved, as indicated by an Unsaved icon.

- **Filters Menu**: Select Open Filters Menu to view loggers by their status (at default, or increased or decreased) or by their selected logging level. Filter settings display below the search field as you specify search criteria.

3. Search for logs.

In the Search field, enter a logger name (or partial name) and press Enter. Searching is case sensitive. For example, enter oracle.bpm to list all loggers that begin with those characters. Note that searching is performed within the filtered list. For example, if the Top Containers filter is selected, only the top containers are searched.

4. Change logging levels as needed.

- Use the up and down icons in the Logging Level column to change a logger level. As you increase or decrease, an unsaved icon displays adjacent to the new logging level to indicate unsaved changes. The Status column indicates whether you increased or decreased the level and lists the default level.

- When a logging level lists Inherited, this indicates that its own current level is inherited from its parent package because it doesn’t have a default level set. Children packages may have a different level. Changing a package level will automatically change the logging level of its children if they inherit from it (if they don’t have a specific logging level set).
5. Save your changes. Download logs as needed.
   
   Click **Download Logs** and save the entire logging file to a zip file.

### Use SSH to Sign In to Oracle Integration Classic (User-Managed)

You must specify the opc username when using SSH to log in to the Oracle Integration Classic virtual machine with a private key.

### Diagnose Oracle Integration Classic (User-Managed) Problems

Oracle Integration Classic (user-managed) provides log files containing reports of an event, errors, warning messages. You can diagnose problems using these log files.

**Topics:**
- Access and View Diagnostic Logs
- Export Suite-Generated Artifacts
- Collect Database Statistics
- View System Health

### Access and View Diagnostic Logs

Use log files such as WebLogic Server log files or Java Flight Recorder to diagnose problems, and report incidents in Oracle Integration Classic (user-managed).

**Topics:**
- Use WebLogic Server Logs
- Use Java Flight Recorder Performance Profiles
- Use Oracle Integration Report Incidents

### Use WebLogic Server Logs

Use WebLogic Server Administration Console logs to diagnose errors.

To find the log files in WebLogic Server Administration Console:

1. Sign in to the Oracle Cloud Infrastructure Console.

2. Click **Manage this service** and select **Open WebLogic Server Console**.
   
   A new browser opens and you are redirected to the login page.

3. Enter the user name and password you provided when you created the service instance.
4. In the Domain Structure area, expand **Diagnostics**.

5. Click **Log Files**.

   The Log Files table appears.

6. Select the option to the left of the log file you want to view.

7. Click **View**.

   The log file you selected appears in the table.

---

**Note:**

If you do not find the information you are looking for, click the **Customize this table** link above the log file and select the Time Interval or use the other filter options available.

---

**Use Java Flight Recorder Performance Profiles**

You can use Oracle’s commercial profiling tools, Java Flight Recorder and Java Mission Control, to analyze the performance of applications deployed on Oracle Java Cloud Service.

Java Flight Recorder (JFR) and Java Mission Control (JMC) collect detailed runtime information so that you can analyze incidents after they occur. JFR, available in Oracle HotSpot JVM, is a performance monitoring and profiling tool that records diagnostic information on a continuous basis, making it always available, even in the wake of catastrophic failure such as a system crash. JMC enables you to monitor and manage Java applications without introducing the performance overhead normally associated with these types of tools. It includes the JFR user interface, which allows users who are running a Java Flight Recorder-compliant version of Oracle HotSpot to view JVM recordings, current recording settings, and runtime parameters. The JFR interface includes the Events Type View, which gives you direct access to event information that has been recorded in the .jfr file, such as event producers and types, event logging and graphing, event by thread, event stack traces, and event histograms.

**Basic Workflow for Profiling Applications with JFR**

Monitoring applications with JFR comprises these steps:

1. Enable JFR in your WebLogic Server instance.

2. Obtain the flight recording by generating a diagnostic image capture.

3. Analyze the recording with the Flight Recorder UI.

**Enable JFR in Your WebLogic Server Instance**

Because it is a commercial feature, if WebLogic Server is configured with Oracle HotSpot, Java Flight Recorder is, by default, disabled. To enable it, use the following JVM commands in the startup script for the WebLogic Server instance in which the JVM runs:

```
-XX:+UnlockCommercialFeatures -XX:+FlightRecorder
```
The sequence of these commands is critical: +UnlockCommercialFeatures command advises the JVM to recognize the command +FlightRecorder. The commands must be entered in that order or the JVM will not start.

