

# Oracle® Cloud

## Administering Oracle Fusion Data Intelligence



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# Preface

Learn how to get started with Oracle Fusion Data Intelligence.

## Topics

- [Audience](#)
- [Documentation Accessibility](#)
- [Diversity and Inclusion](#)
- [Related Documentation](#)
- [Conventions](#)

## Audience

This document is intended for administrators who implement, configure, and manage Oracle Fusion Data Intelligence.

## Documentation Accessibility

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## Diversity and Inclusion

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## Related Documentation

These related Oracle resources provide more information.

- Oracle Cloud <http://cloud.oracle.com>

- Getting Started with Oracle Cloud
- [Managing and Monitoring Oracle Cloud](#)
- Using Oracle Fusion Data Intelligence
- Getting Started with Oracle Analytics Cloud
- Visualizing Data and Building Reports in Oracle Analytics Cloud
- Preparing Data in Oracle Analytics Cloud

## Conventions

The following text conventions are used in this document.

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

# 1

## Get Started with Oracle Fusion Data Intelligence

Let's explore Oracle Fusion Data Intelligence and what you need to know to get started with administration.

### Topics:

- [About Oracle Fusion Data Intelligence](#)
- [About Oracle Fusion Data Intelligence Releases](#)
- [About Oracle Fusion Data Intelligence Components](#)
- [About Oracle Fusion Data Intelligence Console](#)
- [Comparison of Capabilities between Analytics Cloud Associated with Fusion Data Intelligence and Standalone Analytics Cloud](#)
- [Usage Guidelines for Autonomous Data Warehouse Associated with Fusion Data Intelligence](#)
- [Preview Features](#)
- [Generally Available Features](#)
- [Region Availability](#)
- [About Oracle Fusion Data Intelligence Service Level Objective](#)
- [Billing Metrics of Autonomous Data Warehouse Associated with Fusion Data Intelligence](#)

## About Oracle Fusion Data Intelligence

Oracle Fusion Data Intelligence is a family of prebuilt, cloud native analytics applications for Oracle Cloud Applications that provides line-of-business users with prebuilt insights to improve decision-making.

It empowers business users with industry-leading, AI-powered, self-service analytics capabilities for data preparation, visualization, enterprise reporting, augmented analysis, and natural language processing. It is a Cloud application that delivers best-practice key metrics and deep analyses to help decision-makers run their business. Oracle Fusion Data Intelligence is built on top of Oracle Analytics Cloud and Oracle Autonomous Data Warehouse. This packaged service starts with Oracle Fusion Cloud Applications, and you can deploy rapidly, personalize, and extend it. The service extracts and loads data from your Oracle Fusion Cloud Applications into an instance of Oracle Autonomous Data Warehouse. Business users can then create and customize dashboards in Oracle Analytics Cloud.

This service consists of a data pipeline, data warehouse, semantic model, and best-practice content such as prebuilt key metrics, workbooks, and visualizations. Oracle manages the service starting with deployment through performance monitoring, upgrades, and maintenance for the prebuilt content. You can customize the prebuilt content as defined in the [Customize Oracle Fusion Data Intelligence](#) section. Apart from your Oracle Fusion Cloud Applications data, you can load external data from non-Oracle Fusion Cloud Applications sources such as

SalesForce or EBusiness Suite into Oracle Autonomous Data Warehouse associated with Oracle Fusion Data Intelligence. See [About Managing Data Connections](#).

Oracle Fusion Data Intelligence incorporates appropriate cache management strategy to optimize performance. You must configure the included semantic model only with the embedded Oracle Fusion Data Intelligence tools and deployed only on the Oracle Fusion Data Intelligence service instance. You mustn't configure the included semantic model with non-Oracle Fusion Data Intelligence tools including Oracle Analytics Client Tools, Oracle Analytics Administration Tool, or APIs.

Oracle Fusion Data Intelligence runs on Oracle Cloud Infrastructure and is integrated with many infrastructure services. Before you begin using Oracle Fusion Data Intelligence, you familiarize yourself with Oracle Cloud Infrastructure. See [Welcome to Oracle Cloud Infrastructure](#).

To familiarize yourself the Oracle Fusion Data Intelligence user experience, see [Learn About the New Oracle Fusion Data Intelligence Experience](#).

## About Oracle Fusion Data Intelligence Service Level Objective

Oracle Fusion Data Intelligence is built on Oracle Cloud Infrastructure and leverages the Oracle PaaS Cloud services.

Oracle Fusion Data Intelligence availability is tied to dependent Oracle services such as Oracle Identity Cloud Service, Oracle Analytics Cloud, Oracle Autonomous Data Warehouse, and Oracle Cloud IaaS services, including compute and storage. Each of these services has published service level agreements under [Oracle Cloud SLA](#). See the Oracle PaaS and IaaS Public Cloud Services Pillar Document (PDF).

Oracle Fusion Data Intelligence has a service-level objective (SLO) of 99.9%.

## About Oracle Fusion Data Intelligence Releases

Updates to Oracle Fusion Data Intelligence are mainly released as Application and Platform releases with major features and minor, security, and emergency patches.

Here are the details:

- Platform Releases:
  - Platform Releases contain updates to your service; for example as security patches and updates to the Console accessible to administrators.
  - You don't need to schedule the upgrade or make any selection or take any action because Oracle applies the release patches automatically. You don't need to make any selection or take any action. These updates include operating system and security patches and are applied for all customers on the same day.
  - Because these releases don't change the data model or content, business users aren't affected.
  - All reports and dashboards are available during the upgrade process. Pipelines (incremental daily schedule) may get delayed if it coincides with the upgrade.
  - You can expect a major release every quarter (February, May, August, November), a minor patch every month, and emergency fixes as patches.
- Application Releases:
  - Application Releases contain updates to the data model and new content when available.

- You'll receive notification emails about these releases.
- You'll find the release numbers listed in the Release Updates tile of the Console, where you can view the available releases and apply them as appropriate.
- You'll notice an "auto-update" target date for major releases. You can update to a release any time before the predefined date by changing it to a date convenient for you. See [Update Your Application](#). On the predefined date, if you haven't yet updated, then Oracle Fusion Data Intelligence automatically updates your data model and content without extending the predefined date.
- All reports and dashboards are available during the upgrade process.
- You can expect a major release every quarter (February, May, August, November) and optional updates or emergency patches. Each patch is cumulative. For example, if you choose to apply the 22.R1.P3 patch, then the previous patches (such as 22.R1.P1 and 22.R1.P2) are also applied with the 22.R1.P3 patch. You won't see the older patches listed in the Release Updates tile of the Console as available releases when the release changes to the current one (such as 22.R1.P3).
- You aren't impacted by major application releases which have undergone testing to negate the impact to existing business users. Major application releases don't cause service downtime.

## About Oracle Fusion Data Intelligence Components

Oracle Fusion Data Intelligence consists of several core components such as Oracle Cloud Infrastructure Identity and Access Management, Oracle Fusion Data Intelligence Console, data pipeline infrastructure, Oracle Autonomous Data Warehouse, and Oracle Analytics Cloud.

It has prebuilt components that Oracle manages and extensible components that you can manage. Though Oracle manages these components, you can customize and extend them:

- Data pipeline to Oracle Fusion Cloud Applications
- Data model
- Semantic model
- Best practice content like key metrics, workbooks, and reports

You can:

- Add external data sources into the same Oracle Autonomous Data Warehouse as the Oracle Fusion Cloud Applications data.
- Use any ETL tool or the robust Oracle Data Integrator with its many connectors to load data into the custom schemas and tables in the same Oracle Autonomous Data Warehouse repository.
- Connect to data using more than the 30 self-service connectors rather than loading data into Oracle Autonomous Data Warehouse.
- Import Microsoft Excel files or spreadsheets.
- Extend the semantic model.
- Create key metrics, dashboards, and reports.



## About Oracle Fusion Data Intelligence Console

You must have the Oracle Fusion Data Intelligence service administrator role to access the Console and perform administration tasks.

The following table outlines the tasks that you can perform on the Oracle Fusion Data Intelligence Console.

Task	More information
Security	Manage users and their access to subject areas and data. See <a href="#">Manage Users, Groups, Application Roles, and Data Access</a> .
Release Updates	Decide upon and apply the application updates (except the emergency patches that are deployed automatically). See <a href="#">Manage Application Updates</a> .
Virus Scanner	Use the Virus Scanner option on the Console to connect to your virus scanning server. See <a href="#">Configure a Virus Scanner</a> .
Advanced Configuration	Advanced data and content configurations will be available in a future release.
Data Configuration	Configure connections to Fusion source systems and managed pipelines. Modify pipeline settings, data augmentations, and application-specific configurations. See <a href="#">Configure Oracle Fusion Data Intelligence Data</a> .
Semantic Model Extensions	Configure extensions and customizations to the semantic model. Join with custom data objects or import external semantic models. See <a href="#">Customize Oracle Fusion Data Intelligence</a> .
Data Validation	Validate the data after loading the source data from Oracle Fusion Cloud Applications into your data warehouse. See <a href="#">Validate Oracle Fusion Data Intelligence Data</a> .
Uploads	Upload and download data related to security and financial categories to your data warehouse using files. See <a href="#">Manage Uploads and Downloads</a> .
Promote Objects	Promote changes to the semantic model, security configurations, and customized key metrics from non-production to Production environments. See <a href="#">Promote Your Customizations to the Production Environment</a> .
Bundles	Manage snapshots of your application artifacts as bundles. See <a href="#">Bundle Your Application Artifacts</a> .
Session and Query Cache	See which users are signed in and troubleshoot report queries. This is also accessible from the Console. See <a href="#">Monitor Users and Activity Logs</a> .
Issue SQL	Test and debug SQL queries. See <a href="#">Run Test SQL Queries</a> .

## Comparison of Capabilities between Analytics Cloud Associated with Fusion Data Intelligence and Standalone Analytics Cloud

As an Oracle Fusion Data Intelligence service administrator, you perform certain tasks differently in the Oracle Analytics Cloud instance associated with Oracle Fusion Data Intelligence than the standalone Oracle Analytics Cloud instance.

Service administrators have access to two console user interfaces, and administrative tasks span both the consoles. The Oracle Fusion Data Intelligence Console allows administrators to manage central tasks that are common to both users as well as the application. The Oracle Analytics Cloud Console allows administrators to configure features that are specific to analytics. An Oracle Analytics Cloud instance associated with Oracle Fusion Data Intelligence

is directly connected to the Oracle Autonomous Data Warehouse instance and doesn't support connections to external systems. For example, connections to social media platforms isn't supported through an Oracle Analytics Cloud instance associated with an Oracle Fusion Data Intelligence instance. You can use the Oracle Fusion Data Intelligence Console to define external connections and extensions to the repository file but you can't directly access the repository (rpd) file.

The following table outlines the tasks that you can and can't perform on the Oracle Analytics Cloud instance Console that's included with Oracle Fusion Data Intelligence. You must have the Oracle Fusion Data Intelligence service administrator role to access the Console and perform administration tasks.

Tasks	More Information
Maps	Define how users display their data on maps. See <a href="#">Manage Map Information for Analyses</a> .
Extensions	Upload custom visualization types or custom data actions. See <a href="#">Manage Custom Plug-ins</a> .
Social	Not available. External connections to social media platforms aren't allowed in Oracle Fusion Data Intelligence.
Search Index	Set up how content is indexed and crawled so users always find the latest information when they search. See <a href="#">Schedule Regular Content Crawls and Monitor Search Crawl Jobs</a> .
Safe Domains	Authorize access to safe domains. See <a href="#">Register Safe Domains</a> .
Users and Roles	Not available. Use the Security option on the Console in Oracle Fusion Data Intelligence to define users and roles. See <a href="#">Manage Users, Groups, Application Roles, and Data Access</a> .
Snapshots	Not available. Use the Bundles option on the Console in Oracle Fusion Data Intelligence to manage snapshots. See <a href="#">Bundle Your Application Artifacts</a> .
Semantic Model Connections	Not authorized. Additional database connections for the semantic model aren't supported through the Oracle Analytics Cloud Console. Only the connection to Oracle Autonomous Data Warehouse is supported. However, all direct connections from the visualization layer in the Oracle Analytics Cloud instance are supported.
Virus Scanner	Use the Virus Scanner option on the Console in Oracle Fusion Data Intelligence to connect to your virus scanning server. See <a href="#">Configure a Virus Scanner</a> .
Session and Query Cache	See which users are signed in and troubleshoot report queries. This is also accessible from the Console in Oracle Fusion Data Intelligence. See <a href="#">Monitor Users and Activity Logs</a> .
Issue SQL	Test and debug SQL queries. See <a href="#">Run Test SQL Queries</a> .
Mail Server	Connect to your email server. See <a href="#">Set Up an Email Server to Deliver Reports</a> .
Monitor Deliveries	Track deliveries sent by the email server. See <a href="#">Track the Reports You Distribute by Email or Through Agents</a> .
System Settings	Not authorized. Oracle directly manages the system settings for each of the Oracle Fusion Data Intelligence instances and tunes the instances to provide an optimized user experience. Oracle Fusion Data Intelligence doesn't allow configuration of advanced options for an Oracle Analytics Cloud instance.
Remote Data Connectivity	Register one or more Data Gateway agents for remote connectivity to visualization workbooks. See <a href="#">Configure and Register Data Gateway for Visualization</a> .
Vanity URL	Not available.

# Usage Guidelines for Autonomous Data Warehouse Associated with Fusion Data Intelligence

Oracle Fusion Data Intelligence provisions instances of Oracle Autonomous Data Warehouse to store data. As part of the integrated SaaS offering of Oracle Fusion Data Intelligence, Oracle doesn't allow or recommend certain Oracle Autonomous Data Warehouse administration tasks.

As a service administrator, you can access the Oracle Autonomous Data Warehouse instance associated with Oracle Fusion Data Intelligence using the Oracle Cloud Infrastructure Console. The following table outlines the tasks that aren't allowed or recommended.

Task	More information
Database lifecycle management	You can't stop, delete, pause, or restart the database. Oracle Fusion Data Intelligence controls these activities for the instance. Oracle recommends that you don't rename the database and don't use the Start or Stop options in the Scheduled Maintenance feature for the Oracle Autonomous Data Warehouse instance associated with Oracle Fusion Data Intelligence.
Changes to auto-provisioned resources	You can scale up resources such as OCPUs for additional capacity or terabytes for additional storage. However, you can't scale down such resources to levels below those automatically provisioned with Oracle Fusion Data Intelligence.  Auto-scale for OCPUs is turned on by default by Oracle Fusion Data Intelligence and you can't turn it off.
Autonomous Data Guard	Even though you can turn on Autonomous Data Guard, this isn't recommended because Oracle Fusion Data Intelligence doesn't currently support failover to the instance populated through Data Guard.
Restore from backups	Oracle Autonomous Data Warehouse provides daily backups. While restoring to a new instance may be useful to view or copy data from backup, it isn't recommended to restore backups against the Oracle Autonomous Data Warehouse instance associated with Oracle Fusion Data Intelligence. Doing so may put the data pipelines and factory content in an inconsistent state.

The Oracle Autonomous Data Warehouse instance created by Oracle Fusion Data Intelligence is primarily for use by the service. While you can insert custom data and query the database, it has an impact on the database storage and compute. Following are some guidelines:

Custom Usage	Guidance
Adding data to custom schemas	You can add as many as 50GB of custom data to the service. For more than 50GB, you must scale up the terabytes of storage through the Oracle Cloud Infrastructure Console, which is charged to your Oracle Cloud account. If you intend to do compute intensive queries and transformations on your custom data, then you can scale up additional OCPUs using the Oracle Cloud Infrastructure Console, which is charged to your Oracle Cloud account. See <a href="#">Scale Up Oracle Autonomous Data Warehouse</a> .

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Custom Usage	Guidance
Adding additional CPUs	Ensure that you have adequate CPUs configured in Oracle Autonomous Data Warehouse (and corresponding sessions) to be able to run custom ETL. For every CPU that was allocated as part of the Oracle Fusion Data Intelligence instance creation, you shouldn't exceed 5 low service concurrent sessions for custom ETL. Exceeding this can impact the ETL or reporting performance and hence isn't supported. If you need to run more sessions, then ensure that you've additional CPU added to your Oracle Autonomous Data Warehouse instance. Each additional CPU that you add this way allows as many as 300 low sessions. You must avoid Medium or High sessions in all cases because they block the ETL pipeline.
Adding database connections	See <a href="#">Tutorial</a> . Follow these guidelines: <ul style="list-style-type: none"><li>• Aim for fewer than 10 concurrent database connections.</li><li>• When you configure the connections, ensure that you select the service with the <i>low</i> prefix in its name. Don't select the service with the <i>high</i> prefix because it can lead to performance issues in reports and delays in completion of daily data refreshes in Oracle Fusion Data Intelligence.</li><li>• Close unused sessions in a timely manner to ensure no adverse impact on the performance of Oracle Fusion Data Intelligence.</li><li>• If you plan to run compute intensive queries or create many concurrent database connections, then you can scale up additional OCPUs through the Oracle Cloud Infrastructure Console, which is charged to your Oracle Cloud account.</li></ul>

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## Preview Features

Oracle Fusion Data Intelligence offers certain functionality as preview features for you to try. Preview features are high confidence features that are design, specification, and implementation complete with roadmap commitment but may change before they become generally available.

You can evaluate the Preview features for production use as-is based on your specific requirements. If you've questions on the feasibility of deploying a specific Preview feature for production use in your instance, then contact Oracle Support.

Preview features are disabled by default. If you want to explore one of the preview features, ask your administrator to enable it for your organization. Administrators can make preview features available for others to try; see [Make Preview Features Available](#).

To enable the preview features, see [Make Preview Features Available](#).

### Functional Areas

See *Features Available for Preview* in:

- Fusion CX Analytics
- Fusion ERP Analytics
- Fusion HCM Analytics
- Fusion SCM Analytics

### Connectors

Feature	Description
AWS S3	<p>This feature enables an administrator to connect to data in Amazon Simple Storage Service (AWS S3).</p> <p>See <a href="#">Load Data from Amazon Simple Storage Service into Oracle Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"> <li>• <b>On</b> – Display the <b>AWS S3</b> option in the Create Connection dialog.</li> <li>• <b>Off</b> – Hide the <b>AWS S3</b> option in the Create Connection dialog.</li> </ul> <p>Default: Off</p> <p>Restart Required: No</p>
Azure SQL	<p>This feature enables connecting to an Azure SQL instance to create augmentations using data from that instance.</p> <p>See <a href="#">Load Data from Azure SQL into Oracle Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"> <li>• <b>On</b> – Display the <b>Azure SQL</b> option in the Create Connection dialog.</li> <li>• <b>Off</b> – Hide the <b>Azure SQL</b> option in the Create Connection dialog.</li> </ul> <p>Default: Off</p> <p>Restart Required: No</p>
Azure Storage	<p>This feature enables connecting to an Azure Storage instance to create augmentations using data from that instance.</p> <p>See <a href="#">Load Data from Azure Storage into Oracle Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"> <li>• <b>On</b> – Display the <b>Azure Storage</b> option in the Create Connection dialog.</li> <li>• <b>Off</b> – Hide the <b>Azure Storage</b> option in the Create Connection dialog.</li> </ul> <p>Default: Off</p> <p>Restart Required: No</p>
Oracle Autonomous Database	<p>This feature enables an administrator to connect to custom data in Oracle Autonomous Database. You can create up to five connections to different Oracle Autonomous Database instances and they are denoted as <b>Oracle Autonomous Database 1</b>, <b>Oracle Autonomous Database 2</b>, <b>Oracle Autonomous Database 3</b>, <b>Oracle Autonomous Database 4</b>, and <b>Oracle Autonomous Database 5</b>.</p> <p>See <a href="#">Load Data from Oracle Autonomous Database into Oracle Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"> <li>• <b>On</b> – Display the Oracle Autonomous Database option such as <b>Oracle Autonomous Database 1</b> in the Create Connection dialog.</li> <li>• <b>Off</b> – Hide the Oracle Autonomous Database option such as <b>Oracle Autonomous Database 1</b> in the Create Connection dialog.</li> </ul> <p>Default: Off</p> <p>Restart Required: No</p>
Oracle BI Publisher	<p>This feature enables connecting to an Oracle Analytics Publisher instance to create augmentations using data from that instance.</p> <p>See <a href="#">Load Data from Oracle Analytics Publisher into Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"> <li>• <b>On</b> – Display the <b>Oracle BI Publisher</b> option in the Create Connection dialog.</li> <li>• <b>Off</b> – Hide the <b>Oracle BI Publisher</b> option in the Create Connection dialog.</li> </ul> <p>Default: Off</p> <p>Restart Required: No</p>

Feature	Description
Oracle Enterprise Data Management Cloud	<p>This feature enables connecting to Oracle Enterprise Data Management Cloud service instance to build a managed data pipeline with data from that instance.</p> <p>See <a href="#">Load Data from Enterprise Data Management Cloud into Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"><li>• <b>On</b> – Display the <b>Oracle Enterprise Data Management Cloud</b> option in the Create Connection dialog.</li><li>• <b>Off</b> – Hide the <b>Oracle Enterprise Data Management Cloud</b> option in the Create Connection dialog.</li></ul> <p>Default: Off Restart Required: No</p>
EPM Financial Close and Consolidation Data Export	<p>This feature enables connecting to an EPM Export Data instance to create augmentations using data from that instance.</p> <p>See <a href="#">Load Data from EPM Export Data Instance into Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"><li>• <b>On</b> – Display the <b>EPM Financial Close and Consolidation Data Export</b> option in the Create Connection dialog.</li><li>• <b>Off</b> – Hide the <b>EPM Financial Close and Consolidation Data Export</b> option in the Create Connection dialog.</li></ul> <p>Default: Off Restart Required: No</p>
EPM Planning and Budgeting Data Export	<p>This feature enables connecting to an EPM Export Data instance to create augmentations using data from that instance.</p> <p>See <a href="#">Load Data from EPM Export Data Instance into Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"><li>• <b>On</b> – Display the <b>EPM Planning and Budgeting Data Export</b> option in the Create Connection dialog.</li><li>• <b>Off</b> – Hide the <b>EPM Planning and Budgeting Data Export</b> option in the Create Connection dialog.</li></ul> <p>Default: Off Restart Required: No</p>
EPM Profitability and Cost Management Data Export	<p>This feature enables connecting to an Oracle EPM instance to build a managed data pipeline with data from that instance.</p> <p>See <a href="#">Load Data from EPM Export Data Instance into Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"><li>• <b>On</b> – Display the <b>EPM Profitability and Cost Management Data Export</b> option in the Create Connection dialog.</li><li>• <b>Off</b> – Hide the <b>EPM Profitability and Cost Management Data Export</b> option in the Create Connection dialog.</li></ul> <p>Default: Off Restart Required: No</p>