For example:

```
java -XX:+UnlockCommercialFeatures -XX:+FlightRecorder -XX:FlightRecorderOptions=defaultrecording=true,maxage=20m MyApp
```

You can also enter the +UnlockCommercialFeatures and +FlightRecorder commands in the WebLogic Server configuration file's JAVA_OPTIONS (or equivalent) variable.

For more detailed information on enabling JFR, see Running Java Flight Recorder in the Java Platform, Standard Edition Java Flight Recorder Runtime Guide.

Obtain the Flight Recording by Generating a Diagnostic Image Capture

The diagnostic image capture itself is a single JFR file that contains individual images produced by the different server subsystems. If the JFR file is available, it is included in the diagnostic image as the file FlightRecording.jfr.

You can generate a diagnostic image capture on-demand — for example, from the WebLogic Server Administration Console, Fusion Middleware Control, WLST, or a JMX application — or as the result of an image action. To generate a diagnostic image captures and configure the location in which they are created, see Configuring and Capturing Diagnostic Images in Oracle® Fusion Middleware Configuring and Using the Diagnostics Framework for Oracle WebLogic Server.

Analyze the Recording with the Flight Recorder UI

Once you've obtained the recording, you can then view and analyze it by using the Flight Recorder user interface, a JMC component. Assuming you are running a Java Flight Recorder-compliant version of Oracle HotSpot, the JFRUI allows you to view JVM recordings, current recording settings, and runtime parameters. The JFR interface includes the Events Type View, which gives you direct access to event information that has been recorded in the JFR file, such as event producers and types, event logging and graphing, event by thread, event stack traces, and event histograms. Some of the activity you can monitor on the JFR UI includes:

- Display Event Data for a Product Subcomponent
- View the Event Log to Display Details
- Track Execution Flow by Analyzing an Operative Set
- Expand the Operative Set and View Correlated Diagnostic Data

Use of the JFR UI for these tasks and more is described in greater detail in Analyzing Java Flight Recorder Data in Oracle® Fusion Middleware Configuring and Using the Diagnostics Framework for Oracle WebLogic Server.
Use Oracle Integration Report Incidents

You can report incidents for problematic issues that occur during design time in Oracle Integration (for example, being unable to open an integration, the failure of connection testing, or the failure of artifact regeneration).

To report incidents in Oracle Integration, see Report Incidents in Using Integrations in Oracle Integration.

Export Suite-Generated Artifacts

Download artifacts of an integration to view and diagnose problems.

You can download artifacts as a zip file using the Download Artifacts option in Oracle Integration, see Downloading Generated Artifacts for an Integration in Using Integrations in Oracle Integration.

Collect Database Statistics

Collect database statistics to diagnose performance problems by comparing statistics captured in a baseline to those captured during a period of poor performance.

See Gathering Database Statistics in the Oracle Database Performance Tuning Guide.

View System Health

You can view information about the system health of Oracle Integration components. As you navigate around Oracle Integration, you receive a system health state that is not older then five minutes. The only exception is the Messaging Service state, which may take longer than five minutes to update.

The state of system health is viewable from multiple locations in Oracle Integration instance:

- From the main banner of pages
- From the Integrations, Connections, and Lookups pages
- From the mapper or expression builder
- From the System Health page under the Monitoring tab

See Viewing System Health in Using Integrations in Oracle Integration.

Delete an Oracle Integration Classic (User-Managed) Instance

When you no longer require an Oracle Integration Classic (user-managed) instance, you can delete it.

Oracle Integration Classic can be running or stopped before you attempt to delete it. If the instance is stopped, you must check Force Delete on the Delete Service dialog for proper schema cleanup.
When you delete an Oracle Integration Classic instance:

- Resources such as IP addresses are removed.
- The Oracle Database Cloud Service database deployment is not deleted when you delete the Oracle Integration Classic instance.
- The object storage container is not deleted when you delete the Oracle Integration Classic instance.