Feature	Description
Oracle E-Business Suite On-Prem	<p>This feature enables configuring remote agent, loading data from on-premises Oracle eBusiness Suite (EBS), and building a complete managed data pipeline with that data.</p> <p>See <a href="#">Load Data from On-premises E-Business Suite into Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"> <li>• <b>On</b> – Display the <b>Oracle E-Business Suite On-Prem</b> option in the Create Connection dialog.</li> <li>• <b>Off</b> – Hide the <b>Oracle E-Business Suite On-Prem</b> option in the Create Connection dialog.</li> </ul> <p>Default: Off Restart Required: No</p>
Oracle Eloqua	<p>This feature enables connecting to an Oracle Eloqua instance to bring in business-relevant marketing and sales campaign data to build a managed data pipeline with data from that instance.</p> <p>See <a href="#">Connect with Your Oracle Eloqua Data Source</a>.</p> <ul style="list-style-type: none"> <li>• <b>On</b> – Display the <b>Oracle Eloqua</b> option in the Create Connection dialog.</li> <li>• <b>Off</b> – Hide the <b>Oracle Eloqua</b> option in the Create Connection dialog.</li> </ul> <p>Default: Off Restart Required: No</p>
Oracle EPM - Enterprise Data Management	<p>This feature enables connecting to an Oracle EPM instance and building a complete managed data pipeline with that data.</p> <p>See <a href="#">Load Data from Enterprise Performance Management into Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"> <li>• <b>On</b> – Display the <b>Oracle EPM - Enterprise Data Management</b> option in the Create Connection dialog.</li> <li>• <b>Off</b> – Hide the <b>Oracle EPM - Enterprise Data Management</b> option in the Create Connection dialog.</li> </ul> <p>Default: Off Restart Required: No</p>
Oracle EPM - Financial Close and Consolidation	<p>This feature enables connecting to an Oracle EPM instance and building a complete managed data pipeline with that data.</p> <p>See <a href="#">Load Data from Enterprise Performance Management into Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"> <li>• <b>On</b> – Display the <b>Oracle EPM - Financial Close and Consolidation</b> option in the Create Connection dialog.</li> <li>• <b>Off</b> – Hide the <b>Oracle EPM - Financial Close and Consolidation</b> option in the Create Connection dialog.</li> </ul> <p>Default: Off Restart Required: No</p>
Oracle EPM - Planning and Budgeting	<p>This feature enables connecting to Oracle EPM instance and building a complete managed data pipeline with that data.</p> <p>See <a href="#">Load Data from Enterprise Performance Management into Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"> <li>• <b>On</b> – Display the <b>Oracle EPM - Planning and Budgeting</b> option in the Create Connection dialog.</li> <li>• <b>Off</b> – Hide the <b>Oracle EPM - Planning and Budgeting</b> option in the Create Connection dialog.</li> </ul> <p>Default: Off Restart Required: No</p>

Feature	Description
Oracle EPM - Profitability and Cost Management	<p>This feature enables connecting to Oracle EPM instance and building a complete managed data pipeline with that data.</p> <p>See <a href="#">Load Data from Enterprise Performance Management into Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"><li>• <b>On</b> – Display the <b>Oracle EPM - Profitability and Cost Management</b> option in the Create Connection dialog.</li><li>• <b>Off</b> – Hide the <b>Oracle EPM - Profitability and Cost Management</b> option in the Create Connection dialog.</li></ul> <p>Default: Off</p> <p>Restart Required: No</p>
Oracle JD Edwards On-Prem	<p>This feature enables connecting to the various data sources in the on-premises JD Edwards instance and building a complete managed data pipeline with that data.</p> <p>See <a href="#">Load Data from On-premises JD Edwards into Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"><li>• <b>On</b> – Display the <b>Oracle JD Edwards On-Prem</b> option in the Create Connection dialog.</li><li>• <b>Off</b> – Hide the <b>Oracle JD Edwards On-Prem</b> option in the Create Connection dialog.</li></ul> <p>Default: Off</p> <p>Restart Required: No</p>
Oracle JDBC	<p>This feature enables the remote agent-managed connectivity to an Oracle database using JDBC. You can create upto five connections and they are denoted as <b>Oracle JDBC 1</b>, <b>Oracle JDBC 2</b>, <b>Oracle JDBC 3</b>, <b>Oracle JDBC 4</b>, and <b>Oracle JDBC 5</b>.</p> <p>See <a href="#">Load Data from Oracle Database Using JDBC into Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"><li>• <b>On</b> – Display the Oracle JDBC option such as <b>Oracle JDBC 1</b> in the Create Connection dialog.</li><li>• <b>Off</b> – Hide the Oracle JDBC option such as <b>Oracle JDBC 1</b> in the Create Connection dialog.</li></ul> <p>Default: Off</p> <p>Restart Required: No</p>
MongoDB	<p>This feature enables connecting to a MongoDB instance to build a managed data pipeline with data from that instance.</p> <p>See <a href="#">Load Data from Mongo Database into Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"><li>• <b>On</b> – Display the <b>MongoDB</b> option in the Create Connection dialog.</li><li>• <b>Off</b> – Hide the <b>MongoDB</b> option in the Create Connection dialog.</li></ul> <p>Default: Off</p> <p>Restart Required: No</p>
MySQL Cloud	<p>This feature enables connecting to a MySQL Cloud instance to build data augmentation with data from that instance.</p> <p>See <a href="#">Load Data from MySQL Cloud Database into Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"><li>• <b>On</b> – Display the <b>MySQL Cloud</b> option in the Create Connection dialog.</li><li>• <b>Off</b> – Hide the <b>MySQL Cloud</b> option in the Create Connection dialog.</li></ul> <p>Default: Off</p> <p>Restart Required: No</p>



Feature	Description
MySQL On-Prem	<p>This feature enables connecting to a MySQL on-premises instance to build data augmentation with data from that instance.</p> <p>See <a href="#">Load Data from On-premises MySQL Database into Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"><li>• <b>On</b> – Display the <b>MySQL On-Prem</b> option in the Create Connection dialog.</li><li>• <b>Off</b> – Hide the <b>MySQL On-Prem</b> option in the Create Connection dialog.</li></ul> <p>Default: Off Restart Required: No</p>
Oracle PeopleSoft On-Prem - Campus Solutions	<p>This feature enables connecting to the various data sources in the on-premises PeopleSoft instance and building a complete managed data pipeline with that data.</p> <p>See <a href="#">Load Data from On-premises PeopleSoft into Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"><li>• <b>On</b> – Display the <b>Oracle PeopleSoft On-Prem - Campus Solutions</b> option in the Create Connection dialog.</li><li>• <b>Off</b> – Hide the <b>Oracle PeopleSoft On-Prem - Campus Solutions</b> option in the Create Connection dialog.</li></ul> <p>Default: Off Restart Required: No</p>
Oracle PeopleSoft On-Prem - Financials	<p>This feature enables connecting to the various data sources in the on-premises PeopleSoft instance and building a complete managed data pipeline with that data.</p> <p>See <a href="#">Load Data from On-premises PeopleSoft into Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"><li>• <b>On</b> – Display the <b>Oracle PeopleSoft On-Prem - Financials</b> option in the Create Connection dialog.</li><li>• <b>Off</b> – Hide the <b>Oracle PeopleSoft On-Prem - Financials</b> option in the Create Connection dialog.</li></ul> <p>Default: Off Restart Required: No</p>
Oracle PeopleSoft On-Prem - Human Resources	<p>This feature enables connecting to the various data sources in the on-premises PeopleSoft instance and building a complete managed data pipeline with that data.</p> <p>See <a href="#">Load Data from On-premises PeopleSoft into Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"><li>• <b>On</b> – Display the <b>Oracle PeopleSoft On-Prem - Human Resources</b> option in the Create Connection dialog.</li><li>• <b>Off</b> – Hide the <b>Oracle PeopleSoft On-Prem - Human Resources</b> option in the Create Connection dialog.</li></ul> <p>Default: Off Restart Required: No</p>

Feature	Description
Oracle PeopleSoft On-Prem - Learning Management	<p>This feature enables connecting to the various data sources in the on-premises PeopleSoft instance and building a complete managed data pipeline with that data.</p> <p>See <a href="#">Load Data from On-premises PeopleSoft into Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"><li>• <b>On</b> – Display the <b>Oracle PeopleSoft On-Prem - Learning Management</b> option in the Create Connection dialog.</li><li>• <b>Off</b> – Hide the <b>Oracle PeopleSoft On-Prem - Learning Management</b> option in the Create Connection dialog.</li></ul> <p>Default: Off</p> <p>Restart Required: No</p>
QuickBooks Online	<p>This feature enables connecting to a QuickBooks Online instance to create augmentations using data from that instance.</p> <p>See <a href="#">Load Data from QuickBooks Online into Oracle Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"><li>• <b>On</b> – Display the <b>QuickBooks Online</b> option in the Create Connection dialog.</li><li>• <b>Off</b> – Hide the <b>QuickBooks Online</b> option in the Create Connection dialog.</li></ul> <p>Default: Off</p> <p>Restart Required: No</p>
Remote Agent	<p>Remote Agent application helps bring data from on-premises applications like E-Business Suite and JD Edwards into Oracle Fusion Data Intelligence.</p> <p>See <a href="#">Set up the Remote Agent to Load Data into Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"><li>• <b>On</b> – Display the Remote Agent option in the Create Connection dialog.</li><li>• <b>Off</b> – Hide the Remote Agent option in the Create Connection dialog.</li></ul> <p>Default: Off</p> <p>Restart Required: No</p>
SFTP	<p>This feature enables connecting to a Secure FTP source and building a complete managed data pipeline with that data.</p> <p>See <a href="#">Load Data from a Secure FTP Source into Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"><li>• <b>On</b> – Display the SFTP option in the Create Connection dialog.</li><li>• <b>Off</b> – Hide the SFTP option in the Create Connection dialog.</li></ul> <p>Default: Off</p> <p>Restart Required: No</p>
Shopify	<p>This feature enables connecting to a Shopify instance and building a complete managed data pipeline with that data.</p> <p>See <a href="#">Load Data from Shopify into Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"><li>• <b>On</b> – Display the Shopify option in the Create Connection dialog.</li><li>• <b>Off</b> – Hide the Shopify option in the Create Connection dialog.</li></ul> <p>Default: Off</p> <p>Restart Required: No</p>

Feature	Description
Snowflake	<p>This feature enables connecting to a Snowflake instance and creating augmentations using that data.</p> <p>See <a href="#">Load Data from Snowflake into Oracle Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"> <li><b>On</b> – Display the <b>Snowflake</b> option in the Create Connection dialog.</li> <li><b>Off</b> – Hide the <b>Snowflake</b> option in the Create Connection dialog.</li> </ul> <p>Default: Off Restart Required: No</p>
SQL Server	<p>This feature enables connecting to the SQL Server instance to create augmentations using data from that instance.</p> <p>See <a href="#">Load Data from SQL Server into Oracle Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"> <li><b>On</b> – Display the <b>SQL Server</b> option in the Create Connection dialog.</li> <li><b>Off</b> – Hide the <b>SQL Server</b> option in the Create Connection dialog.</li> </ul> <p>Default: Off Restart Required: No</p>
Taleo	<p>This feature enables connecting to a Taleo instance and creating augmentations using that data.</p> <p>See <a href="#">Load Data from Taleo into Fusion Data Intelligence (Preview)</a>.</p> <ul style="list-style-type: none"> <li><b>On</b> – Display the <b>Taleo</b> option in the Create Connection dialog.</li> <li><b>Off</b> – Hide the <b>Taleo</b> option in the Create Connection dialog.</li> </ul> <p>Default: Off Restart Required: No</p>

## Notifications

Feature	Description
Event Notification	<p>This feature publishes data pipeline events to the Oracle Cloud Infrastructure Audit service. See <a href="#">Enable Event Notifications (Preview)</a>.</p>

## Pipeline Features

Feature	Description
Data Refresh Estimate	<p>This feature enables prediction of completion time for a data refresh. The predicted time is visible under Data Pipeline in the Pipeline Parameters section on the Pipeline Settings page.</p> <p>See <a href="#">About Data Refresh Performance</a>.</p> <ul style="list-style-type: none"> <li><b>On</b> – Display the <b>Estimated Refresh Completion</b> detail under Data Pipeline in the Pipeline Parameters section on the Pipeline Settings page.</li> <li><b>Off</b> – Hide the <b>Estimated Refresh Completion</b> detail under Data Pipeline in the Pipeline Parameters section on the Pipeline Settings page.</li> </ul> <p>Default: Off Restart Required: No</p>

Feature	Description
Frequent Refresh Tables	<p>This feature enables custom warehouse tables for frequent data refresh. See <a href="#">Schedule Frequent Refreshes of Warehouse Tables</a>.</p> <ul style="list-style-type: none"> <li><b>On</b> – Display the <b>Frequent Refresh Tables</b> detail under Data Pipeline in the Pipeline Parameters section on the Pipeline Settings page.</li> <li><b>Off</b> – Hide the <b>Frequent Refresh Tables</b> detail under Data Pipeline in the Pipeline Parameters section on the Pipeline Settings page.</li> </ul> <p>Default: Off Restart Required: No</p>
Prioritized Data Refresh	<p>This feature enables configuration of the warehouse tables for prioritized refresh ahead of other data in the regularly scheduled daily refresh cycles. See <a href="#">Prioritize Datasets for Incremental Refresh (Preview)</a>.</p> <ul style="list-style-type: none"> <li><b>On</b> – Display the <b>Prioritized Data Refresh</b> tab on the Pipeline Settings page.</li> <li><b>Off</b> – Hide the <b>Prioritized Data Refresh</b> tab on the Pipeline Settings page.</li> </ul> <p>Default: Off Restart Required: No</p>

## Generally Available Features

Oracle Fusion Data Intelligence offers certain functionality as generally available that you must enable using the Console. Generally available features are publicly available features that you can use for production workloads.

Generally available features are disabled by default. Administrators can make these features available for others to use; see [Enable Generally Available Features](#).

### Pipeline Features

Feature	Description
Frequent Refresh	<p>This feature enables certain pipeline refresh schedules to be set to a frequency of 4 hours or higher. See <a href="#">Schedule Frequent Refreshes of Data</a>.</p> <ul style="list-style-type: none"> <li><b>On</b> – Display the <b>Frequent Refresh</b> option on the Pipeline Settings page.</li> <li><b>Off</b> – Hide the <b>Frequent Refresh</b> option on the Pipeline Settings page.</li> </ul> <p>Default: Off Restart Required: No</p>
Scheduled Full Data Reload	<p>For specific functional areas, an administrator can schedule full refreshes on a weekly, monthly, or quarterly basis. See <a href="#">Schedule Periodic Full Reload of Functional Area Data</a>.</p> <ul style="list-style-type: none"> <li><b>On</b> – Display the <b>Scheduled Full Data Reload</b> on the Pipeline Settings page.</li> <li><b>Off</b> – Hide the <b>Scheduled Full Data Reload</b> on the Pipeline Settings page.</li> </ul> <p>Default: Off Restart Required: No</p>

Feature	Description
Data Source Reset and Reload	<p>This feature enables reset and reload of a data source. See Reset and Reload the Data Source.</p> <ul style="list-style-type: none"> <li><b>On</b> – Display the <b>Data Source Reset and Reload</b> detail under Data Pipeline in the Pipeline Parameters section on the Pipeline Settings page.</li> <li><b>Off</b> – Hide the <b>Data Source Reset and Reload</b> detail under Data Pipeline in the Pipeline Parameters section on the Pipeline Settings page.</li> </ul> <p>Default: Off Restart Required: No</p>

## Region Availability

Oracle Fusion Data Intelligence is available in the following regions currently:

Region Location	Region Name	Region Key
Amsterdam, Netherlands	eu-amsterdam-1	AMS
Ashburn, VA	us-ashburn-1	IAD
Dubai, UAE	me-dubai-1	DXB
Frankfurt, Germany	eu-frankfurt-1	FRA
Jeddah, Saudi Arabia	me-jeddah-1	JED
London, United Kingdom	uk-london-1	LHR
Melbourne, Australia	ap-melbourne-1	MEL
Mumbai, India	ap-mumbai-1	BOM
Osaka, Japan	ap-osaka-1	KIX
Phoenix, AZ	us-phoenix-1	PHX
Sao Paulo, Brazil	sa-saopaulo-1	GRU
Singapore, Singapore	ap-singapore-1	SIN
Sydney, Australia	ap-sydney-1	SYD
Tokyo, Japan	ap-tokyo-1	NRT
Toronto, Canada	ca-toronto-1	YYZ
UK Gov South (London), United Kingdom	uk-gov-london-1	LTN
UK Gov West (Newport), United Kingdom	uk-gov-cardiff-1	BRS

## Billing Metrics of Autonomous Data Warehouse Associated with Fusion Data Intelligence

Oracle Autonomous Database introduced a more advanced ECPU billing metric and is now retiring the legacy OCPU billing metric for Oracle Autonomous Data Warehouse.

ECPU provides the same price-performance as OCPU with continuous improvements over time. Updating to the ECPU and storage billing metrics provides the following additional benefits:

- Lower entry cost.
- Finer granularity for scaling the data warehouse.

- Lower storage costs.

Refer to the [ECPU billing metric FAQ](#) for more details about ECPUs and associated benefits.

Using ECPU impacts your service in the following ways:

- When you sign into Oracle Autonomous Data Warehouse from the Oracle Cloud Infrastructure Console, you'll see the provisioned capacity stated in ECPUs.
- Any scale up done by you for Oracle Autonomous Data Warehouse will thereafter be billed against the replacement ECPU billing metrics based on your rate card for OCI billing.
- All database tools will be turned off by default. If you've already been using any of these tools such as APEX, then no data loss will occur when they're turned off. You can turn them on from the Oracle Autonomous Data Warehouse Oracle Cloud Infrastructure Console. If you wish to use database tools such as Oracle Machine Learning (OML), Graph Studio, or Data Transforms, then you must allocate dedicated ECPUs that will consume credits against your Universal Credits (UCC) subscription. For more information, see [Manage Autonomous Database Built-in Tools](#).

Reach out to your Oracle contact and review the Universal Credits (UCC) subscription agreement and make sure you understand the ECPU billing metric. If you have general questions about preparing for this change, then contact your Oracle account team, or connect through [Fusion Data Intelligence customer forum](#) or create a service request (SR) on [My Oracle Support](#).

# 2

## Activate Oracle Fusion Data Intelligence

As the cloud account administrator, create and activate the service instance for Oracle Fusion Data Intelligence.

### Topics:

- [Activate Your Oracle Fusion Data Intelligence Subscription](#)
- [Before You Begin with Oracle Fusion Data Intelligence](#)
- [Typical Workflow to Activate Oracle Fusion Data Intelligence](#)
- [Typical Workflow to Administer Oracle Fusion Data Intelligence](#)

## Before You Begin with Oracle Fusion Data Intelligence

Oracle Fusion Data Intelligence is available on Oracle Cloud Infrastructure and uses few other Oracle Cloud Infrastructure services.

When you order Oracle Fusion Data Intelligence, you get access to Oracle Autonomous Data Warehouse and Oracle Analytics Cloud Subscription.

When you activate your Oracle Fusion Data Intelligence order, you get the Service Administrator role. This role gives you full administration privileges on the service, so you can complete all aspects of Oracle Fusion Data Intelligence setup and create other users. There's no need to delegate this responsibility, but if you want someone else to set up Oracle Fusion Data Intelligence, you can add more users and assign them to the required roles.

Here's the information about how Oracle Fusion Data Intelligence uses other Oracle Cloud Infrastructure services and what you need to do if you're setting up Oracle Fusion Data Intelligence for the first time.

Service	What is it for?	Do I need to do anything?
Oracle Identity Cloud Service	When you subscribe to Oracle Fusion Data Intelligence, you automatically receive Oracle Identity Cloud Service Foundation that provides the core identity and access management capabilities. Oracle Fusion Data Intelligence uses Oracle Identity Cloud Service to manage users and groups.	As a security administrator, you can perform user-group management if you've the User Administrator role in Oracle Identity Cloud Service. See <a href="#">Managing Oracle Identity Cloud Service Users and Groups in the Oracle Cloud Infrastructure Console</a> .
Oracle Autonomous Data Warehouse	Oracle Fusion Data Intelligence uses Oracle Autonomous Data Warehouse to store the data extracted from the Oracle Fusion Cloud Applications sources.	Provide the autonomous data warehouse details while creating a service instance for Oracle Fusion Data Intelligence. See <a href="#">Create an Oracle Fusion Data Intelligence Subscription Instance</a>

<b>Service</b>	<b>What is it for?</b>	<b>Do I need to do anything?</b>
Oracle Analytics Cloud	Oracle Fusion Data Intelligence uses Oracle Analytics Cloud to analyze data, create visualizations, and generate reports from the Oracle Fusion Cloud Applications data stored in Oracle Autonomous Data Warehouse.	No



# Typical Workflow to Activate Oracle Fusion Data Intelligence

If you're activating Oracle Fusion Data Intelligence, then follow these tasks as a guide.

Task	D More Information
Activate your Oracle Fusion Data Intelligence subscription.	e s c r i p t i o n  A <a href="#">Activate Your Oracle Fusion Data Intelligence Subscription</a> t e r y o u r o r d e r f o r t h e O r a c l e F u s i o n D a t a I n t e l l i g

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Task	D More Information
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	e l l i g e n c e s u b s c r i p t i o n .

Task	D More Information
Activate your Universal Credits Subscription	<a href="#">Activate the Universal Credits Subscription</a> y o u r s a l e s r e p r e s e n t a t i v e a l s o i n c l u d e d a U n i v e r s a l C r

Task	D More Information
	e s c r i p t i o n
	e d i t s s u b s c r i p t i o n a s p a r t o f y o u r o r d e r , y o u r e c e i v e a s e p

Task	D More Information
	e s c r i p t i o n
	a r a t e W e l c o m e e m a i l a s k i n g y o u t o a c t i v a t e t h a t a s w e l l .

Task	D More Information
Activate the Oracle Fusion Data Intelligence subscription.	U p o n s i g n i n g i n , y o u , r e t a k e n t o t h e A d d S u b s c r i p t i o n p a g e



Task	D More Information
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Task	D More Information
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	y o u ' l l a d d t h e O r a c l e F u s i o n D a t a I n t e l l i g e n c e s u b s c r i p t

Task	D More Information
	e s c r i p t i o n
	i o n t o t h e C l o u d a c c o u n t .

Task	D More Information
After activating the service, complete the post-activation activities. Sign into the Oracle Cloud Infrastructure Console.	A <a href="#">Sign In to the Oracle Cloud Infrastructure Console</a> t e r y o u a c t i v a t e t h e s e r v i c e , u s e t h e c l o u d a c c o u n t c r e d

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then Set Up Provisioning with Single Sign-On before procedure

Task	D More Information
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	d i n g w i t h t h i s a n d t h e s u b s e q u e n t t a s k s .



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Task	Description
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Use the Oracle Cloud Infrastructure Console to access the service pages.	<a href="#">Access Your Service</a> When you sign in into the OCI console, you will see the homepage page. US
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Task	D More Information
	e s c r i p t i o n
	e t h e n a v i g a t i o n m e n u i n t h e u p p e r l e f t t o n a v i g a t e t o t h e s e

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Task	D More Information
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	r v i c e p a g e s w h e r e y o u c r e a t e , m a n a g e , a n d v i e w y o u r c l o u d r

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Task	D More Information
	e s c r i p t i o n
	e s o u r c e s .

Task	D More Information
(Optional) Add a user with administrator permissions for the service.	e s c r i p t i o n  A <a href="#">Add Users with Administrator Permissions</a> d a u s e r w i t h f u l l a d m i n i s t r a t o r p e r m i s s i o n s o f t h e d e f a

Task	D More Information
	e s c r i p t i o n
	u l t a d m i n i s t r a t o r o f t h e s e r v i c e .