To delete an Oracle Integration Classic instance:

1. Sign in to the Oracle Cloud Infrastructure Console.
2. In the Oracle Integration Classic console, find the instance you want to delete.
3. From the menu, select **Delete**.
4. In the Delete Service dialog box that opens, set the following options:
   - **Force Delete**—*(Optional)*: Select this check box if you want the service instance to be deleted even if the database deployment cannot be reached to delete the database schemas. If enabled, you may need to delete the associated database schemas manually on the database deployment if they are not deleted as part of the service instance delete operation.
   - **Database Administrator User Name**: Enter the name of the database administrator user that was specified when the database deployment was created. This user owns the instance’s repository and schemas. If you have specified two databases, specify the name of the administrator for the database deployment for the Oracle required schema.
   - **Database Administrator User Password**: Enter the database administrator user password for the database deployment that contains the Oracle required schema.
   - **Skip Backup**: Select to skip the backup of the terminated instance.
5. Click **Delete**.

Once deleted, the Oracle Integration Classic instance is removed from the list of service instances displayed on the Oracle Integration Classic instance Console.
Troubleshoot Oracle Integration Classic (User-Managed)

Topics:

• Provision an Instance Without the Correct User Roles Causes Failure
• Provision Oracle Integration Classic (User-Managed)
• 504 Gateway Timeout Error May Require Editing an Instance’s Load Balancer Access Rules Manually to Add a New IP Address
• Troubleshoot cURL Command Issues When Configuring an IP Network
• Database Backups May Use Up Disk Space and Cause Oracle Integration Classic Servers to Shut Down
• Troubleshoot Backup and Restore Issues
• Troubleshoot Patching Issues
• Oracle Integration Classic (User-Managed) Fails to Connect to the Database Instance

Provision an Instance Without the Correct User Roles Causes Failure

If you attempt to provision Oracle Integration Classic (user-managed) without the required set of user roles, you receive errors. For example, the following error occurred because the user account did not possess the correct role for provisioning an Oracle Database Cloud Service instance.

Mar 7, 2018 7:41:57 PM UTC Service creation request accepted.
Mar 7, 2018 7:41:57 PM UTC Initializing OIC7786QS
Mar 7, 2018 7:42:34 PM UTC Failed to create Compute resources for Database Server...[Compute Error: Unable to authenticate]
Mar 7, 2018 7:42:34 PM UTC Initiating Database Service Termination...

To successfully provision Oracle Integration Classic, ensure that your user account is assigned the correct roles. See Assign the Correct User Roles to Create an Instance.
Provision Oracle Integration Classic (User-Managed)

Ensure that you satisfy the following prerequisites before provisioning Oracle Integration Classic (user-managed). Not doing so prevents you from successfully provisioning Oracle Integration Classic.

- Know the Oracle Cloud Infrastructure Object Storage Classic account name when you start to provision Oracle Integration Classic. This account name is automatically created when you purchase your universal credits. You specify the account name when provisioning Oracle Integration Classic with the provisioning wizard or with the Oracle Cloud Stack templates. See Create an Oracle Integration Classic (User-Managed) Instance for instructions on how to obtain the account name.

- Review the minimum system requirements. See Create an Oracle Integration Classic (User-Managed) Instance.

- If you want to provision Oracle Integration Classic with the provisioning wizard, ensure that you first provision Oracle Database Cloud Service. This is because when using the provisioning wizard, you are prompted to specify the Oracle Database Cloud Service login credentials and service name. If you provision Oracle Integration Classic with the Oracle Cloud Stack templates, this is not a requirement because the Oracle Database Cloud Service instance is automatically provisioned for you.

504 Gateway Timeout Error May Require Editing an Instance's Load Balancer Access Rules Manually to Add a New IP Address

If an Oracle Integration Classic (user-managed) instance is provisioned when the virtual load balancer has temporarily switched from, for example, three IP addresses to one IP address due to a load situation, the instance's four load balancer access rules are created with only that one IP address even though the virtual load balancer has multiple IP addresses. The access rule ideally should have all load balancer IP addresses in comma-separated fashion.

The missing two IP addresses mean that when the Oracle Integration Classic instance requests are routed through all load balancer IP addresses to the Oracle Integration Classic instance, the requests coming from the unknown two IP addresses time out (504 Gateway Timeout errors). Only requests routed from the registered IP address route successfully.

To resolve this situation, manually disable (from the Oracle Platform Service Manager console) the four load balancer access rules (ora_lb2admin_7001_1, ora_lb2ms_7001_1, ora_lb2admin_8001_1, and ora_lb2ms_8001_1) and add a duplicate set of four rules (with different names) with all load balancer IP addresses included.
Troubleshoot cURL Command Issues When Configuring an IP Network

Note the following potential issues when executing curl commands to create the virtual Oracle Load Balancer as a Service.

• If you see the following exception while executing curl commands, use the -k option in the command (for example, curl -i -k -X POST).

```
curl: (60) SSL certificate problem: unable to get local issuer certificate
More details here: https://curl.haxx.se/docs/sslcerts.html

curl failed to verify the legitimacy of the server and therefore could not establish a secure connection to it. To learn more about this situation and how to fix it, please visit the web page mentioned above.
```

• When you receive an HTTP 500 Internal Server error, your JSON file content is likely not correct. Check for special characters such as "."

• When you submit a request and the curl command does not respond and print any output, ensure the Oracle Load Balancer as a Service URL is accessible from a browser and you are not behind a firewall/inside a corporate network.

Database Backups May Use Up Disk Space and Cause Oracle Integration Classic Servers to Shut Down

If you cannot restart your managed server (it enters a failed state) and you receive the following error, this may be due to excessive disk space usage on the database virtual machine (for example, the backup mount is at 75% for /u01).

```
Received exception while creating connection for pool "SOALocalTxDataSource":
ORA-00257: Archiver error. Connect AS SYSDBA only until resolved.
```

This can result in archiving issues and the Oracle WebLogic Servers can only connect to the database as SYSDBA.

To resolve this issue, increase the mount space. This enables the database to run again. If no issues are found in the archive logs, clean up the files occasionally to avoid similar issues in the future.

See Back Up and Restore an Oracle Integration Classic (User-Managed) Instance.

Troubleshoot Backup and Restore Issues

After a backup, if you scale in or out a managed server and then attempt to restore the backup, additional managed servers are created during backup restoration. You need...
to manually delete the additional managed servers for Oracle Integration Classic (user-managed) Home page to display properly.

To delete additional managed servers:

1. Sign in to the Oracle Cloud Infrastructure Console.
2. In the Oracle Integration Classic console, click the name of your Oracle Integration Classic instance.
3. On the page, click \( \text{ } \) and choose Open WebLogic Server Console to open the WebLogic Server Console. A new browser opens and you are redirected to the WebLogic Server console’s login page.
4. Sign in to Oracle WebLogic Server Administration Console.
5. In the Domain Structure pane, select Environment, then select Servers.
6. In the Change Center pane, click Lock & Edit.
7. Select the additional managed servers and click Delete. Click OK to confirm.
8. In the Change Center pane, click Activate Changes.

Troubleshoot Patching Issues

Patching Precheck fails if the current user session is locked. You need to unlock the user session before performing prechecks for patching Oracle Integration Classic (user-managed).

To unlock the user session:

1. Sign in to the Oracle Cloud Infrastructure Console.
2. In the Oracle Integration Classic console, click the name of your Oracle Integration Classic instance.
3. On the page, click \( \text{ } \) and choose Open WebLogic Server Console to open the Oracle WebLogic Server Administration Console. Alternatively, you can use the following URL format to access the console:

   https://example.com/console

   A new browser opens and you are redirected to the Oracle WebLogic Server Administration Console login page.

4. Sign in to Oracle WebLogic Server Administration Console as a WebLogic server administrator.
5. In the Domain Structure pane, select Environment, then select Servers.
6. In the Configuration tab, verify the state of all the managed servers. Ensure that the state for all the managed servers is displayed as *Running*.

7. In the Change Center pane, click **View Changes and restarts**.

8. On the Change and Restarts page, click the **Other Edit Sessions** tab and ensure that there is only one row by default listed under the Current Edit Sessions table. If the **Owned By** column in the Current Edit Sessions table is set to *JaaS_System_WLS_Admin*, click **Lock & Edit**. Now you’ll see the logged-in user ID in the Owned By column.

9. Click the **Change List** tab and verify if the **Pending Changes** table has no items to display.
10. In the Change Center pane, click **Release Configuration**.

Oracle Integration Classic (User-Managed) Fails to Connect to the Database Instance

If Oracle Integration Classic (user-managed) fails to connect to the database instance for a period of four hours or more, you should restart your Oracle Integration Classic instance.

By default, the maximum amount of time that an Oracle Integration Classic instance tries to recover from a database connection failure without any intervention is four hours. After this period of time, manually restart the Oracle Integration Classic instance if the connectivity issue is not resolved.