Task	D More Information
Create a user to extract data	<a href="#">Create a User in Oracle Fusion Cloud Applications to Extract Data</a> y o u w a n t t o u s e t h e p a s s w o r d - b a s e d b a s i c a u t h e n t i c a t i o

Task	D More Information
	e s c r i p t i o n
	n t o c o n n e c t t o y o u r s o u r c e s y s t e m , t h e n y o u m u s t p r o v i d e c r



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Task	D More Information
	e s c r i p t i o n
	a c l e F u s i o n D a t a I n t e l l i g e n c e .

Task	D More Information
Set up user access to Oracle Fusion Data Intelligence using single sign-on.	e s c r i p t i o n  Y o u c a n s e t u p h o w u s e r s f r o m O r a c l e F u s i o n C l o u d A p p l i c a t i

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Task	D More Information
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Task	D More Information
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Task	D More Information
Create an instance for Oracle Fusion Data Intelligence.	U <a href="#">Create an Oracle Fusion Data Intelligence Subscription Instance</a> e t h e C o n s o l e t o c r e a t e a n i n s t a n c e . I f y o u 'v e s e t u p p r o v i

Task	D More Information
	e s c r i p t i o n
	s i o n i n g w i t h s i n g l e s i g n - o n , w h i c h f e d e r a t e s y o u r t e n a n c

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Task	D More Information
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Task	D More Information
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Task	D More Information
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Task	D More Information
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Task	Description
Verify the Oracle Fusion Data Intelligence instance.	<a href="#">Verify Your Instance and Sign In</a> Once you receive a name email with the link when you return to the instance, check that

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Task	D More Information
Create and associate users and groups.	<a href="#">Managing Oracle Identity Cloud Service Users and Groups in the Oracle Cloud Infrastructure Console</a> n y o u s e t u p p r o v i s i o n i n g w i t h s i n g l e s i g n - o n , y o u e n a b

Task	D More Information
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	l e s y n c h r o n i z a t i o n o f u s e r s a n d t h e i r a s s o c i a t e d r o l e s f r

Task	D More Information
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	o m O r a c l e F u s i o n C l o u d A p p l i c a t i o n s t o y o u r f e d e r a t e d O r a



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Task	D More Information
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	c l e l d e n t i t y C l o u d S e r v i c e i n s t a n c e . A f t e r t h e i n i t i a l s y

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Task	D More Information
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	n c h r o n i z a t i o n , i f y o u a d d u s e r s i n y o u r O r a c l e F u s i o n C l o u

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Task	D More Information
	e s c r i p t i o n
	d A p p l i c a t i o n s i n s t a n c e , t h e y a r e a u t o m a t i c a l l y a v a i l a b

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Task	D More Information
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	c e b e c a u s e y o u ' v e e n a b l e d s y n c h r o n i z a t i o n . S e e <a href="#">Set Up P r o</a>

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Task	D More Information
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Task	D More Information
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**Task**

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Task	D More Information
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	u c a n v i e w t h e u s e r s a n d g r o u p s o n t h e S e c u r i t y p a g e b u t y o u c

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Task	D More Information
	e s c r i p t i o n
	a n , t c r e a t e , m o d i f y , o r d e l e t e t h e m . W h e n y o u s e t u p p r o v i s

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Task	D More Information
	e s c r i p t i o n
	i o n i n g w i t h o u t s i n g l e s i g n - o n , t o a c c e s s O r a c l e F u s i o n D a

Task	D More Information
	e s c r i p t i o n
	t a l l t e l l i g e n c e , m a n u a l l y c r e a t e O r a c l e F u s i o n C l o u d A p p

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**Task**

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Task	D More Information
	e s c r i p t i o n
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Task	D More Information
Configure data security.	E <a href="#">Manage Users, Groups, Application Roles, and Data Access</a> s u r e t h a t u s e r s h a v e a p p r o p r i a t e a c c e s s t o u s e O r a c l e F u

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Task	D More Information
Configure Oracle Fusion Data Intelligence data.	S <a href="#">Configure Oracle Fusion Data Intelligence Data</a> e t u p g l o b a l a n d r e p o r t i n g c o n f i g u r a t i o n s a n d c r e a t e d a t

**Task**

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## Activate Your Oracle Fusion Data Intelligence Subscription

You're now on step 2 of the four required steps to getting up and running with Oracle Fusion Data Intelligence. You've completed step 1 of these required steps and are ready to activate the Oracle Fusion Data Intelligence subscription to start using the service:

1. Order your Oracle Fusion Data Intelligence subscription through your sales representative.
2. Activate your Oracle Fusion Data Intelligence subscription.
3. Set up user access using single sign-on. See [Set Up User Access to Oracle Fusion Data Intelligence Using Single Sign-On](#).
4. Create your Oracle Fusion Data Intelligence instance. See [Create an Oracle Fusion Data Intelligence Instance](#).
5. Configure Oracle Fusion Data Intelligence. See [Configure Oracle Fusion Data Intelligence Data](#).

**Topics:**

- [About Activating Your Oracle Fusion Data Intelligence Subscription](#)
- [Activate the Universal Credits Subscription](#)
- [Activate the Oracle Fusion Data Intelligence Subscription](#)

## About Activating Your Oracle Fusion Data Intelligence Subscription

Before getting started, it's important to note that an UCC subscription is a technical prerequisite to activating Oracle Fusion Data Intelligence. An active UCC subscription must exist in the cloud account in which you plan to activate Oracle Fusion Data Intelligence.

Oracle Fusion Data Intelligence has dependencies on Oracle Analytics Cloud and Oracle Autonomous Data Warehouse and these services are only available with an UCC subscription. Typically there's no additional charge for these services. For exceptions, see the [Important – Read Before Activating](#) section.

After your order for the Oracle Fusion Data Intelligence subscription has been processed, you receive the following two Welcome emails in any sequence:

- Welcome email for your Universal Credits (UCC) subscription - The name of the service in the body of this Welcome email is "Oracle PaaS and IaaS Universal Credits".
- Welcome email for your Oracle Fusion Data Intelligence subscription - The name of the service in the body of this Welcome email is "Oracle Fusion XXX Analytics..." where XXX represents the Oracle Fusion Data Intelligence applications you subscribed to such as Fusion HCM Analytics and Fusion ERP Analytics.

On receiving both the Welcome emails, follow these steps:

1. Review the [Important – Read Before Activating](#) section.
2. Write down the name of your Oracle Fusion Cloud Applications account or tenancy.

 **Note:**

Cloud account is also known as tenancy.

3. Ensure that you're a cloud administrator in your Oracle Fusion Cloud Applications account and have been granted the OCI\_Administrator role or Administrators group, whichever is available. See the [Role Needed to Activate](#) section.
4. Activate your UCC subscription into your existing Oracle Fusion Cloud Applications account only if you don't have an active UCC subscription in your existing Oracle Fusion Cloud Applications account.



- a. If you already have an active UCC subscription in your existing Oracle Fusion Cloud Applications account, then skip to step 5.
  - b. Otherwise, after activating the UCC subscription, be sure to wait until you receive a confirmation email from Oracle Cloud stating that your services are ready before moving to step 5.
5. Activate the Oracle Fusion Data Intelligence subscription into the same existing Oracle Fusion Cloud Applications account.
    - Wait until you receive a confirmation email from Oracle Cloud stating that your services are ready before signing back into your Oracle Fusion Cloud Applications account and verifying that your Oracle Fusion Data Intelligence entitlements appear and that the "Create Instance" button is enabled.
    - It's also feasible to activate your Oracle Fusion Data Intelligence subscription into a non-Oracle Fusion Cloud Applications account but this is discouraged. See [Important – Read Before Activating](#) for further details.

### Important – Read Before Activating

- **Best practices** are to always activate UCC and Oracle Fusion Data Intelligence into your Oracle Fusion Cloud Applications account. Doing so saves you time, cost and complexity when setting up your security integration between Oracle Fusion Data Intelligence and your Oracle Fusion Cloud Applications as well as improved ongoing synchronization performance.
- **If an UCC subscription exists in your Oracle Fusion Cloud Applications account** prior to ordering your Oracle Fusion Data Intelligence subscription, then another UCC subscription isn't needed and would have been removed by your sales representative during the order process. You would then only receive the Welcome email to activate your Oracle Fusion Data Intelligence subscription.
- **UCC PAYG subscriptions expire within 30 days of receiving the UCC Welcome email.** It's very important that you activate UCC into your Oracle Fusion Cloud Applications account within 30 days of receiving it. If the UCC PAYG subscription expires, then UCC activation will fail and you'll need to submit a service request prior to trying to activate Oracle Fusion Data Intelligence.
- **Attempting to activate Oracle Fusion Data Intelligence before activating your UCC subscription** will result in a warning message telling you to activate into an Oracle Cloud account with an UCC subscription. Go back and activate UCC into your Oracle Fusion Cloud Applications account and be sure to wait until you receive a confirmation email from Oracle Cloud stating that your services are ready before activating Oracle Fusion Data Intelligence.

#### Note:

This warning only appears if you received your Welcome email for your Oracle Fusion Data Intelligence subscription after March 8, 2023.

- **If an UCC subscription exists in a non-Oracle Fusion Cloud Applications account**, then activating Oracle Fusion Data Intelligence subscription into this non-Oracle Fusion Cloud Applications account goes against best practices. It will cost you additional time, money, and complexity when setting up your security integration between Oracle Fusion Data Intelligence and your Oracle Fusion Cloud Applications and reduced performance in its ongoing synchronization. Oracle highly recommends that you pause the activation process and do the following:

- Ask your sales representative to issue you an order for a \$0 UCC PAYG subscription that you can then activate into your Oracle Fusion Cloud Applications account
- If you plan on extending Oracle Fusion Data Intelligence with more than 50GB of non-Oracle Fusion Cloud Applications data, then you can set up a parent and child relationship between the UCC subscription in your non-Oracle Fusion Cloud Applications account and this new UCC PAYG subscription so that the charges come out of the existing UCC subscription in your non-Oracle Fusion Cloud Applications account. This can be done using the Organization Management functionality in Oracle Cloud Infrastructure. See [Organization Management](#).

### Role Needed to Activate

You must be a cloud administrator with the OCI\_Administrator role or be in the OCI Administrators group for the Oracle Cloud account that you're trying to activate your subscriptions into to activate successfully both UCC and Oracle Fusion Data Intelligence subscriptions. If you aren't a cloud administrator with this role, then either:

1. Ask the current cloud administrator of the cloud account to add you as a cloud administrator and assign the OCI\_Administrator role or add you to the Administrators group before you try to activate. However, be mindful of your account's location when asking:
  - If you've an account in an Oracle Cloud Infrastructure Identity and Access Management default or local domain, then a user with the Oracle Cloud Infrastructure administrator privileges needs to add you to the Administrators group.

 **Note:**

The prebuilt read-only Tenant Admin Policy grants administration privileges to the prebuilt Administrators group.

- If you've an account in an Oracle Identity Cloud Service stripe, then a user with the Oracle Cloud Infrastructure administrator privileges needs to ensure that the Oracle Identity Cloud Service OCI Administrators group is mapped to the Identity and Access Management Administrators group and then add you to the Oracle Identity Cloud Service OCI Administrators group.

 **Note:**

The prebuilt OCI Administrators group in an Oracle Identity Cloud Service stripe is mapped to the Administrators group in the Identity and Access Management local domain.

- If you've an account in a migrated Oracle Identity Cloud Service identity domain, then a user with the Oracle Cloud Infrastructure administrator privileges needs to add you to the OCI Administrators group and create the following policy rule:

```
Allow Group OracleIdentityCloudService/OCI_Administrators to Manage All-Resources in Tenancy
```

 **Note:**

A migrated OCI\_Admistrators group doesn't have administrative privileges immediately after a migration.

- If you've an account in any other identity domain, then a user with the Oracle Cloud Infrastructure administrator privileges needs to add you to the Domain\_Admistrators group and create the following policy rule:

```
Allow Group < Name of Domain>/Domain_Admistrators to Manage All-Resources in Tenancy
```

2. Or forward the activation emails to a person who has the OCI\_Administrator role or is in the Administrators group and have them follow the activation instructions.

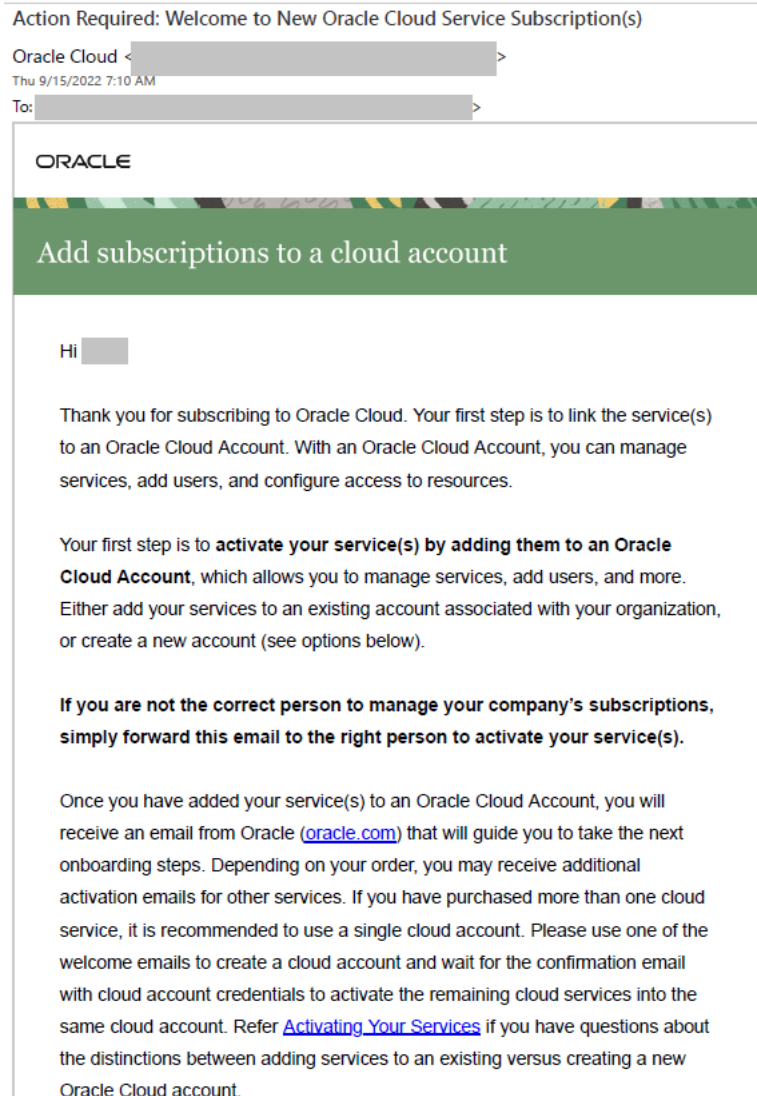
If this Oracle Cloud account uses identity domains, then see the *Creating Users* section in [Using the Console](#) to create a user and assign the OCI\_Admistrators or Administrators group, whichever is available. To add this group to an existing user in an identity domain, see the *Adding Users to Groups* section in [Using the Console](#). If this Oracle Cloud account uses Oracle Identity Cloud Service to manage users, then see [Create User Accounts](#) to create a user and assign the OCI\_Administrator role or Administrators group, whichever is available. To add this group to an existing user in Oracle Identity Cloud Service, see [Assign Groups to the User Account](#). To know if your tenancy uses identity domains or Oracle Identity Cloud Service, see [Do You Have Access to Identity Domains?](#)

## Activate the Universal Credits Subscription

Activate the new UCC subscription into your existing Oracle Fusion Cloud Applications account using the **Add to existing cloud account** option in the UCC Welcome email.

If you don't see your existing Oracle Fusion Cloud Applications account when selecting the cloud account to activate into, stop and submit a service request against "Fusion Data Intelligence" in My Oracle Support so that it gets routed to the correct team. For this service request, select **Significant Impairment** as **Issue Type** and in **Problem Type**, click **Activate, Create, Delete, Manage FAW Instance** and then select **FAW Activation**. Ensure that you include the account name you're trying to activate into along with a screen shot showing that you've been assigned this role in that Cloud account.

1. Locate your UCC Welcome email.



2. In the UCC Welcome email, click **Add to existing cloud account**.

 **Note:**

The name of the service in the body of this Welcome email is "Oracle PaaS and IaaS Universal Credits".

Subscription ID: [REDACTED]

- Oracle PaaS and IaaS Universal Credits ([REDACTED])

**Add to existing cloud account**

Create new cloud account

**Order Details:**  
 Order Number: [REDACTED]  
 Order Date: Thu, Sep 15, 2022, 01:39 AM UTC  
 Customer Support Identifier (CSI): [REDACTED]  
 Organization Name: [REDACTED]

**Questions?**  
 Please contact your account representative or [Oracle Support](#).

**Additional resources:**  
 Join the [Cloud Customer Connect community](#), to submit ideas for product enhancements directly to Oracle development or engage in real-time dialogues with other Oracle customers, Oracle experts, and Oracle partners about lessons learned and best practices for cloud adoption and business transformation.

Oracle University is offering [free training on Oracle Cloud](#) for a limited time.

**ORACLE**  
 Cloud

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3. Follow the instructions in [Add the New Cloud Service to an Existing Oracle Cloud Account](#).

 **Note:**

It can take up to an hour for the activation process to finish. Once it completes, you'll receive an email with the subject "Your services are ready!". Ensure that you don't proceed to the next step until you have received this email.

## Activate the Oracle Fusion Data Intelligence Subscription

Activate your Oracle Fusion Data Intelligence subscription into the Oracle Cloud account where you have Universal Credits (UCC).

After Oracle processes your subscription order, you receive an email asking you to activate the subscription. As part of the activation process, you sign into the Cloud account that has both your Oracle Fusion Cloud Applications and UCC subscription already in it. Upon signing in, you're taken to the Add Subscription page in the Oracle Cloud Infrastructure Console where you'll add the Oracle Fusion Data Intelligence subscription to the Cloud account.

After you add the Oracle Fusion Data Intelligence subscription, it can take up to an hour for the activation process to complete. You'll receive another email confirming that your subscription is ready. Don't proceed to the next step until you've received this email.

1. Locate your Oracle Fusion Data Intelligence Welcome email that you received from Oracle Cloud.

 **Note:**

The name of the service in the body of this Welcome email is "Oracle Fusion XXX Analytics..." where XXX represents the Fusion Data Intelligence pillar(s) you subscribed to such as Fusion HCM Analytics and Fusion ERP Analytics.

Action Required: Welcome to New Oracle Cloud Service Subscription(s)

Oracle Cloud <[redacted]>  
Thu 9/15/2022 7:10 AM  
To: [redacted]

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ORACLE

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**Add subscriptions to a cloud account**

Hi [redacted]

Thank you for subscribing to Oracle Cloud. Your first step is to link the service(s) to an Oracle Cloud Account. With an Oracle Cloud Account, you can manage services, add users, and configure access to resources.

Your first step is to **activate your service(s) by adding them to an Oracle Cloud Account**, which allows you to manage services, add users, and more. Either add your services to an existing account associated with your organization, or create a new account (see options below).

**If you are not the correct person to manage your company's subscriptions, simply forward this email to the right person to activate your service(s).**

Once you have added your service(s) to an Oracle Cloud Account, you will receive an email from Oracle ([oracle.com](https://oracle.com)) that will guide you to take the next onboarding steps. Depending on your order, you may receive additional activation emails for other services. If you have purchased more than one cloud service, it is recommended to use a single cloud account. Please use one of the welcome emails to create a cloud account and wait for the confirmation email with cloud account credentials to activate the remaining cloud services into the same cloud account. Refer [Activating Your Services](#) if you have questions about the distinctions between adding services to an existing versus creating a new Oracle Cloud account.

2. In the email, click **Add to existing cloud account**.

Subscription ID: [REDACTED]

- Oracle Fusion HCM Analytics - Hosted Employee ([REDACTED])

Add to existing cloud account

Create new cloud account

**Order Details:**

Order Number: [REDACTED]

Order Date: Thu, Sep 15, 2022, 01:39 AM UTC

Customer Support Identifier (CSI): [REDACTED]

Organization Name: [REDACTED]

**Questions?**

Please contact your account representative or [Oracle Support](#).

**Additional resources:**

Join the [Cloud Customer Connect community](#) to submit ideas for product enhancements directly to Oracle development or engage in real-time dialogues with other Oracle customers, Oracle experts, and Oracle partners about lessons learned and best practices for cloud adoption and business transformation.

Oracle University is offering [free training on Oracle Cloud](#) for a limited time.



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3. On the Oracle Cloud page, click **Sign In using a Cloud Account Name**.



Next

Forgot your cloud account name? [Get help](#)

[Sign In](#) using a Cloud Account Name

**Not an Oracle Cloud customer yet?**

Sign Up

4. In **Cloud Account Name**, enter the tenancy name of the existing Oracle Cloud account that has UCC and Oracle Fusion Cloud Applications and then click **Next**.

**ORACLE**  
Cloud

Cloud Account Name ?

Next

Forgot your cloud account name? [Get help](#)

Do you have a Traditional Cloud Account? [Sign In](#)

**Not an Oracle Cloud customer yet?**

Sign Up

If you don't see your existing Oracle Cloud account that has UCC and Oracle Fusion Cloud Applications in it, stop and submit a service request against "Fusion Data Intelligence" in My Oracle Support so that it gets routed to the correct team. For this service request, select **Significant Impairment** as **Issue Type** and in **Problem Type**, click **Activate, Create, Delete, Manage FAW Instance** and then select **FAW Activation**. Ensure that you include the account name you are trying to activate into along with a screen shot showing that you've been assigned this role in that Cloud account.

5. On the Oracle Cloud Account Sign In page, sign in as follows:
  - If the tenancy is set up with single sign-on, then in the Single Sign-On (SSO) section, select the applicable identity provider and click **Continue** to display the sign-in details.

[Change tenancy](#)

## Single Sign-On (SSO)

We have detected that your tenancy has been federated to another Identity Provider.

Select your Identity Provider below.

Continue

In the Oracle Cloud Account sign-in details, verify that the tenancy name is your Oracle Fusion Cloud Applications account, enter your credentials, and then click **Sign In** that takes you to the Add Subscription page in Oracle Cloud Infrastructure.



**ORACLE** Cloud

Oracle Cloud Account Sign In

Identity domain ⓘ  
Default

User Name  
User name or email

Password  
Password

[Forgot Password?](#)

**Sign In**

[Need help signing in?](#)

- If the tenancy isn't set up with single sign-on, then in the Oracle Cloud Account sign-in details, verify that the tenancy name is your Oracle Fusion Cloud Applications account, enter your credentials and then click **Sign In** that takes you to the Add Subscription page in Oracle Cloud Infrastructure.
6. On the Add subscription page, click the applicable row to select the subscription that matches the subscription listed in the activation email and then click **Add subscription**.

### Add subscription

Add the following subscriptions to your tenancy. If you want to add these subscriptions to a different tenancy, sign out and change the tenancy.

Tenancy name: [redacted]

Subscription	Subscription ID	Description
ANALYTICSAPP	[redacted]	Oracle Fusion HCM Analytics - Hosted Employee - [redacted]

ⓘ Adding subscriptions to a tenancy cannot be undone.

**Add subscription** [Cancel](#)

 **Note:**

Stop here if you don't see the subscription that you wish to activate.

- It likely means that you don't have the OCI\_Administrator role or Administrators group (whichever is available) assigned to you. You must contact your cloud account administrator.
- If you've been assigned the OCI\_Administrator role or are part of the Administrators group, then enter a service request against "Fusion Data Intelligence" in My Oracle Support so that it gets routed to the correct team. For this service request, select **Significant Impairment** as **Issue Type** and in **Problem Type**, click **Activate, Create, Delete, Manage FAW Instance** and then select **FAW Activation**. Ensure that you include the account name you're trying to activate into along with a screen shot showing that you've been assigned this role in that Cloud account.

7. In the **Thanks for adding your subscriptions** message, click **Close**.

## Thanks for adding your subscriptions. You're almost done!

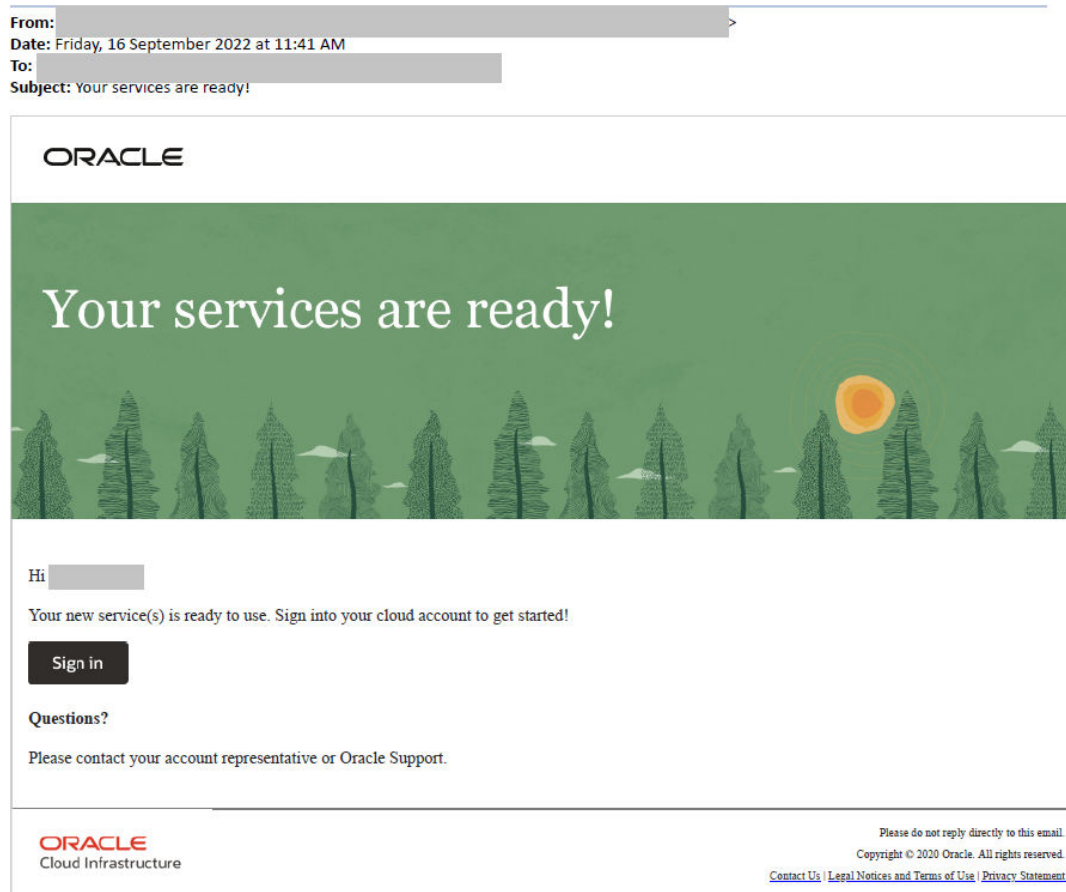
We'll email you with further instructions when your subscriptions are ready, so you can get your services up and running.

[Learn more about managing your administrative roles](#)

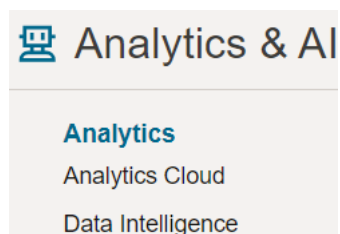
Close

It can take upto an hour to receive an email with the subject "Your services are ready!".

8. Open the email that you received from Oracle Cloud stating that your services are ready and click **Sign in**. Use your Cloud account credentials.



9. In Oracle Cloud Infrastructure Console, click the Navigator menu icon, click **Analytics & AI**, and then under Analytics & AI, click **Data Intelligence**.



10. On the Fusion Data Intelligence Instances page, verify that the subscriptions listed in the Compartment banner match your Oracle Fusion Data Intelligence order and the **Create Instance** button is enabled.

Before you click the **Create Instance** button, ensure that you set up user access using single sign-on. See [Set Up User Access to Oracle Fusion Data Intelligence Using Single Sign-On](#) . Once you complete setting up user access, you can create your instance.

To create an instance, see [Create an Oracle Fusion Data Intelligence Subscription Instance](#) .

11. If you run into issues, then enter a service request against “Fusion Data Intelligence” in My Oracle Support so that it gets routed to the correct team. For this service request, select **Significant Impairment** as **Issue Type** and in **Problem Type**, click **Activate, Create, Delete, Manage FAW Instance** and then select **FAW Activation**. Prior to creating the

service request, ensure that you have noted down the Cloud account, order number, subscription details, and the failed step information.

## Typical Workflow to Administer Oracle Fusion Data Intelligence

If you're setting up Oracle Fusion Data Intelligence for the first time, then follow these tasks as a guide.

Task	Description	More Information
Activate your Oracle Fusion Data Intelligence subscription.	After your order for the Oracle Fusion Data Intelligence subscription has been processed, you receive a Welcome email asking you to activate your Oracle Fusion Data Intelligence subscription. If your sales representative also included a Universal Credits subscription as part of your order, you receive a separate Welcome email asking you to activate that as well.	<a href="#">Activate Your Oracle Fusion Data Intelligence Subscription</a>
Sign into the Oracle Cloud Infrastructure Console.	After you activate the service, use the cloud account credentials to access your services. If you're planning to use single sign-on to access Oracle Fusion Data Intelligence, then <a href="#">Set Up Provisioning with Single Sign-On</a> before proceeding with this and the subsequent tasks.	<a href="#">Sign In to the Oracle Cloud Infrastructure Console</a>
Use the Oracle Cloud Infrastructure Console to access the service pages.	When you sign in to the Console, you'll see the home page. Use the navigation menu in the upper left to navigate to the service pages where you create, manage, and view your cloud resources.	<a href="#">Access Your Service</a>
(Optional) Add a user with administrator permissions for the service.	Add a user with full administrator permissions of the default administrator of the service.	<a href="#">Add Users with Administrator Permissions</a>
Create a user to extract data	If you want to use the password-based basic authentication to connect to your source system, then you must provide credentials of a user who has the appropriate privileges to extract data from Oracle Fusion Cloud Applications into Oracle Fusion Data Intelligence.	<a href="#">Create a User in Oracle Fusion Cloud Applications to Extract Data</a>
Set up user access to Oracle Fusion Data Intelligence using single sign-on.	You can set up how users from Oracle Fusion Cloud Applications access Oracle Fusion Data Intelligence using single sign-on. This setup eases the management of various user names and passwords. It enables you to synchronize users and roles in Oracle Fusion Cloud Applications with Oracle Identity Cloud Service and then enable these users to access Oracle Fusion Data Intelligence.	<a href="#">Set Up User Access to Oracle Fusion Data Intelligence Using Single Sign-On</a>
Create an instance for Oracle Fusion Data Intelligence.	Use the Console to create an instance. If you've set up provisioning with single sign-on, which federates your tenancy with Oracle Identity Cloud Service, then you create the Fusion Data Intelligence instance in the federated Oracle Identity Cloud Service instance. If your tenancy isn't federated with an identity provider, then you create the Fusion Data Intelligence instance in the default Oracle Identity Cloud Service instance that's available with your Oracle Fusion Data Intelligence subscription.	<a href="#">Create an Oracle Fusion Data Intelligence Subscription Instance</a>

Task	Description	More Information
Verify the Oracle Fusion Data Intelligence instance.	You receive an email when your instance is ready. Check that you can sign in and that your instance is up and running.	<a href="#">Verify Your Instance and Sign In</a>
Create and associate users and groups.	When you set up provisioning with single sign-on, you enable synchronization of users and their associated roles from Oracle Fusion Cloud Applications to your federated Oracle Identity Cloud Service instance. After the initial synchronization, if you add users in your Oracle Fusion Cloud Applications instance, they are automatically available in your federated Oracle Identity Cloud Service instance because you've enabled synchronization. See <a href="#">Set Up Provisioning with Single Sign-On</a> . You can also add additional users in your federated Oracle Identity Cloud Service instance if you've the User Administrator role in Oracle Identity Cloud Service. In Oracle Fusion Data Intelligence, you can view the users and groups on the Security page but you can't create, modify, or delete them. When you set up provisioning without single sign-on, to access Oracle Fusion Data Intelligence, manually create Oracle Fusion Cloud Applications users and groups (these are the equivalent of job roles in Oracle Fusion Cloud Applications) in Oracle Identity Cloud Service and then assign the groups (job roles) to users.	<a href="#">Managing Oracle Identity Cloud Service Users and Groups in the Oracle Cloud Infrastructure Console</a>
Configure data security.	Ensure that users have appropriate access to use Oracle Fusion Data Intelligence. Access to subject areas and data depends on the roles assigned to the users.	<a href="#">Manage Users, Groups, Application Roles, and Data Access</a>
Configure Oracle Fusion Data Intelligence data.	Set up global and reporting configurations and create data pipelines for functional areas to copy your Oracle Fusion Cloud Applications data to the data warehouse.	<a href="#">Configure Oracle Fusion Data Intelligence Data</a>

## Sign In to the Oracle Cloud Infrastructure Console

After you activate the service, use the cloud account credentials to sign in to the Oracle Cloud Infrastructure Console to access your services.

If you're the first user on the account and were invited by Oracle Cloud, then you're automatically added to the Administrators group. You can invite other members of the organization by adding users in Oracle Cloud Infrastructure Identity and Access Management. See [Signing In to the Console](#).

## Access Your Service

Sign in to the Oracle Cloud Infrastructure Console and use the navigation menu in the upper left to navigate to the service pages where you create, manage, and view your cloud resources..

See [Using the Console](#).

## Add Users with Administrator Permissions

If you want another user to administer the service, then provide the user with the same permissions as the default administrator of the service.

- If you're an Oracle Cloud Infrastructure Identity and Access Management administrator and want to add another Oracle Cloud Infrastructure Identity and Access Management user with administrator privileges, then complete the following tasks:
  - Create a group and add a non-administrator user to the group. Name the group, for example, `FAWAdmin.grp`. See [Managing Groups](#).
  - Create a compartment for the Oracle Fusion Data Intelligence instances to limit the access of non-administrator users to only those services within the compartment. Name the compartment, for example, `FAWServicesCompartment`. See [Managing Compartments](#).
  - Define the policies for the non-administrator user to access the Oracle Fusion Data Intelligence instances. Name the policy, for example, `FAWAdmin.pl`. Add a policy statement such as:

```
ALLOW GROUP FAWAdmin.grp TO MANAGE analytics-warehouses IN COMPARTMENT
FAWServicesCompartment
```

Add policies to grant the non-administrator user permission to create an autonomous data warehouse (ADW) and Oracle Analytics Cloud in the compartment that you created, for example, `FAWServicesCompartment`. Ensure that the compartment in which you grant the manage ADW and Oracle Analytics Cloud permissions is the same as the compartment in which the non-administrator user has a manage permission for Oracle Fusion Data Intelligence instances.

Name the ADW-specific policy, for example, `FAWADWAdmin.pl` and add a policy statement such as:

```
ALLOW GROUP FAWAdmin.grp TO MANAGE autonomous-database-family IN
COMPARTMENT
FAWServicesCompartment
```

Name the Oracle Analytics Cloud-specific policy, for example, `FAWOACAdmin.pl` and add a policy statement such as:

```
ALLOW GROUP FAWAdmin.grp TO MANAGE analytics-instances IN COMPARTMENT
FAWServicesCompartment
```

See [Managing Policies](#).

- If your tenancy uses Oracle Identity Cloud Service to manage user login and password for the Oracle Cloud Infrastructure Console, then to add a user with administrator permissions, see [Managing Oracle Identity Cloud Service Users and Groups in the Oracle Cloud Infrastructure Console](#).

## Create a User in Oracle Fusion Cloud Applications to Extract Data

If you want to use the password-based basic authentication to connect to your source system, then you must provide credentials of a user who has the appropriate privileges to extract data from Oracle Fusion Cloud Applications into Oracle Fusion Data Intelligence.

In Oracle Fusion Cloud Applications, ensure that you've the Security Manager role and access the Security Console to create a user to extract data into Oracle Fusion Data Intelligence. Ensure that the password for this user doesn't contain any special characters or space.

Oracle counts this user as an Oracle Fusion Cloud Applications licensed user. You must assign the appropriate data security privileges to this user for bulk data extraction. Later, specify this user while providing the source details when you're creating your Oracle Fusion Data Intelligence instance and updating the source details after creating the instance.

If you're using the password-based basic authentication to connect to your source system, then you won't be able to reset the password for the prebuilt `FAWService` user in Oracle Fusion Cloud Applications. You can continue to use the `FAWService` user until the existing password expires. The recommendation is to update the connection details with the new user created to extract data, such as `MyFAWExtractUser` before the password for the `FAWService` user expires to ensure continuation of data extraction. See [Update the Data Source Connection Details](#). To provide the user credentials while creating a Oracle Fusion Data Intelligence instance, see [Enter Details for an Oracle Fusion Data Intelligence Subscription Instance](#).

If you want to use the credentials of the user such as `MyFAWExtractUser` for validating the extracted data, then ensure that you also assign to this user the custom data BI - Abstract Role that was created for data validation; for example, `FAW_CUSTOM_DATA_VALIDATION_ROLE`. See [Create a Custom BI Abstract Role](#). Otherwise, create a user such as `MyFAWValidationUser` and assign the custom data BI - Abstract Role created for data validation. See [Create a User to Validate the Extracted Data](#).

1. Sign in to Oracle Fusion Cloud Applications and in the Navigator, click **Tools**, and then click **Security Console**.
2. In the Console, click the Users tab and create a user that you want to use to extract data into Oracle Fusion Data Intelligence; for example, `MyFAWExtractUser`.  
See [Add User Accounts](#).
3. Click the Roles tab and then click **Create**.
4. On the Basic Information page, enter `FAW_EXTRACT_ADMIN` in Role Name, `FAW_EXTRACT_ADMIN` in Role Code, and BI - Abstract Roles in Role Category.
5. Click **Next** to navigate to the subsequent pages. You can skip entering details on the Function Security Policies and Data Security Policies pages.
6. On the Role Hierarchy page, click **Add Role** and in the Add Role Membership dialog, search for the following roles and click **Add Role Membership** to add them:
  - ESS Administrator Role: To create and manage schedules for global data extracts or jobs.
  - `ORA_ASM_APPLICATION_IMPLEMENTATION_ADMIN_ABSTRACT`: To have access to global offerings and data stores or jobs.
7. Close the Add Role Membership dialog and click **Next**.
8. Skip entering details on the Segregation of Duties page and click **Next**.

9. On the Users page, click **Add User** and in the Add User dialog, search for and select the user to whom you want to assign this role; for example, MyFAWExtractUser. Click **Add Selected Users** and close the Add User dialog.
10. Click **Next**. Review the summary and click **Save and Close**.



# 3

## Set Up Oracle Fusion Data Intelligence

As the cloud account administrator, create the service instance for Oracle Fusion Data Intelligence.

### Topics:

- [Prerequisites for Oracle Fusion Data Intelligence](#)
- [Typical Workflow to Set Up Oracle Fusion Data Intelligence](#)
- [Set Up User Access to Oracle Fusion Data Intelligence Using Single Sign-On](#)
- [Create an Oracle Fusion Data Intelligence Instance](#)
- [Deploy Oracle Fusion Data Intelligence with a Private Endpoint](#)
- [Make Preview Features Available](#)
- [Enable Generally Available Features](#)
- [View Work Requests](#)
- [View Subscriptions](#)
- [Update the Data Source Connection Details](#)
- [Update Your Subscriptions](#)
- [Update the Administrator Password for Oracle Autonomous Data Warehouse](#)
- [Reset the Password for OAX\\_USER Schema](#)
- [Reset the Password for Custom Schemas](#)
- [Terminate Instances](#)
- [Move the Oracle Fusion Data Intelligence Instance to Another Compartment](#)
- [Update the Notification Email](#)
- [Scale Up Oracle Autonomous Data Warehouse](#)
- [Change Oracle Analytics Cloud Capacity](#)
- [Provide Your Encryption Key for Oracle Autonomous Data Warehouse](#)
- [Configure Advanced Options](#)

## Prerequisites for Oracle Fusion Data Intelligence

The prerequisites needed to set up Oracle Fusion Data Intelligence pillars ensure you can use all the features of those products.

**Table 3-1 Prerequisites for Pillars**

Pillar	Prerequisites
Oracle Fusion CX Analytics	See Prerequisites for Fusion CX Analytics.
Oracle Fusion ERP Analytics	See Prerequisites for Fusion ERP Analytics.

**Table 3-1 (Cont.) Prerequisites for Pillars**

Pillar	Prerequisites
Oracle Fusion HCM Analytics	See Prerequisites for Fusion HCM Analytics.
Oracle Fusion SCM Analytics	See Prerequisites for Fusion SCM Analytics.

## Typical Workflow to Set Up Oracle Fusion Data Intelligence

If you're setting up Oracle Fusion Data Intelligence for the first time, then follow these tasks as a guide.

Task	Description	More Information
Set up user access to Oracle Fusion Data Intelligence using single sign-on.	You can set up how users from Oracle Fusion Cloud Applications access Oracle Fusion Data Intelligence using single sign-on. This setup simplifies how you manage user names and passwords. It enables you to synchronize users and roles in Oracle Fusion Cloud Applications with Oracle Identity Cloud Service and then enable these users to access Oracle Fusion Data Intelligence.	<a href="#">Set Up User Access to Oracle Fusion Data Intelligence Using Single Sign-On</a>
Create an Oracle Fusion Data Intelligence instance.	Create a service instance to manage your cloud resources.	<a href="#">Create an Oracle Fusion Data Intelligence Subscription Instance</a>
Verify your instance and sign in.	Verify your service instance when you receive an email from Oracle that your Oracle Fusion Data Intelligence service instance is ready.	<a href="#">Verify Your Instance and Sign In</a>

## Set Up User Access to Oracle Fusion Data Intelligence Using Single Sign-On

You can set up how users from Oracle Fusion Cloud Applications access Oracle Fusion Data Intelligence using single sign-on. This setup simplifies how you manage user names and passwords. You must complete this setup before you create your Oracle Fusion Data Intelligence instances except as indicated in scenarios #5 and #6 that require further setup after you create the Oracle Fusion Data Intelligence instance.

### Topics:

- [About Setting Up User Access to Oracle Fusion Data Intelligence Using Single Sign-On](#)
- [Set Up User Access to Oracle Fusion Data Intelligence Using Single Sign-On in Scenario #1](#)
- [Set Up User Access to Oracle Fusion Data Intelligence Using Single Sign-On in Scenario #2](#)

- [Set Up User Access to Oracle Fusion Data Intelligence Using Single Sign-On in Scenario #3](#)
- [Set Up User Access to Oracle Fusion Data Intelligence Using Single Sign-On in Scenario #4](#)
- [Set Up User Access to Oracle Fusion Data Intelligence Using Single Sign-On in Scenario #5](#)
- [Set Up User Access to Oracle Fusion Data Intelligence Using Single Sign-On in Scenario #6](#)

## About Setting Up User Access to Oracle Fusion Data Intelligence Using Single Sign-On

Using single sign-on simplifies managing user access to Oracle Fusion Data Intelligence.

Users of Oracle Fusion Data Intelligence are mostly Oracle Fusion Cloud Applications users and those whom you create specifically in Oracle Fusion Data Intelligence. Setting up access to Oracle Fusion Data Intelligence for these users using single sign-on depends on whether identity domains are available in your cloud account or you're using Oracle Identity Cloud Service to manage the users.

Some Oracle Cloud regions use the Oracle Cloud Infrastructure Identity and Access Management (IAM) identity domains. See [Identity Domain Overview](#). It's easy to determine whether or not your cloud account offers identity domains. In Oracle Cloud Infrastructure Console, navigate to **Identity & Security**. Under **Identity**, check for **Domains**.

The way you set up user access to Oracle Fusion Data Intelligence using single sign-on is based on when you created the cloud account for Oracle Fusion Cloud Applications and the cloud account in which you activated Oracle Fusion Data Intelligence.

Check your cloud account for Oracle Fusion Cloud Applications and Oracle Fusion Data Intelligence to know whether identity domains are available and then use these scenarios as applicable to set up user access to Oracle Fusion Data Intelligence using single sign-on:

- Scenario 1 - Existing Oracle Fusion Cloud Applications in a cloud account that doesn't offer identity domains and Oracle Fusion Data Intelligence activated in the same cloud account as Oracle Fusion Cloud Applications.
- Scenario 2 - New Oracle Fusion Cloud Applications in a cloud account that offers identity domains and Oracle Fusion Data Intelligence activated in the same cloud account as Oracle Fusion Cloud Applications.
- Scenario 3 - Existing Oracle Fusion Cloud Applications in a cloud account that doesn't offer identity domains and Oracle Fusion Data Intelligence activated in a different pre-existing cloud account that doesn't offer identity domains.
- Scenario 4 - New Oracle Fusion Cloud Applications in a cloud account that offers identity domains and Oracle Fusion Data Intelligence activated in a different pre-existing cloud account that doesn't offer identity domains.
- Scenario 5 - Existing Oracle Fusion Cloud Applications in a cloud account that doesn't offer identity domains and Oracle Fusion Data Intelligence activated in a different new cloud account that offers identity domains.
- Scenario 6 - New Oracle Fusion Cloud Applications in a cloud account that offers identity domains and Oracle Fusion Data Intelligence activated in a different new cloud account that offers identity domains.

## Set Up User Access to Oracle Fusion Data Intelligence Using Single Sign-On in Scenario #1

Scenario #1 applies to a single cloud account for Oracle Fusion Cloud Applications and Oracle Fusion Data Intelligence and the cloud account doesn't offer identity domains.

If you're an existing user of Oracle Fusion Cloud Applications with Oracle Fusion Data Intelligence activated in the same cloud account as Oracle Fusion Cloud Applications and your cloud account doesn't offer identity domains, then perform these steps:

1. Complete the setup required for provisioning Oracle Fusion Data Intelligence with single sign-on.

See [Set Up Provisioning with Single Sign-On](#).

2. In the Oracle Cloud Infrastructure Console, click the **Navigation** menu icon, click **Analytics & AI** and then click **Data Intelligence** to create the Oracle Fusion Data Intelligence instance.

See [Create an Oracle Fusion Data Intelligence Subscription Instance](#).

## Set Up Provisioning with Single Sign-On

Provisioning Oracle Fusion Data Intelligence with single sign-on enables you to synchronize users and groups in Oracle Fusion Cloud Applications with Oracle Identity Cloud Service and then enable these users to access Oracle Fusion Data Intelligence.

Here's the list of tasks that you must complete in the order that they are listed.

1. Ensure that you've the **FA\_GSI\_Administrator** role for the applicable Oracle Fusion Cloud Applications environment. You need this role to synchronize users and groups in Oracle Fusion Cloud Applications with the Oracle Identity Cloud Service instance specified in the Identity Cloud account associated with your Oracle Fusion Cloud Applications instance. See [How to add FA\\_GSI\\_Administrator role to a user?](#)
2. Write down the Oracle Identity Cloud Service details in the mail notifying you of the Identity Cloud account associated with your Oracle Fusion Cloud Applications instance for later use.
3. Set up synchronization of Oracle Fusion Cloud Applications with the Oracle Identity Cloud Service instance specified in the Identity Cloud account associated with your Oracle Fusion Cloud Applications instance.
4. Federate the Oracle Identity Cloud Service instance specified in the Identity Cloud account associated with your Oracle Fusion Cloud Applications instance to the Oracle Cloud Infrastructure tenancy where Fusion Data Intelligence is provisioned.
5. Sign in to the Oracle Cloud Infrastructure tenancy where Fusion Data Intelligence is provisioned using the federated Oracle Identity Cloud Service instance.

## Copy and Store the Oracle Identity Cloud Service URL

Copy and store the Oracle Identity Cloud Service URL available in the mail notifying you of the Identity Cloud account associated with your Oracle Fusion Cloud Applications instance in a

text file. You require this information while setting up the synchronization of Oracle Fusion Cloud Applications with the Oracle Identity Cloud Service instance.

As the administrator of Oracle Fusion Cloud Applications, you would have received emails notifying you of the Identity Cloud account associated with your Oracle Fusion Cloud Applications instance.

1. From the email, copy the Oracle Identity Cloud Service URL for each of the development and production instances for each of the Oracle Fusion Cloud Applications environments and paste them in a text file.
2. If the email isn't available, then you can raise a service request to obtain information about the Identity Cloud account associated with your Oracle Fusion Cloud Applications instances. See [Contact My Oracle Support](#). Alternatively, as the Oracle Cloud account administrator, access the My Services Dashboard to obtain this information; see [About My Services Dashboard](#).

## Set Up Synchronization of Oracle Fusion Cloud Applications with Oracle Identity Cloud Service

Set up the synchronization of Oracle Fusion Cloud Applications with the Oracle Identity Cloud Service instance specified in the Identity Cloud account associated with your Oracle Fusion Cloud Applications instance. This synchronization gets the Oracle Fusion Cloud Applications users and groups into the applicable Oracle Identity Cloud Service instance that enables these users to access Oracle Fusion Data Intelligence.

To set up this synchronization, you need the client ID and secret from the Identity Cloud account associated with your Oracle Fusion Cloud Applications instance.

1. Sign in to Oracle Identity Cloud Service using the URL that you obtained in [Copy and Store the Oracle Identity Cloud Service URL](#).
2. Navigate to **Home**, click the **Navigator** menu, click **Oracle Cloud Services**, and then click **Oracle Fusion Cloud Applications**.
3. Open a text file, copy the URL from the browser until "identity.oraclecloud.com", and paste it in the text file.

Sample format of the URL is *https://idcs-<Oracle Identity Cloud Service stripe ID>.identity.oraclecloud.com/*. For example, in the url `https://idcs-12ab34c56789.identity.oraclecloud.com:443`, copy `https://idcs-12ab34c56789.identity.oraclecloud.com`.

4. On the Oracle Fusion Cloud Applications page, click **Configuration**, expand **General Information**, copy the client ID and paste it in the text file. Then click **Show Secret**, copy the text, paste it in the text file, and then save the text file.
5. On the Oracle Fusion Cloud Applications page, under **Configuration**, expand **Client Configuration**, scroll down, and click **Add**.
6. In Add App Role, select **Application Administrator** and **Identity Domain Administrator** and then click **Add**.
7. On the Oracle Fusion Cloud Applications page, click **Provisioning**, and then select **Enable Provisioning**.
8. Under **Select Provisioning Operations**, select **Authoritative Sync**, and then select **Enable Synchronization**.
9. Under **Provisioning**, expand **Configure Connectivity**, and click **Test Connectivity**. Then click **Save**.

10. Confirm that the synchronization of Oracle Fusion Cloud Applications with Oracle Identity Cloud Service was set up successfully by viewing the users and groups along with user to groups mappings before and after synchronization.

## Federate the Oracle Identity Cloud Service Instance to Your Oracle Cloud Infrastructure Tenancy

Federate the Oracle Identity Cloud Service associated with your Oracle Fusion Cloud Applications instance to the Oracle Cloud Infrastructure tenancy where Oracle Fusion Data Intelligence is provisioned to connect them and enable the usage of a single set of sign-in credentials.

Use the text file in which you had previously saved the URL, client ID, and client secret. See [Set Up Synchronization of Oracle Fusion Cloud Applications with Oracle Identity Cloud Service](#). After you've connected the Oracle Identity Cloud Service instance to the Oracle Cloud Infrastructure tenancy, use the new identity provider to sign in to Oracle Cloud Infrastructure.

1. Sign in to your Oracle Cloud account that contains the tenancy where Oracle Fusion Data Intelligence is provisioned (in certain cases this can be same as your Oracle Fusion Cloud Applications account).
2. On the Oracle Cloud Home, navigate to **Identity** and then click **Federation**.
3. On the Federation page, click **Add Identity Provider**.
4. On the Add Identity Provider page, use lower case to enter a **Name** and add a description.
5. Select **Oracle Identity Cloud Service**, and enter the URL, client ID, and client secret that you had previously saved in a text file.
6. Scroll down and click **Continue** at the bottom of the Add Identity Provider page.
7. In the next page, map **IDCS Administrators** under **Identity Provider Group** to **Administrators** under **OCI Group** and click **Add Provider**.
8. On the Federation page, view and write down the name of the new identity provider.

## Sign in to Oracle Cloud Infrastructure using the Federated Oracle Identity Cloud Service Instance

You must sign in to Oracle Cloud Infrastructure using the federated Oracle Identity Cloud Service instance to create your Oracle Fusion Data Intelligence instance.

1. Sign in to the Oracle Cloud Infrastructure by selecting the tenancy where Oracle Fusion Data Intelligence is provisioned and under Single Sign-On (SSO), select the identity provider that you added in [Federate the Oracle Identity Cloud Service Instance to Your Oracle Cloud Infrastructure Tenancy](#).
2. In the Oracle cloud account Sign In dialog, click **Oracle Fusion Cloud Applications**.
3. In the Sign In Oracle Fusion Cloud Applications dialog, enter your Oracle Fusion Cloud Applications credentials and click **Sign In**.

You see the Oracle Cloud Infrastructure's Console Home page.

## Set Up User Access to Oracle Fusion Data Intelligence Using Single Sign-On in Scenario #2

Scenario #2 applies to a single cloud account for Oracle Fusion Cloud Applications and Oracle Fusion Data Intelligence and the cloud account offers identity domains.

If you're a new user of Oracle Fusion Cloud Applications with Oracle Fusion Data Intelligence activated in the same cloud account as Oracle Fusion Cloud Applications and your cloud account offers identity domains, then perform these steps:

1. Set up the JWT Based authentication for Oracle Fusion Data Intelligence.  
See [Configure JWT Authentication Provider](#). While [configuring the token-based authentication](#), ensure that you enter `FAWServiceJWTIssuer` as the trusted issuer.
2. Use the Oracle Cloud Infrastructure Console and add these policies to enable users from the identity domain associated with Oracle Fusion Cloud Applications to access the Oracle Fusion Data Intelligence compartments:

```
Allow group '<DomainName>'/'<GroupName>' to manage analytics-warehouses in
tenancy
Allow group '<DomainName>'/'<GroupName>' to manage
analytics-instances in
tenancy
Allow group '<DomainName>'/'<GroupName>' to manage
autonomous-database-family
in tenancy
Allow group '<DomainName>'/'<GroupName>' to manage all-resources
in
compartment <compartment name>
```

See "To create a policy" in [Managing Policies](#).

3. Copy and paste into a text file the URL of your Oracle Fusion Cloud Applications instance for later use. You specify this URL as the source Oracle Fusion Cloud Applications while creating the Oracle Fusion Data Intelligence instance.
4. In Oracle Cloud Infrastructure, sign in to the cloud account where both Oracle Fusion Cloud Applications and Oracle Fusion Data Intelligence services have been activated using your cloud account administrator credentials.
5. On the Oracle Cloud Infrastructure Sign-in page, choose the domain that's corresponding to the Oracle Fusion Cloud Applications instance that you want to specify as the source while creating the Oracle Fusion Data Intelligence instance.
6. In the Oracle Cloud Infrastructure Console, click the **Navigation** menu icon, click **Analytics & AI** and then click **Data Intelligence** to create the Oracle Fusion Data Intelligence instance.

See [Create an Oracle Fusion Data Intelligence Subscription Instance](#).

## Set Up User Access to Oracle Fusion Data Intelligence Using Single Sign-On in Scenario #3

Scenario #3 applies to separate cloud accounts for Oracle Fusion Cloud Applications and Oracle Fusion Data Intelligence and both the cloud accounts don't offer identity domains.

If you're an existing user of Oracle Fusion Cloud Applications in a cloud account that doesn't offer identity domains with Oracle Fusion Data Intelligence activated in a different existing cloud account that doesn't offer identity domains, then perform these steps:

1. Complete the steps listed in [Set Up Provisioning with Single Sign-On](#).
2. In the Oracle Cloud Infrastructure Console, click the **Navigation** menu icon, click **Analytics & AI** and then click **Data Intelligence** to create the Oracle Fusion Data Intelligence instance.

See [Create an Oracle Fusion Data Intelligence Subscription Instance](#).

## Set Up User Access to Oracle Fusion Data Intelligence Using Single Sign-On in Scenario #4

Scenario #4 applies to separate cloud accounts for Oracle Fusion Cloud Applications and Oracle Fusion Data Intelligence with one cloud account offering identity domains and another not offering identity domains.

If you're a new user of Oracle Fusion Cloud Applications in a cloud account that offers identity domains with Oracle Fusion Data Intelligence activated in a different existing cloud account that doesn't offer identity domains, then you must federate the identity domain associated with Oracle Fusion Cloud Applications to the Oracle Cloud Infrastructure tenancy where Oracle Fusion Data Intelligence is provisioned. During provisioning of Oracle Fusion Cloud Applications in a cloud account that offers identity domains, typically the Oracle Fusion Cloud Applications users and groups are synchronized automatically with the identity domain. In case the Oracle Fusion Cloud Applications users and groups aren't synchronized automatically with the identity domain, then you must manually enable the synchronization before performing the steps listed in this section. See [Synchronize Users from Your Oracle Fusion Cloud Applications Instance with the Identity Domain](#).

1. Copy and store the details of the identity domain associated with the Oracle Fusion Cloud Applications instance.  
See [Copy and Store Details of the Identity Domain](#).
2. Federate the identity domain associated with Oracle Fusion Cloud Applications to the Oracle Cloud Infrastructure tenancy where Oracle Fusion Data Intelligence is provisioned.  
See [Federate the Identity Domain to Your Oracle Cloud Infrastructure Tenancy](#).
3. Sign in to Oracle Cloud Infrastructure using the federated identity domain to create your Oracle Fusion Data Intelligence instance.  
See [Sign in to Oracle Cloud Infrastructure using the Federated Identity Domain](#).
4. In the Oracle Cloud Infrastructure Console, click the **Navigation** menu icon, click **Analytics & AI** and then click **Data Intelligence** to create the Oracle Fusion Data Intelligence instance.

See [Create an Oracle Fusion Data Intelligence Subscription Instance](#).



## Copy and Store Details of the Identity Domain

Copy and store the client ID, client secret, and the URL of the identity domain associated with the Oracle Fusion Cloud Applications instance in a text file to use while federating the identity domain with the Oracle Cloud Infrastructure tenancy where Oracle Fusion Data Intelligence is provisioned.

1. Sign in to the Oracle Cloud Infrastructure Console using the credentials of the cloud account associated with Oracle Fusion Cloud Applications.
2. In the **Navigator** menu, click **Identity & Security** and on the Identity & Security page, click **Domains**.
3. On the Domains page, click the identity domain associated with the Oracle Fusion Cloud Applications instance.
4. On the domain Overview page, in the Domain information section, copy the domain url till *identity.oraclecloud.com*. For example, in the domain url `https://idcs-12ab34c56789.identity.oraclecloud.com:443`, copy `https://idcs-12ab34c56789.identity.oraclecloud.com`.
5. On the domain Overview page, click **Oracle Cloud Services** and then click **Oracle Fusion Cloud Applications**.
6. On the Oracle Fusion Cloud Applications page, click **Configuration**.
7. Under General Information, copy the **Client ID** and paste into a text file.
8. In **Client Secret**, click **Show Secret**, copy the secret, and paste into a text file.

## Federate the Identity Domain to Your Oracle Cloud Infrastructure Tenancy

Federate the identity domain associated with your Oracle Fusion Cloud Applications instance to the Oracle Cloud Infrastructure tenancy where Oracle Fusion Data Intelligence is provisioned. This federation enables users to sign in to Oracle Fusion Data Intelligence using their Oracle Fusion Cloud Applications credentials.

1. Sign in to your Oracle Cloud account that contains the tenancy where Oracle Fusion Data Intelligence is provisioned.
2. On the Oracle Cloud Home, navigate to **Identity** and then click **Federation**.
3. On the Federation page, click **Add Identity Provider**.
4. On the Add Identity Provider page, enter a name and description.
5. Select **Oracle Identity Cloud Service** as **Type**.
6. Enter the URL of the identity domain, client ID, and client secret that you had saved in a text file. See [Copy and Store Details of the Identity Domain](#).
7. Scroll down and click **Continue** at the bottom of the Add Identity Provider page.
8. In the next page, map **Domain\_Administrators** group under **Identity Provider Group** with **Administrators** group under **OCI Group** and click **Add Provider**.

## Sign in to Oracle Cloud Infrastructure using the Federated Identity Domain

You must sign in to Oracle Cloud Infrastructure using the federated identity domain associated with your Oracle Fusion Cloud Applications instance to create the Oracle Fusion Data Intelligence instance.

1. Sign in to the Oracle Cloud Infrastructure by selecting the tenancy where Oracle Fusion Data Intelligence is provisioned and under Single Sign-On (SSO), select the identity provider that you added in [Federate the Identity Domain to Your Oracle Cloud Infrastructure Tenancy](#).
2. In the Oracle Cloud Account Sign In dialog, click **Oracle Fusion Cloud Applications**.
3. In the Sign In Oracle Fusion Cloud Applications dialog, enter your Oracle Fusion Cloud Applications credentials and click **Sign In**.

You see the Oracle Cloud Infrastructure's Console Home page.

## Synchronize Users from Your Oracle Fusion Cloud Applications Instance with the Identity Domain

Synchronize users from your Oracle Fusion Cloud Applications instance with the identity domain in the cloud account associated with Oracle Fusion Cloud Applications.

1. Sign in to the Oracle Cloud Infrastructure Console using your Oracle Fusion Cloud Applications credentials.
2. In the Oracle Cloud Infrastructure **Navigator** menu, click **Identity & Security** and then in the Identity & Security pane, under **Identity**, click **Domains**.
3. On the Domains page, navigate to the identity domain associated with the Oracle Fusion Cloud Applications instance that you plan to use while creating the Oracle Fusion Data Intelligence instance.
4. Click **Oracle Cloud Services** from the menu options.
5. On the Oracle Cloud Services page, click the **Oracle Fusion Cloud Applications** application.
6. On the application page, click **Provisioning** and turn on the **Enable provisioning** switch.
7. In the Select provisioning operations section, select the **Authoritative Sync** check box and turn on the **Enable synchronization** switch.
8. Click **Save changes**.
9. On the application page, click **Import** to initiate the synchronization process.

After the process finishes, you see the list of users and groups synchronized from Oracle Fusion Cloud Applications in the identity domain.

## Set Up User Access to Oracle Fusion Data Intelligence Using Single Sign-On in Scenario #5

Scenario #5 applies to separate cloud accounts for Oracle Fusion Cloud Applications and Oracle Fusion Data Intelligence and one cloud account offers identity domains and another doesn't.

If you're an existing user of Oracle Fusion Cloud Applications in a cloud account that doesn't offer identity domains with Oracle Fusion Data Intelligence activated in a different new cloud account that offers identity domains, then perform these steps:

1. Synchronize the Oracle Fusion Cloud Applications users and roles with the Oracle Identity Cloud Service instance associated with it.

See [Copy and Store the Oracle Identity Cloud Service URL](#) and [Set Up Synchronization of Oracle Fusion Cloud Applications with Oracle Identity Cloud Service](#).

2. Create a domain in the cloud account in which you activated Oracle Fusion Data Intelligence to control the authentication and authorization of the users who can sign in to Oracle Fusion Data Intelligence.

Ensure that you select **Free** domain type but ignore the limits mentioned for the Free domain type because they aren't applicable for Oracle Fusion Data Intelligence. See [Creating Identity Domains](#) and *Creating an Identity Domain* in [Using the Console](#).

3. Configure the GenericSCIM Template in the identity domain that you created in the cloud account in which you activated Oracle Fusion Data Intelligence for enabling synchronization of users, groups, and group mappings from the Oracle Identity Cloud Service instance associated with the Oracle Fusion Cloud Applications instance.

While configuring the GenericSCIM template, use the **GenericScim - Client Credentials** template and in **Select Provisioning Operation**, choose **Authoritative Sync**. In the Configure connectivity section, provide these details of the source Oracle Identity Cloud Service or Identity from where the users are going to be synchronized:

- Host Name: For example, (without the https)<idcs-source>.identity.oraclecloud.com or idcs-123456abcde123.identity.oraclecloud.com
- Base URL: /admin/v1
- Client ID: Enter the client ID you made note of from the confidential application.
- Client Secret: Enter the client secret you made note of from the confidential application.
- Scope: urn:opc:idm:\_\_myscopes\_\_
- Authentication Server Url: For example, https://<idcs-source>.identity.oraclecloud.com/oauth2/v1/token or idcs-123456abcde123.identity.oraclecloud.com/oauth2/v1/token

See [Configure the Generic SCIM App Template](#).

4. Configure single sign-on between the Oracle Identity Cloud Service instance associated with Oracle Fusion Cloud Applications and the identity domain associated with Oracle Fusion Data Intelligence.

See [Configure Single Sign-on Between Oracle Identity Cloud Service and Identity Domain](#).

5. In the Oracle Cloud Infrastructure Console, create an Oracle Cloud Infrastructure policy to enable a domain user to create the Oracle Fusion Data Intelligence instance.

While creating the policy, select the identity domain in which you plan to create the Oracle Fusion Data Intelligence instance and enter these policy statements:

- Allow group '<DomainName>/'<GroupName>' to manage analytics-warehouses in tenancy
- Allow group '<DomainName>/'<GroupName>' to manage analytics-instances in tenancy
- Allow group '<DomainName>/'<GroupName>' to manage autonomous-database-family in tenancy

See [To create a policy](#).

6. In the Oracle Cloud Infrastructure Console, click the **Navigation** menu icon to navigate to **Data Intelligence** and create the Oracle Fusion Data Intelligence instance.

See [Create an Oracle Fusion Data Intelligence Subscription Instance](#).

7. Create an identity provider policy for single sign-on to ensure that the Oracle Fusion Data Intelligence sign-in page has an option to sign in with the Oracle Fusion Cloud Applications credentials.

See *Adding an Identity Provider Policy* in [Using the Console](#).

On the Add IdP Rule page, in **Assign identity providers** select the SAML IDP that you created in [Add an SAML Application](#); for example, the *FAW-SSO SAML* identity provider.

8. Assign the *ANALYTICSAPP\_<faw-instance-name>* and *ANALYTICSINST\_oax<faw-instance-name>-<id>* analytics apps to the identity provider policy for single sign-on.

When you attempt to authenticate through these apps, the only identity providers that appear in the Sign In page of these apps are the ones you assigned to the identity provider policy for single sign-on. For example, the *FAW-SSO SAML* identity provider. These apps were created when you created the Oracle Fusion Data Intelligence instance. See *Adding Apps to the Policy* in [Using the Console](#).

## Configure Single Sign-on Between Oracle Identity Cloud Service and Identity Domain

Configure single sign-on between the Oracle Identity Cloud Service instance associated with Oracle Fusion Cloud Applications and the identity domain associated with Oracle Fusion Data Intelligence to ensure that users can sign into Oracle Fusion Data Intelligence with their existing Oracle Fusion Cloud Applications credentials.

To configure single sign-on between the Oracle Identity Cloud Service instance associated with Oracle Fusion Cloud Applications and the identity domain associated with Oracle Fusion Data Intelligence, you must create a Security Assertion Markup Language (SAML) application in Oracle Identity Cloud Service. You then configure this SAML application with the details from the metadata XML file of the Oracle Fusion Data Intelligence identity domain.

### Topics:

- [Add an SAML Application](#)
- [Copy Details from the Identity Domain Metadata File](#)
- [Configure the SAML Application](#)

## Add an SAML Application

Add a Security Assertion Markup Language (SAML) application in the Oracle Identity Cloud Service associated with your Oracle Fusion Cloud Applications instance to provide a way to authenticate a user once and then communicate that authentication to multiple applications.

1. Sign in to the Console of Oracle Identity Cloud Service associated with your Oracle Fusion Cloud Applications instance.
2. In the **Navigator** menu, click **Applications** and on the Applications page, click **Add**.
3. In Add Application, select **SAML Application**.
4. On the Add SAML Application page, in the Details section, enter a name such as *FAW-SSO* and select the **User can request access** check box to enable the user to access the app.
5. In the SSO Configuration section, click **Download Identity Provider Metadata** to download the metadata XML file of Oracle Identity Cloud Service associated with your Oracle Fusion Cloud Applications instance and save the metadata XML file to your local machine.

6. Save and pause the configuration of this SAML application temporarily to collect certain values from the metadata XML file of the Oracle Fusion Data Intelligence identity domain. Don't sign off from Oracle Identity Cloud Service.

## Copy Details from the Identity Domain Metadata File

Copy details from the metadata XML file of the Oracle Fusion Data Intelligence identity domain into a text file to use while configuring the SAML Application that you created.

1. Sign in to the Oracle Cloud Infrastructure Console using the credentials of the domain that you created in the cloud account in which you activated Oracle Fusion Data Intelligence.
2. In the Oracle Cloud Infrastructure **Navigator** menu, click **Identity & Security** and then in the Identity & Security pane, under **Identity**, click **Domains**.
3. On the Domains page, navigate to the identity domain that you created in this cloud account and on the identity domain details page, click **Security** and then click **Identity Providers**.
4. On the Identity provider (IdP) policies in the identity domain page, click **Add IdP**, and select **Add SAML IdP** from the dropdown list.
5. On the Add SAML identity provider page, in the Add Details section, enter **Name** such as Fusion SSO Login.
6. In the Configure IdP section, select the **Import identity provider metadata** radio button to choose and import the metadata XML file of Oracle Identity Cloud Service associated with your Oracle Fusion Cloud Applications instance that you previously downloaded to your local machine.
7. In the Map Attributes section, select **Unspecified** if the **Username** for Oracle Identity Cloud Service associated with your Oracle Fusion Cloud Applications instance can be email or short name. If the **Username** is email, then select **EmailAddress**.
8. In the Export section, download the metadata XML file of the Oracle Fusion Data Intelligence identity domain and its signing certificate.
9. Open the metadata XML file of the Oracle Fusion Data Intelligence identity domain in a text editor and copy the values for **entityID**, **AssertionConsumerService**, and **SingleLogoutService** into another text file to use while configuring the SAML Application that you created.
10. Return to configuring the SAML Application in the Console of Oracle Identity Cloud Service associated with your Oracle Fusion Cloud Applications instance.

## Configure the SAML Application

Use the details from the metadata XML file of the Oracle Fusion Data Intelligence identity domain to configure the SAML Application that you created in the Oracle Identity Cloud Service associated with your Oracle Fusion Cloud Applications instance.

Return to creating the SAML application that you had paused in [Add an SAML Application](#).

1. On the Add SAML Application page, use the metadata XML file of the Oracle Fusion Data Intelligence identity domain and the signing certificate to enter values for **Entity ID** and **Assertion Consumer URL** in the General section.
2. In Signing Certificate, click **Upload** to select the signing certificate of the Oracle Fusion Data Intelligence identity domain that you had previously downloaded and upload it.
3. In **NameID Format**, select **Unspecified** and in **NameID Value**, select **User Name**.

4. In Advanced Settings section, select the **Include Signing Certificate in Signature** and **Enable Single Logout**. Use the metadata XML file of the Oracle Fusion Data Intelligence identity domain and the signing certificate to enter values for **Single Logout URL** and **Logout Response URL**.
5. Expand the Authentication and Authorization section and ensure that the **Enforce Grants as Authorization** option isn't selected.
6. Click **Finish** and then click **Activate**.
7. Navigate to the Oracle Fusion Data Intelligence identity domain, click the SAML application that you created to edit it.
8. In Edit SAML identity provider, click **Test Login** to verify that you're able to login successfully.

## Set Up User Access to Oracle Fusion Data Intelligence Using Single Sign-On in Scenario #6

Scenario #6 applies to separate cloud accounts for Oracle Fusion Cloud Applications and Oracle Fusion Data Intelligence and both the cloud accounts offer identity domains.

If you're a new user of Oracle Fusion Cloud Applications in a cloud account that offers identity domains with Oracle Fusion Data Intelligence activated in a different new cloud account that offers identity domains, then perform these steps:

1. Copy and paste into a text file the URL of your Oracle Fusion Cloud Applications instance for later use.

You specify this URL as the source Oracle Fusion Cloud Applications while creating the Oracle Fusion Data Intelligence instance.

2. Create a domain in the cloud account in which you activated Oracle Fusion Data Intelligence to control the authentication and authorization of the users who can sign in to Oracle Fusion Data Intelligence.

Ensure that you select **Free** domain type but ignore the limits mentioned for the Free domain type because they aren't applicable for Oracle Fusion Data Intelligence. See [Creating Identity Domains](#) and *Creating an Identity Domain* in [Using the Console](#).

3. Configure the GenericSCIM Template in the identity domain that you created in the cloud account in which you activated Oracle Fusion Data Intelligence for enabling synchronization of users, groups, and group mappings from the identity domain associated with the Oracle Fusion Cloud Applications instance.

While configuring the GenericSCIM template, use the **GenericScim - Client Credentials** template and in **Select Provisioning Operation**, choose **Authoritative Sync**. In the Configure connectivity section, ensure that the host name is in this sample format (without the https): `idcs-123456abcde123.identity.oraclecloud.com`. See [Configure the Generic SCIM App Template](#).

4. Configure single sign-on between the identity domain associated with Oracle Fusion Cloud Applications and the identity domain associated with Oracle Fusion Data Intelligence.

See [Configure Single Sign-on Between Two Identity Domains](#).

5. In Oracle Cloud Infrastructure Console, create an Oracle Cloud Infrastructure policy to enable a domain user to create the Oracle Fusion Data Intelligence instance.

While creating the policy, select the identity domain in which you plan to create the Oracle Fusion Data Intelligence instance and enter these policy statements:

- Allow group '<DomainName>/'<GroupName>' to manage analytics-warehouses in tenancy
- Allow group '<DomainName>/'<GroupName>' to manage analytics-instances in tenancy
- Allow group '<DomainName>/'<GroupName>' to manage autonomous-database-family in tenancy

See [To create a policy](#).

6. In the Oracle Cloud Infrastructure Console, click the **Navigation** menu icon to navigate to **Data Intelligence** and create the Oracle Fusion Data Intelligence instance.

See [Create an Oracle Fusion Data Intelligence Subscription Instance](#).

7. Create an identity provider policy for single sign-on to ensure that the Oracle Fusion Data Intelligence sign-in page has an option to sign in with the Oracle Fusion Cloud Applications credentials.

See [Adding an Identity Provider Policy](#) in [Using the Console](#).

On the Add IdP Rule page, in **Assign identity providers** select the SAML IDP that you created in [Add an SAML Application](#); for example, the *FAW-SSO* SAML identity provider.

8. Assign the *ANALYTICSAPP\_<faw-instance-name>* and *ANALYTICSINST\_oax<faw-instance-name>-<id>* analytics apps to the identity provider policy for single sign-on.

When you attempt to authenticate through these apps, the only identity providers that appear in the Sign In page of these apps are the ones you assigned to the identity provider policy for single sign-on. For example, the *FAW-SSO* SAML identity provider. These apps were created when you created the Oracle Fusion Data Intelligence instance. See [Adding Apps to the Policy](#) in [Using the Console](#).

## Configure Single Sign-on Between Two Identity Domains

Configure single sign-on between the the identity domain associated with Oracle Fusion Cloud Applications and the identity domain associated with Oracle Fusion Data Intelligence to ensure that users can sign into Oracle Fusion Data Intelligence with their existing Oracle Fusion Cloud Applications credentials.

To configure single sign-on between the identity domain associated with Oracle Fusion Cloud Applications and the identity domain associated with Oracle Fusion Data Intelligence, you must create a Security Assertion Markup Language (SAML) application using the Oracle Cloud Infrastructure Console. You then configure this SAML application with the details from the metadata XML file of the Oracle Fusion Data Intelligence identity domain.

### Topics:

- [Add an SAML Application](#)
- [Copy Details from the Identity Domain Metadata File](#)
- [Configure the SAML Application](#)

## Add an SAML Application

Add a Security Assertion Markup Language (SAML) application in the identity domain associated with your Oracle Fusion Cloud Applications instance to provide a way to authenticate a user once and then communicate that authentication to multiple applications.

1. Sign in to the Oracle Cloud Infrastructure Console using the credentials of the cloud account associated with Oracle Fusion Cloud Applications.

2. In the **Navigator** menu, click **Applications** and on the Applications page, click **Add**.
3. In Add Application, select **SAML Application**.
4. On the Add SAML Application page, in the Details section, enter a name such as FAW-SSO and select the **User can request access** check box to enable the user to access the app.
5. In the SSO Configuration section, click **Download Identity Provider Metadata** to download the metadata XML file of the identity domain associated with your Oracle Fusion Cloud Applications instance and save the metadata XML file to your local machine.
6. Save and pause the configuration of this SAML application temporarily to collect certain values from the metadata XML file of the Oracle Fusion Data Intelligence identity domain.

## Copy Details from the Identity Domain Metadata File

Copy details from the metadata XML file of the Oracle Fusion Data Intelligence identity domain into a text file to use while configuring the SAML Application that you created.

1. Sign in to the Oracle Cloud Infrastructure Console using your Oracle Fusion Data Intelligence service administrator credentials.
2. In the Oracle Cloud Infrastructure **Navigator** menu, click **Identity & Security** and then in the Identity & Security pane, under **Identity**, click **Domains**.
3. On the Domains page, navigate to the identity domain that you created in this cloud account and on the identity domain details page, click **Security** and then click **Identity Providers**.
4. On the Identity provider (IdP) policies in the identity domain page, click **Add IdP**, and select **Add SAML IdP** from the dropdown list.
5. On the Add SAML identity provider page, in the Add Details section, enter **Name** such as Fusion SSO Login.
6. In the Configure IdP section, select the **Import identity provider metadata** radio button to choose and import the metadata XML file of the identity domain associated with your Oracle Fusion Cloud Applications instance that you previously downloaded to your local machine.
7. In the Map Attributes section, select **Unspecified** if the **Username** for the identity domain associated with your Oracle Fusion Cloud Applications instance can be email or short name. If the **Username** is email, then select **EmailAddress**.
8. In the Export section, download the metadata XML file of the Oracle Fusion Data Intelligence identity domain and its signing certificate.
9. Open the metadata XML file of the Oracle Fusion Data Intelligence identity domain in a text editor and copy the values for **entityID**, **AssertionConsumerService**, and **SingleLogoutService** into another text file to use while configuring the SAML Application that you created.
10. Return to configuring the SAML Application in the Oracle Cloud Infrastructure Console that you had previously signed into using the credentials of the cloud account associated with Oracle Fusion Cloud Applications.



## Configure the SAML Application

Use the details from the metadata XML file of the Oracle Fusion Data Intelligence identity domain to configure the SAML Application that you created in the identity domain associated with your Oracle Fusion Cloud Applications instance.

Return to creating the SAML application that you had paused in [Add an SAML Application](#).

1. On the Add SAML Application page, use the metadata XML file of the Oracle Fusion Data Intelligence identity domain and the signing certificate to enter values for **Entity ID** and **Assertion Consumer URL** in the General section.
2. In Signing Certificate, click **Upload** to select the signing certificate of the Oracle Fusion Data Intelligence identity domain that you had previously downloaded and upload it.
3. In **NameID Format**, select **Unspecified** and in **NameID Value**, select **User Name**.
4. In the Advanced Settings section, select the **Include Signing Certificate in Signature** and **Enable Single Logout**. Use the metadata XML file of the Oracle Fusion Data Intelligence identity domain and the signing certificate to enter values for **Single Logout URL** and **Logout Response URL**.
5. Expand the Authentication and Authorization section and ensure that the **Enforce Grants as Authorization** option isn't selected.
6. Click **Finish** and then click **Activate**.
7. Navigate to the Oracle Fusion Data Intelligence identity domain, click the SAML application that you created to edit it.
8. In Edit SAML identity provider, click **Test Login** to verify that you're able to login successfully.

## Create an Oracle Fusion Data Intelligence Instance

As an administrator, create instances for Oracle Fusion Data Intelligence to enable your users to start using it.

### Topics:

- [About Creating an Instance](#)
- [Create an Oracle Fusion Data Intelligence Subscription Instance](#)
- [Create an Oracle Fusion Data Intelligence Instance without Oracle Fusion Cloud Applications Source](#)
- [Create an Integrated Oracle Fusion Data Intelligence Instance](#)

## About Creating an Instance

You can create an Oracle Fusion Data Intelligence instance in either of these ways:

- Use the Create Instance page in Oracle Fusion Data Intelligence directly. See [Create an Oracle Fusion Data Intelligence Subscription Instance](#) .
- Use the Create Instance page in Oracle Fusion Data Intelligence directly without specifying the data source. See [Create an Oracle Fusion Data Intelligence Instance without Oracle Fusion Cloud Applications Source](#)

- Use Integrations in Oracle Fusion Cloud Applications that redirects to the Create Instance page in Oracle Fusion Data Intelligence. See [Create an Integrated Oracle Fusion Data Intelligence Instance](#) .

When you create an instance using the Create Instance page directly, you can:

- Decide which compartment to use.
- Use a tenancy different from the Oracle Fusion Cloud Applications tenancy.
- Point to any Oracle Fusion Cloud Applications instance of your choice, irrespective of the regions of these services.
- Set up the identity provider of your choice.
- Terminate the instance from the instance details page in Oracle Fusion Data Intelligence.

When you create an instance using the Create Instance page directly without specifying the Oracle Fusion Cloud Applications source, you can:

- Start using Oracle Fusion Data Intelligence even if you don't have any Oracle Fusion Cloud Applications product.
- Analyze data from non-Oracle Fusion Cloud Applications sources such as Oracle Eloqua without initially specifying an Oracle Fusion Cloud Applications URL.
- Bring data from third-party products even if you don't have any Oracle Fusion Cloud Applications product.
- Bring data from a non-Oracle Fusion Cloud Applications source and an Oracle Fusion Cloud Applications source in the same instance. You must provide Oracle Fusion Cloud Applications details prior to loading data from Oracle Fusion Cloud Applications.
- Terminate the instance from the instance details page in Oracle Fusion Data Intelligence.

After the instance is created, you must complete these tasks:

- Create a data connection to an applicable source. See [About Managing Data Connections](#).
- Set up and manage your users and groups in Oracle Identity Cloud Service.
- Later if you want to connect to Oracle Fusion Cloud Applications, then you can update the source details. See [Update the Data Source Connection Details](#).

When you create an Oracle Fusion Data Intelligence instance using the Integrations option in Oracle Fusion Cloud Applications, you automatically get:

- The Oracle Fusion Cloud Applications identity provider and cloud tenancy for the Oracle Fusion Data Intelligence instance.
- Pre-filled Oracle Fusion Cloud Applications-specific data on the Create Instance page in Oracle Fusion Data Intelligence.
- The Oracle Fusion Cloud Applications instance attached to the Oracle Fusion Data Intelligence instance.
- The users, groups, and roles from Oracle Fusion Cloud Applications. Also, you don't have to set up how users from Oracle Fusion Cloud Applications access Oracle Fusion Data Intelligence using single sign-on, if single sign-on is already set up in Oracle Fusion Cloud Applications.

After the instance is created, as an administrator, assign the `FAW Service Administrator` group to the applicable users to manage the instances in the tenancy. If your tenancy uses identity domains, see the *Adding Users to Groups* section in [Using the Console](#). To add this group to an existing user in Oracle Identity Cloud Service, see [Assign Groups to the User](#)

**Account.** To sign into the instance, a user must have any of the groups mentioned in [System Groups](#) assigned to them.

## Create an Oracle Fusion Data Intelligence Subscription Instance

Create a service instance to manage your cloud resources.

Prior to creating the instance, you may want to view the service limits of Oracle Autonomous Data Warehouse and Oracle Analytics Cloud using the Limits, Quotas and Usage page in the Oracle Cloud Infrastructure Console. See [Viewing Your Service Limits, Quotas and Usage](#). If you're unable to create the instance with an error due to inadequate capacity, then you can either get in touch with the administrator for the tenancy or submit a request to increase your service limits from the Limits, Quotas, and Usage page in the Oracle Cloud Infrastructure Console. See [Requesting a Service Limit Increase](#).

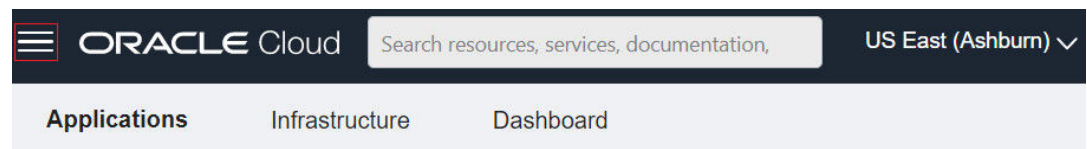
If you're planning to access your instance from a virtual cloud network only, then prior to creating an instance with private network access, you must ensure that the prerequisites are in place. See [Deploy Oracle Fusion Data Intelligence with a Private Endpoint](#).

The recommended practice is to create the Oracle Fusion Data Intelligence instance in your Oracle Fusion Cloud Applications domain. If you choose to create the instance in a non-Oracle Fusion Cloud Applications domain, then you must set up the synchronization of the non-Oracle Fusion Cloud Applications domain with the Oracle Fusion Cloud Applications domain. This synchronization gets the Oracle Fusion Cloud Applications users and groups into the applicable Oracle Identity Cloud Service instance that enables these users to access Oracle Fusion Data Intelligence. See [Set Up Synchronization of Oracle Fusion Cloud Applications with Oracle Identity Cloud Service](#).

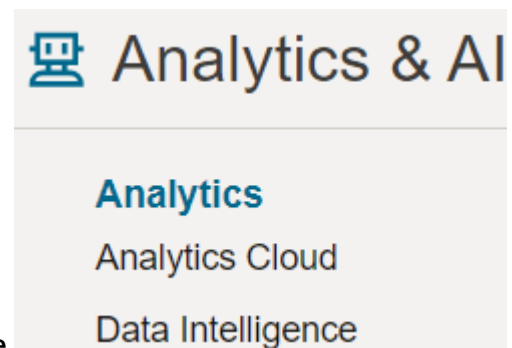
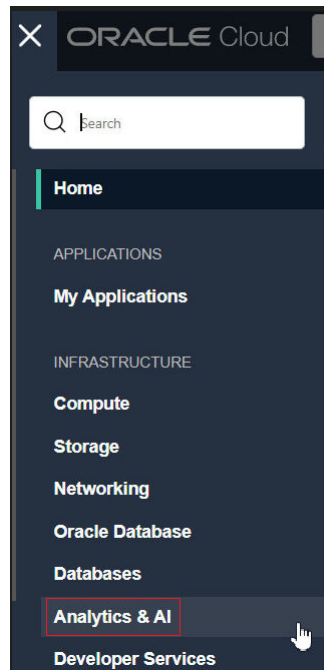
1. Sign in to the Oracle Cloud Infrastructure Console.

If you've provisioned Oracle Fusion Data Intelligence with single sign-on, then sign in using the federated Oracle Identity Cloud Service. See [Set Up Provisioning with Single Sign-On](#).

2. In Oracle Cloud Infrastructure Console, click the **Navigation** menu icon.



3. In the Navigation menu, click **Analytics & AI**.



4. Under Analytics & AI, click **Data Intelligence**.
5. On the Instances page, in **Compartment**, select a compartment if you want to place the service instance in a compartment other than the default root compartment that Oracle created for you.

 **Note:**

Ensure that you have created a compartment before you select it here. See [Managing Compartments](#).

6. On the Instances page, click **Create Instance**.

 **Note:**

If you haven't purchased a subscription, then the **Create Instance** button isn't active.



7. On the Create Instance page, enter a **Display Name** for the service using alphanumeric and special characters.

### Create Instance - Data Intelligence

Compartment

Display Name

Name ⓘ

Name must begin with a letter and not contain any special characters.

Description *Optional*

Notification Email

8. Enter a **Name** for the instance that's unique in your tenancy using only alphanumeric characters without spaces or reuse the name of a deleted instance.
9. Optional: Enter a **Description** for the service using up to 255 alphanumeric and special characters.
10. In **Notification Email**, enter a valid email address if the field doesn't have a value.

Follow the steps in *Enter Details for an Oracle Fusion Data Intelligence Subscription Instance* to provide further information regarding the instance.

## Enter Details for an Oracle Fusion Data Intelligence Subscription Instance

After specifying basic details for your instance such as compartment, name, and description, verify your subscriptions and provide details such as whether it is a test or production instance, connection details of your source data, and email to receive notifications regarding your instance.

These details ensure that you have an instance that meets your business requirements. Oracle Fusion Data Intelligence automatically displays your subscription details in the Offerings section. For example, if you've subscribed for 20 Oracle Fusion ERP Analytics users, then you see the number of users for the instance automatically configured to 20 Oracle Fusion ERP Analytics users. If you've multiple subscriptions such as Oracle Fusion ERP Analytics and Oracle Fusion HCM Analytics, then you see details of all the subscriptions.

1. On the Create Instance page, under **Offerings**, verify that the displayed subscriptions match your Oracle Fusion Data Intelligence order.
2. Select **Development/Test** as your first instance.

Offerings ⓘ

Paid Subscription  No-fee Trial

Intended Use ⓘ

Development/Test

Service Name	Quantity	Start Date	End Date
Fusion ERP Analytics - Hosted Named User	101	Mar 16, 2023	Dec 30, 2023
Fusion HCM Analytics - Hosted Employee	101	Mar 16, 2023	Dec 30, 2023
Oracle Fusion CX Analytics Cloud Service - Hosted Named User	101	Mar 16, 2023	Dec 30, 2023

- In **Fusion Application Connection**, provide the URL of your Oracle Fusion Cloud Applications instance.

**Fusion Application Connection**

Set up Fusion Connection

Fusion Application URL ⓘ

Authentication

Choose how to authenticate to Fusion Applications ⓘ

**JWT Based** Password Based

JSON Web Token (Recommended) ✓

Upload Files  Paste Content

Private Key ⓘ

Drop private key file here. [Or browse.](#)

Public Certificate

Drop public certificate file here. [Or browse.](#)

Keys have been uploaded to Fusion Source ⓘ

- In **Authentication**, select the type of authentication you want to use: **JWT Based** (recommended) or **Password Based**.
  - If you choose **JWT Based** (JSON web token), then upload or copy and paste the private key and public certificate files. Select **Keys have been uploaded to Fusion Source** to enable **Test Connection**.

 **Note:**

See [Configure JWT Authentication Provider](#). While [configuring the token-based authentication](#), ensure that you enter `FAWServiceJWTIssuer` as the trusted issuer.

Ensure that the generated RSA encryption private key contains at least 2048 characters and that you wait at least 15 minutes for the uploaded public certificate to become effective in your Oracle Fusion Cloud Applications instance.

- If you choose **Password Based**, then enter the credentials of an applicable user, such as `MyFAWExtractUser` from your Oracle Fusion Cloud Applications instance. Prior to

entering the user credentials, ensure that the applicable user is created in Oracle Fusion Cloud Applications. See [Create a User in Oracle Fusion Cloud Applications to Extract Data](#).

5. Click **Test Connection** to check the connection to the Oracle Fusion Cloud Applications instance and confirm whether the credentials are valid.
6. In **Autonomous Data Warehouse Credentials**, provide an administrator password for the Oracle Autonomous Data Warehouse that's provisioned in your tenancy to store the transformed data.

Autonomous Data Warehouse Credentials

Username *Read-only*

OAX\_USER

Password

.....

Password must be 12 to 30 characters and contain at least one uppercase letter, one lowercase letter, and one number. The password cannot contain the double quote (") character or the username.

Confirm Password

.....

7. In **Network Access**:
  - Select **Public** to access the instance from anywhere.

Network Access

**Public**  
Access your instance from anywhere. ✓

**Private**  
Access your instance from a Virtual Cloud Network only.

- Select **Private** to access your instance from a virtual cloud network only. Prior to creating an instance with private network access, you must ensure that the prerequisites are in place. See [Deploy Oracle Fusion Data Intelligence with a Private Endpoint](#).

8. Click **Create Instance**.

Add tags to organize your resources. [What can I do with tagging?](#)

Tag namespace	Tag key	Tag value
None (add a free-form tag) ▾	<input type="text"/>	<input type="text"/>

[Cancel](#)

Oracle sends an email to the designated email address when your service is ready. You can display the Activity page to check the current status. When the status changes from CREATING to ACTIVE, the service is ready to use. Navigate to the Details page for the new service to access the Oracle Fusion Data Intelligence URL and associated Oracle Autonomous Data Warehouse. From here, you can also view or modify details such as the password for your Oracle Fusion Cloud Applications instance and the administrator password for the Oracle Autonomous Data Warehouse. You can also delete the service instance that's no longer required.

If you had set up provisioning of Oracle Fusion Data Intelligence with single sign-on, then your service is associated with the federated Oracle Identity Cloud Service instance. If you hadn't set up single sign-on for Oracle Fusion Data Intelligence, then your service is associated with the default Oracle Identity Cloud Service instance that you received with your Oracle Cloud account.

After you create an instance, for at least one hour you see the message that system initialization is in progress. During this period, Oracle Fusion Data Intelligence runs an initialization process that involves extraction of setup data from the source Oracle Fusion Cloud Applications system. You must wait for the system initialization process to complete before creating data pipelines for the functional areas.

## Verify Your Instance and Sign In

Oracle sends an email to the designated email address when your Oracle Fusion Data Intelligence service instance is ready.

1. Sign in to the Oracle Cloud Infrastructure Console.
2. In Oracle Cloud Infrastructure Console, click the Navigation menu icon.
3. In the navigation options, click **Analytics & AI**. Under Analytics, click **Data Intelligence**.
4. Navigate to your service instances page.
5. If you've chosen public network, then navigate to the **Analytics Application URL** to verify that your Oracle Fusion Data Intelligence service instance is up and running. If you've chosen private network, then contact your networking team for access to the Oracle Fusion Data Intelligence url.

## Create an Oracle Fusion Data Intelligence Instance without Oracle Fusion Cloud Applications Source

Create an Oracle Fusion Data Intelligence instance to connect and analyze data from non-Oracle Fusion Cloud Applications sources even if you don't have any Oracle Fusion Cloud Applications products. This instance doesn't require an Oracle Fusion Cloud Applications source to start using Oracle Fusion Data Intelligence.

Prior to creating the instance, you may want to view the service limits of Oracle Autonomous Data Warehouse and Oracle Analytics Cloud using the Limits, Quotas and Usage page in the Oracle Cloud Infrastructure Console. See [Viewing Your Service Limits, Quotas and Usage](#). If you're unable to create the instance with an error due to inadequate capacity, then you can either get in touch with the administrator for the tenancy or submit a request to increase your service limits from the Limits, Quotas, and Usage page in the Oracle Cloud Infrastructure Console. See [Requesting a Service Limit Increase](#).

If you're planning to access your instance from a virtual cloud network only, then prior to creating an instance with private network access, you must ensure that the prerequisites are in place. See [Deploy Oracle Fusion Data Intelligence with a Private Endpoint](#).

Oracle Fusion Data Intelligence automatically displays your subscription details in the Offerings section. For example, if you're subscribed for 20 Oracle Fusion ERP Analytics users, then you see the number of users for the instance automatically configured for 20 Oracle Fusion ERP Analytics users. If you've multiple subscriptions such as Oracle Fusion ERP Analytics and Oracle Fusion HCM Analytics, then you see details of all the subscriptions.

1. Sign in to the Oracle Cloud Infrastructure Console.



If you've provisioned Oracle Fusion Data Intelligence with single sign-on, then sign in using the federated Oracle Identity Cloud Service. See [Set Up Provisioning with Single Sign-On](#).

2. In Oracle Cloud Infrastructure Console, click the **Navigation** menu icon, click **Analytics & AI**, and then under Analytics & AI, click **Data Intelligence**.
3. On the Instances page, in **Compartment**, select a compartment if you want to place the service instance in a compartment other than the default root compartment that Oracle created for you.

 **Note:**

Ensure that you have created a compartment before you select it here. See [Managing Compartments](#).

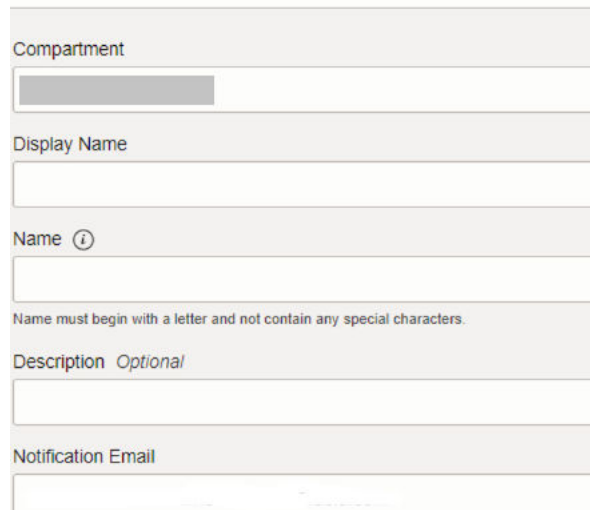
4. On the Instances page, click **Create Instance**.

 **Note:**

If you haven't purchased a subscription, then the **Create Instance** button isn't active.

5. On the Create Instance page, enter a **Display Name**, **Name**, **Description**, and an email to receive notifications about the instance in **Notification Email**.

## Create Instance - Data Intelligence



Compartment

Display Name

Name ⓘ  
Name must begin with a letter and not contain any special characters.

Description *Optional*

Notification Email

6. On the Create Instance page, under **Offerings**, verify that the displayed subscriptions match your Oracle Fusion Data Intelligence order and select **Development/Test** as your first instance.

Offerings ⓘ

Paid Subscription  No-fee Trial

Intended Use ⓘ

Development/Test

Service Name	Quantity	Start Date	End Date
Fusion ERP Analytics - Hosted Named User	101	Mar 16, 2023	Dec 30, 2023
Fusion HCM Analytics - Hosted Employee	101	Mar 16, 2023	Dec 30, 2023
Oracle Fusion CX Analytics Cloud Service - Hosted Named User	101	Mar 16, 2023	Dec 30, 2023

- In **Fusion Application Connection**, ensure to deselect the **Set up Fusion Connection** check box.

## Create Instance - Data Intelligence

Fusion Application Connection

Set up Fusion Connection

- In **Autonomous Data Warehouse Credentials**, provide the password for the OAX\_USER user who can access the Oracle Autonomous Data Warehouse that's provisioned in your tenancy to store the transformed data.

To reset the password for this user, see [Reset the Password for OAX\\_USER Schema](#).

Autonomous Data Warehouse Credentials

Username *Read-only*

OAX\_USER

Password

.....

Password must be 12 to 30 characters and contain at least one uppercase letter, one lowercase letter, and one number. The password cannot contain the double quote (") character or the username.

Confirm Password

.....

- In **Network Access**:
  - Select **Public** to access the instance from anywhere.

Network Access

Public  
Access your instance from anywhere. ✓

Private  
Access your instance from a Virtual Cloud Network only.

- Select **Private** to access your instance from a virtual cloud network only. Prior to creating an instance with private network access, you must ensure that the prerequisites are in place. See [Deploy Oracle Fusion Data Intelligence with a Private Endpoint](#).
- Click **Create Instance**.

Add tags to organize your resources. [What can I do with tagging?](#)

Tag namespace	Tag key	Tag value
None (add a free-form tag) ▾	<input type="text"/>	<input type="text"/>

[Cancel](#)

Oracle sends an email to the designated email address when your service is ready. You can display the Activity page to check the current status. When the status changes from CREATING to ACTIVE, the service is ready to use.

Navigate to the Details page for the new service to access the Oracle Fusion Data Intelligence URL and the associated Oracle Autonomous Data Warehouse and Oracle Analytics Cloud instances. Because you didn't set up a connection to an Oracle Fusion Cloud Applications source, Oracle Fusion Data Intelligence displays a message on the Data Configuration page asking you to set up a data source connection as an initial step.

If you had set up provisioning of Oracle Fusion Data Intelligence with single sign-on, then your service is associated with the federated Oracle Identity Cloud Service instance. If you hadn't set up single sign-on for Oracle Fusion Data Intelligence, then your service is associated with the default Oracle Identity Cloud Service instance that you received with your Oracle Cloud account.

## Create an Integrated Oracle Fusion Data Intelligence Instance

In your Oracle Fusion Cloud Applications service, if you've selected integration with Oracle Fusion Data Intelligence, then you can create an integrated Oracle Fusion Data Intelligence instance.

See [Self-Service Integration with Fusion Data Intelligence](#).

An Oracle Fusion Data Intelligence integrated instance is directly attached to your Oracle Fusion Cloud Applications service and uses the same cloud tenancy and identity provider. This enables you to use the Oracle Fusion Cloud Applications resources such as users, groups, roles seamlessly in Oracle Fusion Data Intelligence.

Prior to creating the instance, you may want to view the service limits of Oracle Autonomous Data Warehouse and Oracle Analytics Cloud using the Limits, Quotas and Usage page in the Oracle Cloud Infrastructure Console. See [Viewing Your Service Limits, Quotas and Usage](#). If you're unable to create the instance with an error due to inadequate capacity, then you can either get in touch with the administrator for the tenancy or submit a request to increase your service limits from the Limits, Quotas, and Usage page in the Oracle Cloud Infrastructure Console. See [Requesting a Service Limit Increase](#).

1. Sign in to Oracle Fusion Cloud Applications.
2. Navigate to the Environment page and add **Fusion Data Intelligence** to an Oracle Fusion Cloud Applications environment.

See [Self-Service Integration with Fusion Data Intelligence](#).

After completing this step, you're redirected to the Create Instance page in Oracle Fusion Data Intelligence.

3. On the Create Instance page, verify that these are prefilled:

- **Name** - derived from the name of your Oracle Fusion Cloud Applications instance.
- **Display Name** - derived from the name of your Oracle Fusion Cloud Applications instance.
- **Tags** - as applicable.
- **Notification Email** - pre-filled with the email ID of the current user signed into Oracle Fusion Cloud Applications.
- **Intended Use** - same as the intended use of your Oracle Fusion Cloud Applications instance.
- **Offerings** - Subscription related information from your Oracle Fusion Data Intelligence subscription order.
- **Fusion Application Connection** - URL derived from your Oracle Fusion Cloud Applications instance.
- Oracle Autonomous Data Warehouse **Username** - defaults as ADMIN.

 **Note:**

In **Description**, enter text such as Oracle Fusion Data Intelligence instance linked to Oracle Fusion Cloud Applications name.

You can modify these, if required:

- Name
- Display Name
- Tags
- Notification Email

4. In **Authentication**, select the type of authentication you want to use: **JWT Based** (recommended) or **Password Based**.
  - If you choose **JWT Based** (JSON web token), then upload or copy and paste the private key and public certificate files. Select **Keys have been uploaded to Fusion Source** to enable **Test Connection**.

 **Note:**

See [Configure JWT Authentication Provider](#). While [configuring the token-based authentication](#), ensure that you enter `FAWServiceJWTIssuer` as the trusted issuer.

Ensure that the generated RSA encryption private key contains at least 2048 characters and that you wait at least 15 minutes for the uploaded public certificate to become effective in your Oracle Fusion Cloud Applications instance.

- If you choose **Password Based**, then enter the credentials of an applicable user, such as `CustFAWExtractUser` from your Oracle Fusion Cloud Applications instance. Prior to entering the user credentials, ensure that the applicable user is created in Oracle Fusion Cloud Applications. See [Create a User in Oracle Fusion Cloud Applications to Extract Data](#). You must reset the password for the applicable user in Oracle Fusion

Cloud Applications prior to entering a new password for this user. See [Reset Passwords](#).

5. Click **Test Connection** to check the connection to the Oracle Fusion Cloud Applications instance and confirm whether the credentials are valid.
6. In **Autonomous Data Warehouse Administrator Credentials**, provide an administrator password for the Oracle Autonomous Data Warehouse that's provisioned in your tenancy to store the transformed data.

Autonomous Data Warehouse Credentials

Username *Read-only*

Password

Password must be 12 to 30 characters and contain at least one uppercase letter, one lowercase letter, and one number. The password cannot contain the double quote (") character or the username.

Confirm Password

7. Click **Create Instance**.

Oracle sends an email to the designated email address when your service is ready. If the Oracle Fusion Data Intelligence integrated instance creation fails or if the integrated Oracle Fusion Data Intelligence instance fails to attach to the Oracle Fusion Cloud Applications instance, then reach out to Oracle Support to get help about the next steps. After the integrated instance is successfully created, the Integrations page in Oracle Fusion Cloud Applications displays the integrated Oracle Fusion Data Intelligence instance details such as Service (name that appears here is along the lines of analytics\_warehouse\_<name of Oracle Fusion Cloud Applications>), Integration status (active), Source (self-service), Type (Fusion Data Intelligence), and Application URL (URL of Oracle Fusion Data Intelligence). Clicking on "Service" takes you to the Oracle Fusion Data Intelligence Oracle Cloud Infrastructure Console for that instance and clicking on the URL launches the Oracle Fusion Data Intelligence user interface. The Oracle Fusion Data Intelligence Instance details page shows the information of the attached Oracle Fusion Cloud Applications along with the Oracle Fusion Cloud Applications url to help you navigate to Oracle Fusion Cloud Applications.

After you create an instance, for at least one hour you see the message that system initialization is in progress. During this period, Oracle Fusion Data Intelligence runs an initialization process that involves extraction of setup data from the source Oracle Fusion Cloud Applications system. You must wait for the system initialization process to complete before creating data pipelines for the functional areas.

## Deploy Oracle Fusion Data Intelligence with a Private Endpoint

When you set up an Oracle Fusion Data Intelligence instance, you have the option to restrict access through a private endpoint.

A private endpoint is accessible through private network traffic and direct public internet access is prohibited. When you deploy Oracle Fusion Data Intelligence with a private endpoint, Oracle Autonomous Data Warehouse and Oracle Analytics Cloud use private endpoints in your private subnet. You can provide access to Oracle Fusion Data Intelligence from an Oracle Cloud Infrastructure VCN that's deployed in any regions, tenancies, and on-premises too.

## About Private Endpoints

Private endpoint refers to a network setup for your Oracle Fusion Data Intelligence instance where all network traffic moves through a private endpoint within a virtual cloud network in your tenancy.

Using a private endpoint for Oracle Fusion Data Intelligence meets the organization's security requirement that restricts the use of public endpoints. Private endpoint configuration doesn't use public subnets and allows you to keep all traffic to and from your Oracle Fusion Data Intelligence instance away from the public internet.

See *About Private Endpoints* in [Private Access](#).

## Prerequisites for a Private Endpoint

To provision an Oracle Fusion Data Intelligence instance with a private endpoint, you must have the following resources already created:

1. A virtual cloud network (VCN) within the region where you plan to deploy Oracle Fusion Data Intelligence and a private subnet in your VCN with availability of /28 (14 IP addresses) IP address or more. You can change this after provisioning.

See [Working with VCNs and Subnets](#).

2. Ensure that you (or whoever plans to create the Oracle Fusion Data Intelligence instance) have the required policies to access the VCN.

Choose the most appropriate level for you from these options:

### Limited Resource Access Policy

- Allow group **FAWAdmin.grp** to **read virtual-network-family** <in compartment your-compartment or in tenancy>
- Allow group **FAWAdmin.grp** to **manage vnics** <in compartment your-compartment or in tenancy>
- Allow group **FAWAdmin.grp** to **use subnets** <in compartment your-compartment or in tenancy>
- Allow group **FAWAdmin.grp** to **use private-ips** <in compartment your-compartment or in tenancy>

### Broad Resource Access Policy

- Allow group **FAWAdmin.grp** to **manage virtual-network-family** <in compartment compartment-name or in tenancy>

Apart from these, you must create the following general service policies:

- Allow group **FAWAdmin.grp** to **manage analytics-warehouse** <in compartment your-compartment or in tenancy>
- Allow group **FAWAdmin.grp** to **read analytics-warehouse-instance-work-requests** <in compartment your-compartment or in tenancy>

- Allow group **FAWAdmin.grp** to **manage autonomous-database-family** <in compartment your-compartment or in tenancy>
  - Allow group **FAWAdmin.grp** to **manage analytics-instances** <in compartment your-compartment or in tenancy>
  - Allow group **FAWAdmin.grp** to **read analytics-instance-work-requests** <in compartment your-compartment or in tenancy>
3. Optional: If you plan to restrict incoming traffic (ingress) using network security group rules, then you must do so when you create your Oracle Fusion Data Intelligence instance. If you want to configure network security groups when you create your Oracle Fusion Data Intelligence instance, then ensure that the network security groups exist in the same VCN as your Oracle Fusion Data Intelligence and you have this required policy to use network security groups:

Allow group **FAWAdmin.grp** to **use network-security-groups** <in compartment your-compartment or in tenancy>

See “To create an NSG” in [Network Security Groups](#).

4. Inbound traffic specified on Port 1522 for Oracle Autonomous Data Warehouse and Port 443 for Oracle Analytics Cloud while entering the security rule information for the network security group or VCN. Ensure that the VCN/SUBNET CIDR block allows ingress and egress in the rules to ports 443 and 1522.

 **Note:**

Both of these ports are required for the functioning of Oracle Fusion Data Intelligence instance with a private endpoint.

## Create an Oracle Fusion Data Intelligence Private Instance

After your Oracle Fusion Data Intelligence private access service has been provisioned by Oracle, create an Oracle Fusion Data Intelligence private instance.

If you've provisioned Oracle Fusion Data Intelligence with single sign-on, then sign in using the federated Oracle Identity Cloud Service strips corresponding to the environment (Test, Production). See [Set Up Provisioning with Single Sign-On](#). Oracle sends an email to the designated email address when your service is ready. When the status changes from creating to active, the service is ready to use.

You must ensure that the prerequisites are in place. See [Prerequisites for a Private Endpoint](#).

1. Sign in to the Oracle Cloud Infrastructure Console.
2. In Oracle Cloud Infrastructure Console, click the **Navigation** menu icon in the top left corner.
3. Click **Analytics & AI**. Under Analytics, click **Data Intelligence**.
4. On the Instances page, in **Compartment**, select a compartment if you want to place the service instance in a compartment other than the default root compartment that Oracle created for you.

 **Note:**

Ensure that you have created a compartment before you select it here. See [Managing Compartments](#).

5. On the Instances page, click **Create Instance**.

 **Note:**

If you haven't purchased a subscription, then the **Create Instance** button isn't active.

6. Enter a **Display Name** for the service using alphanumeric and special characters.
7. Enter a **Name** for the instance that's unique in your tenancy using only alphanumeric characters without spaces or reuse the name of a deleted instance.
8. Optional: Enter a **Description** for the service using up to 255 alphanumeric and special characters.
9. Select **Development/Test** as your first instance.
10. Under Offerings, enable **Subscription Configuration**.

Oracle Fusion Data Intelligence automatically configures the offerings based on your subscription details. For example, if you've subscribed for 20 ERP users, then you see the number of users for the instance automatically configured to 20 ERP users.

11. In **Fusion Application Connection**, provide the URL of your Oracle Fusion Cloud Applications instance.
12. In **Authentication**, select the type of authentication you want to use: Oracle recommended **JWT Based** or **Password Based**.
  - If you choose **JWT Based** (JSON web token), then upload or copy and paste the private key and public certificate files. Select **Keys have been uploaded to Fusion Source** to enable **Test Connection**.

 **Note:**

See [Configure JWT Authentication Provider](#).

Ensure that the generated RSA encryption private key contains at least 2048 characters and that you wait at least 15 minutes for the uploaded public certificate to become effective in your Oracle Fusion Cloud Applications instance.

- If you choose **Password Based**, then enter and confirm the password of the default `FAWService` user from your Oracle Fusion Cloud Applications instance. The `FAWService` user is a predefined user provisioned in Oracle Fusion Cloud Applications and is used by the data pipeline functionality in Oracle Fusion Data Intelligence. This user account has the appropriate data security privileges granted on the Oracle Fusion Cloud Applications view objects to bulk extract data from Oracle Fusion Cloud Applications into the data warehouse.

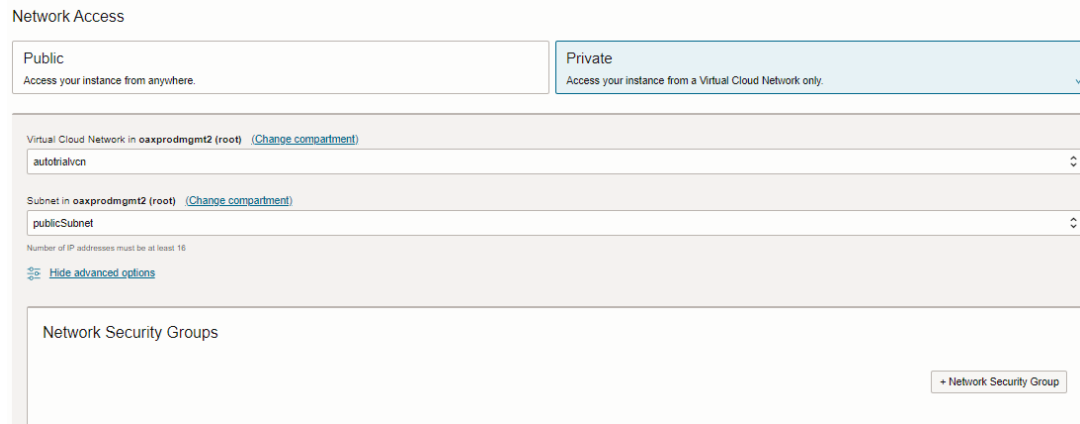


 **Note:**

Ensure that you assign the BIACM\_ADMIN and BICC\_UCM\_CONTENT\_ADMIN roles to the FAWService user using the Security Console of Oracle Fusion Cloud Applications. See [Overview of Access Provisioning](#).

Ensure that you have reset the password for the FAWService user in Oracle Fusion Cloud Applications prior to entering the new password. See [Reset Passwords](#).

13. Click **Test Connection** to check the connection to the Oracle Fusion Cloud Applications instance and confirm whether the credentials are valid.
14. In **Autonomous Data Warehouse Administrator Credentials**, provide an administrator password for the Oracle Autonomous Data Warehouse that's provisioned in your tenancy to store the transformed data.
15. In Network Access, click **Private**.



Network Access

Public  
Access your instance from anywhere.

Private  
Access your instance from a Virtual Cloud Network only.

Virtual Cloud Network in oaxprodmgmt2 (root) [\(Change compartment\)](#)  
autotrialvcn

Subnet in oaxprodmgmt2 (root) [\(Change compartment\)](#)  
publicSubnet

Number of IP addresses must be at least 16

[Hide advanced options](#)

Network Security Groups

+ Network Security Group

16. Select the **Virtual Cloud Network**, **Subnet**, and **Network Security Group** that you had set up and want to use to access Oracle Fusion Data Intelligence.  
See [Prerequisites for a Private Endpoint](#).
17. The email address for notification is pre-populated from the user name. If the user name isn't an email address, then provide a valid email address for notifications.  
You receive an email notification, for example, when your Oracle Fusion Cloud Applications password is invalid.
18. Optional: Add tags to your instance.
19. Click **Create Instance**.

Navigate to the Details page for the new service to access the Oracle Fusion Data Intelligence URL and associated Oracle Autonomous Data Warehouse. From here, you can also view or modify details such as the password for your Oracle Fusion Cloud Applications instance and the administrator password for the Oracle Autonomous Data Warehouse. You can also delete the service instance that's no longer required.

If you had set up provisioning of Oracle Fusion Data Intelligence with single sign-on, then your service is associated with the federated Oracle Identity Cloud Service instance. If you hadn't

set up single sign-on for Oracle Fusion Data Intelligence, then your service is associated with the default Oracle Identity Cloud Service instance that you received with your Oracle Cloud account.

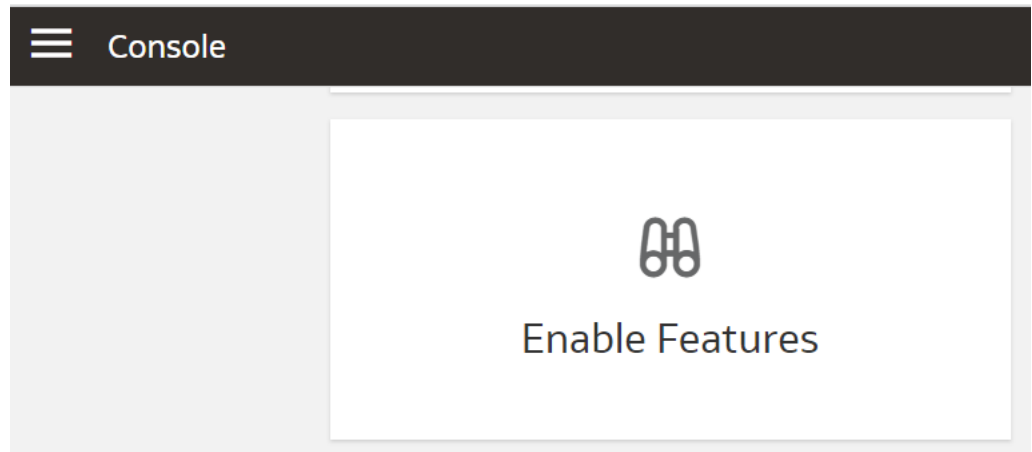
## Make Preview Features Available

As a functional administrator, you can enable the functionality available as a preview feature to try it out.

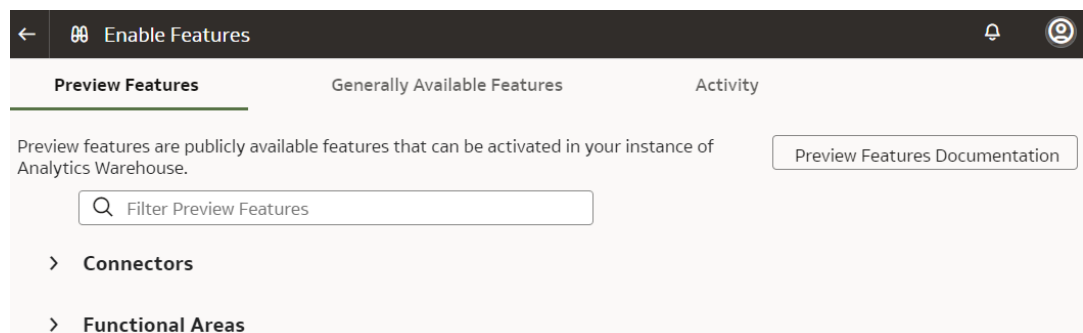
Preview features allow your organization to explore and try new features before they roll out by default. See [Preview Features](#).

The preview features aren't available by default, but administrators can turn individual preview features on or off at any time. Administrators can find the latest preview features in the Enable Features tile on the Console and switch them on for others to use.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Enable Features** under **Application Administration**.



3. On the Enable Features page, under the Preview Features tab, expand the categories such as **Functional Areas** and select the features that you want to make available for your organization.



4. Navigate to the location of the preview feature you want to use. For example, if you've enabled **AWS S3** in the **Managed Pipeline** category, then navigate to the Create Connections dialog from the Manage Connections page to use this feature.

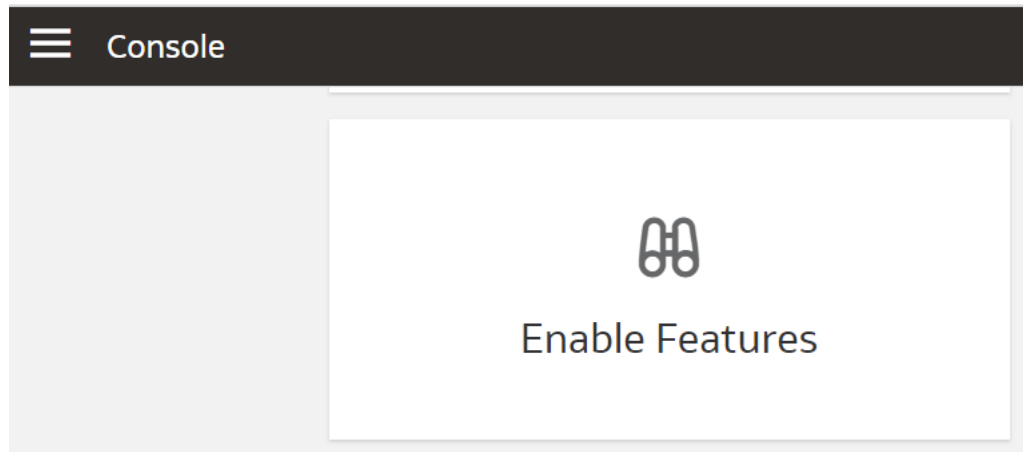
# Enable Generally Available Features

As a functional administrator, you can enable the functionality that's generally available but needs you to enable it to use the specific functionality.

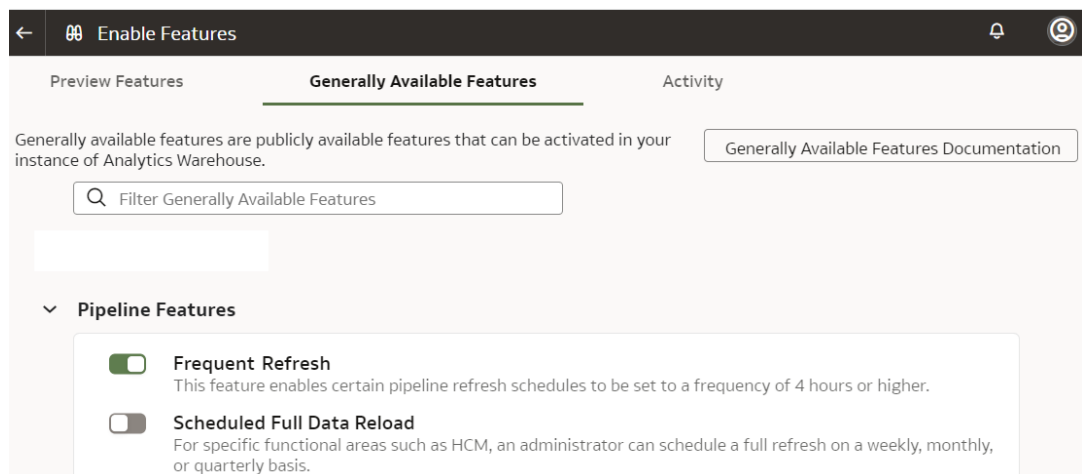
The generally available features aren't available by default, but administrators can turn individual features on or off at any time. Administrators can find the latest generally available features in the Enable Features tile on the Console and switch them on for others to use.

To find out about features that are generally available currently, see Generally Available Features.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Enable Features** under **Application Administration**.



3. On the Enable Features page, under the Generally Available Features tab, expand the categories such as **Pipeline Features** and select the features that you want to make available for your organization.



- Navigate to the location of the feature you want to use. For example, if you've enabled **Frequent Refresh** in the **Pipeline Features** category, then navigate to the Pipeline Settings page and click Frequent Data Refresh Schedule to use this feature.

## View Work Requests

View the actions performed on your instance such as create, update, and terminate an instance as a work request.

Each work request shows when the event was triggered, how much time it took, result (success or failure). If the work request went through successfully, then there is no further action that you can take. However, if it failed, then you can take a look at the error mentioning the cause of the failure.

- Sign in to the Oracle Cloud Infrastructure Console.
- In Oracle Cloud Infrastructure Console, click the Navigation menu icon in the top left corner.
- Click **Analytics & AI**. Under Analytics, click **Data Intelligence**.
- Navigate to your service instances page.
- On the Instances page, click the instance for which you want to view the list of actions that have been performed.
- On the instance details page, under Resources, click **Work Requests**.

Resources		Work Requests				
Subscriptions		Status	Type	OCID	Started	Finished
Work Requests (67)		Succeeded	PATCH_SERVICE	...vrhcpuileq <a href="#">Show</a> <a href="#">Copy</a>	Fri, Nov 10, 2023, 01:57:27 UTC	Fri, Nov 10, 2023, 01:58:18 UTC
		Succeeded	UPDATE_SERVICE	...i5yhybojmq <a href="#">Show</a> <a href="#">Copy</a>	Sat, Oct 21, 2023, 07:03:12 UTC	Sat, Oct 21, 2023, 07:04:12 UTC
		Succeeded	PATCH_SERVICE	...n43tqtoipq <a href="#">Show</a> <a href="#">Copy</a>	Tue, Oct 17, 2023, 00:01:53 UTC	Tue, Oct 17, 2023, 00:02:53 UTC

You see the tasks that have been performed on the instance.

## View Subscriptions

View the subscriptions associated with your instance.

- Sign in to the Oracle Cloud Infrastructure Console.
- In Oracle Cloud Infrastructure Console, click the Navigation menu icon in the top left corner.
- Click **Analytics & AI**. Under Analytics, click **Fusion Analytics Warehouse**.
- Navigate to your service instances page.
- On the Instances page, click the instance for which you want to view the list of actions that have been performed.
- On the instance details page, under Resources, click **Subscriptions**.

Resources		Subscriptions	
<b>Subscriptions</b> Work Requests (67)		<b>Service Name</b>	<b>Quantity</b>
		Fusion ERP Analytics - Hosted Named User	10
		Fusion HCM Analytics - Hosted Employee	10
		Oracle Fusion SCM Analytics Cloud Service - Hosted Named User	10
		Oracle Fusion CX Analytics Cloud Service - Hosted Named User	10

## Update the Data Source Connection Details

Update your data source connection details such as the URL for the Oracle Fusion Cloud Applications instance that you specified while creating your Oracle Fusion Data Intelligence instance and the credentials of an applicable user, such as `MyFAWExtractUser`.

### LiveLabs Sprint

See [Create a User in Oracle Fusion Cloud Applications to Extract Data](#).

You can update the source URL to point to another source environment for Oracle Fusion Cloud Applications. You can update the applicable user credentials when your source Oracle Fusion Cloud Applications instance has been refreshed with data from another environment, for example, due to a Production to Test refresh. You also update the user credentials if the passwords differ between environments or if the password for the applicable user has expired. Prior to entering the new password, ensure that you have reset the password for the applicable user, such as `MyFAWExtractUser`, in Oracle Fusion Cloud Applications. See [Reset Passwords](#).

1. Sign in to the Oracle Cloud Infrastructure Console.
2. In Oracle Cloud Infrastructure Console, click the Navigation menu icon in the top left corner.
3. Click **Analytics & AI**. Under Analytics, click **Data Intelligence**.
4. On the Instances page, click the instance for which you want to update the Oracle Fusion Cloud Applications password.
5. On the instance details page, click **Update Fusion Connection**.
6. In Update Fusion Application Credentials, enter the new URL and select the type of authentication you want to use: **JWT Based** or **Password Based**.
  - If you choose **JWT Based**, upload or copy and paste the private key and public certificate files, then select **Keys have been uploaded to Fusion Source**.

### Note:

See [Configure JWT Authentication Provider](#). While [configuring the token-based authentication](#), ensure that you enter `FAWServiceJWTIssuer` as the trusted issuer.

Ensure that the generated RSA encryption private key contains at least 2048 characters and that you wait at least 15 minutes for the uploaded public certificate to become effective in your Oracle Fusion Cloud Applications instance.

- If you choose **Password Based**, then enter the credentials of an applicable user, such as `MyFAWExtractUser` from your Oracle Fusion Cloud Applications instance in **Username** and **Password**.

7. Click **Test Connection** to verify the updated connection details.
8. Click **Save Changes**.

## Update Your Subscriptions

You can increase the number of users in an existing Oracle Fusion Data Intelligence subscription or add a new subscription to your existing Oracle Fusion Data Intelligence subscription by contacting your sales representative.

For example, you can add the Oracle Fusion HCM Analytics service to your existing Oracle Fusion Data Intelligence subscription that already has Oracle Fusion ERP Analytics.

After your order for addition or modification of subscriptions is processed, you'll receive an email asking you to activate the "update subscriptions" order.



### Note:

Don't use the Activate link in the email to activate your "update subscriptions" order, instead follow these steps to update the subscriptions.

1. Sign in to the Oracle Cloud Infrastructure Console.
2. In Oracle Cloud Infrastructure Console, click the Navigation menu icon in the top left corner.
3. Click **Analytics & AI**. Under Analytics, click **Data Intelligence**.
4. On the Instances page, click the instance for which you want to update the subscriptions.

5. On the instance details page, click **Update Offerings**.
6. In Offerings, verify that the changes to your subscriptions match the “update subscriptions” order.

### Offerings

Paid Subscription     No-fee Trial

Service Name	Existing	New
Fusion ERP Analytics - Hosted Named User per Month	20	500
Fusion HCM Analytics - Hosted Employee	1000	1000
Oracle Fusion Accounting Hub Cloud Service - 1,000 Hosted Records	Not enabled	500

Showing 3 items < 1 of 1 >

Type in "UPDATE" to confirm making changes to the offerings

Save Changes
[Cancel](#)

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7. Enter `Update` to confirm the changes and then click **Save Changes**.

## Update the Administrator Password for Oracle Autonomous Data Warehouse

Update the `ADMIN` schema password for the Oracle Autonomous Data Warehouse that's provisioned in your tenancy if the password for that `ADMIN` schema has changed.

Prior to updating the `ADMIN` schema password in your Oracle Fusion Data Intelligence instance, ensure that you have updated the administrator password in the Oracle Autonomous Data Warehouse instance associated with your Oracle Fusion Data Intelligence instance. Both the passwords must be the same. See [Unlock or Change the ADMIN Database User Password](#).

### Note:

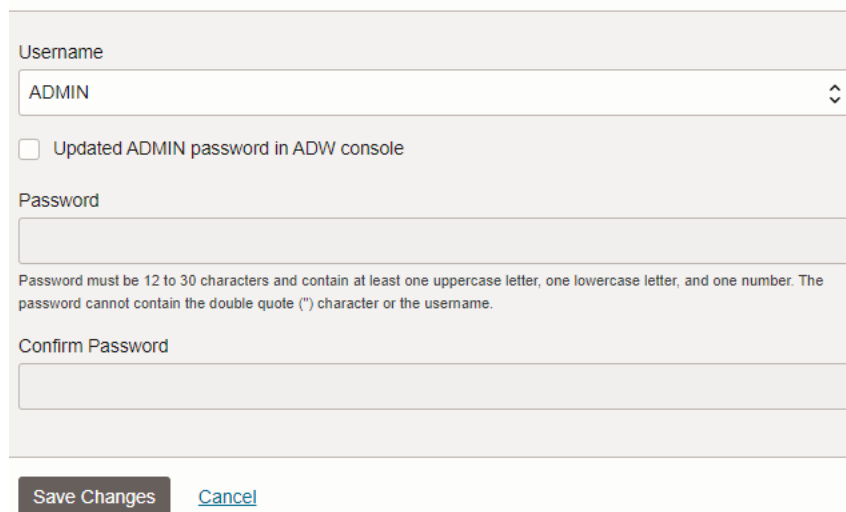
You need to be either an Oracle Cloud Infrastructure administrator or an administrator user with the necessary privileges to sign in and reset the password for the `ADMIN` schema.

### LiveLabs Sprint

1. Sign in to the Oracle Cloud Infrastructure Console.
2. In Oracle Cloud Infrastructure Console, click the Navigation menu icon in the top left corner.

3. Click **Analytics & AI**. Under Analytics, click **Data Intelligence**.
4. On the Instances page, click the instance for which you want to update the administrator password for the Oracle Autonomous Data Warehouse that's provisioned in your tenancy.
5. On the instance details page, click the **Name URL** under **Autonomous Data Warehouse**.
6. On the Autonomous Data Warehouse Details page, from the **More actions** drop-down list, select **Administrator password**.
7. In the Administrator password dialog, enter the new password, confirm, and then click **Change**.
8. Navigate to your Oracle Fusion Data Intelligence instance details page and click **Update password**.
9. In the Update Autonomous Data Warehouse Credentials dialog, in **Username**, select **ADMIN**, select the **Updated ADMIN password in ADW console** check box, enter the same password provided on the Autonomous Data Warehouse Details page, confirm the password, and then click **Save Changes**.

## Update Autonomous Data Warehouse Credentials



Username

ADMIN

Updated ADMIN password in ADW console

Password

Confirm Password

Save Changes [Cancel](#)

Password must be 12 to 30 characters and contain at least one uppercase letter, one lowercase letter, and one number. The password cannot contain the double quote (") character or the username.

## Reset the Password for OAX\_USER Schema

Oracle Fusion Data Intelligence provides default schemas (also known as users) such as the `ADMIN` schema and `OAX_USER` schema.

From release Platform 23.R4 onwards, Oracle Fusion Data Intelligence provides only `OAX_USER` as the default schema and you can only use `OAX_USER` during instance creation.

The `ADMIN` schema enables you to access the Oracle Autonomous Data Warehouse instance associated with your Oracle Fusion Data Intelligence instance. The `OAX_USER` schema enables you to run your own SQL queries against the database or sign in and view the data in the tables of the associated Oracle Autonomous Data Warehouse instance. The security policy of Oracle Autonomous Data Warehouse requires you to change the passwords for the default schemas every 365 days.



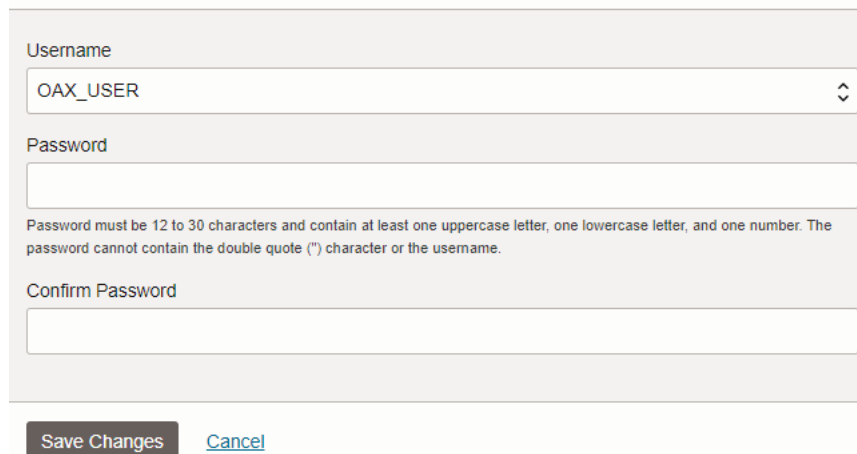
 **Note:**

You need to be either an Oracle Cloud Infrastructure administrator or an administrator user with the necessary privileges to sign in and reset the password for the `OAX_USER` schema.

To change the password for the `ADMIN` schema, see [Update the Administrator Password for Oracle Autonomous Data Warehouse](#).

1. Sign in to the Oracle Cloud Infrastructure Console.
2. Navigate to your Oracle Fusion Data Intelligence instance details page and click **Update password**.
3. In the Update Autonomous Data Warehouse Credentials dialog, in **Username**, select **OAX\_USER**, enter a password, confirm the password, and then click **Save Changes**.

### Update Autonomous Data Warehouse Credentials



Username

OAX\_USER

Password

Confirm Password

Save Changes Cancel

Password must be 12 to 30 characters and contain at least one uppercase letter, one lowercase letter, and one number. The password cannot contain the double quote (") character or the username.

## Reset the Password for Custom Schemas

Oracle Fusion Data Intelligence provides default schemas (also known as users) such as the `ADMIN` schema and `OAX_USER` schema. You can create custom schemas to meet your customization requirements.

The custom schemas enables you to run your own SQL queries against the database or sign in and view the data in the tables of the associated Oracle Autonomous Data Warehouse instance. The security policy of Oracle Autonomous Data Warehouse requires you to change the passwords for the custom schemas every 365 days.

 **Note:**

You need to be either an Oracle Cloud Infrastructure administrator or an administrator user with the necessary privileges to sign in and reset the password for the custom schemas.

You can change the password for the custom schemas using either SQL Developer or the Oracle Cloud Infrastructure Console. To change the password using SQL Developer, sign in to SQL Developer using the credentials of the `ADMIN` schema and run the command that's suggested to use while changing the password from the Oracle Cloud Infrastructure Console.

1. Sign in to the Oracle Cloud Infrastructure Console.
2. Navigate to your Oracle Fusion Data Intelligence instance details page.
3. On the instance details page, click the URL of the Oracle Autonomous Data Warehouse instance.
4. On the Oracle Autonomous Data Warehouse instance details page, click **Database Actions**. At this point, you need to sign in to the database using the `ADMIN` schema credentials.
5. On the Database Actions page, click **SQL** and run the following command to change the password for a custom schema:

```
Alter user <custom schema name> identified by <Password>;
```

## Terminate Instances

You can terminate instances that are active or have failed and you don't need them anymore.

When you terminate an active instance, the associated Oracle Analytics Cloud and Oracle Autonomous Data Warehouse instances along with data and customizations get deleted. However, the users and groups that were created in Oracle Identity Cloud Service aren't deleted during this process.

1. Sign in to the Oracle Cloud Infrastructure Console.
2. In Oracle Cloud Infrastructure Console, click the Navigation menu icon in the top left corner.
3. Click **Analytics & AI**. Under Analytics, click **Data Intelligence**.
4. On the Instances page, use either of the options:
  - Click **Actions** (⋮) for an instance with **Failed** status, and then from **Actions** (⋮), click **Terminate**.
  - Click the instance with **Failed** status to open the instance details page and then on the instance details page, click **Terminate**.
5. In Confirm Terminate, verify the instance name and click **Terminate Instance**.

### Confirm Terminate

Are you sure you want to terminate the instance named **instanceName**? Terminating the instance permanently deletes it and removes all automatic backups. You cannot recover a terminated instance.

Type in the instance name to confirm the termination.

  
  
 [Cancel](#)

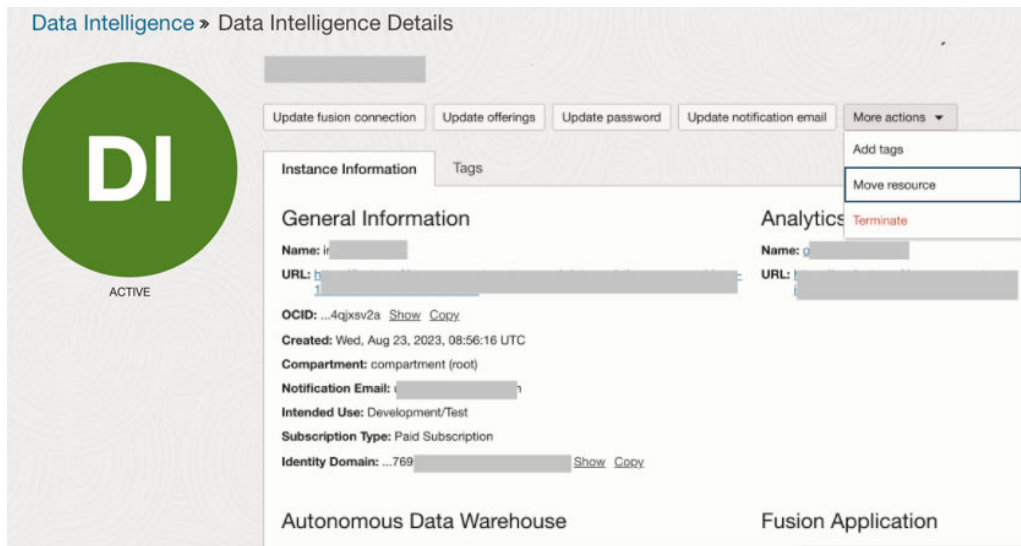
# Move the Oracle Fusion Data Intelligence Instance to Another Compartment

As the cloud account administrator, you can move your Oracle Fusion Data Intelligence instance to another Oracle Cloud Infrastructure compartment after you've created the instance.

 [LiveLabs Link](#)

You may want to move the instance from one compartment to another if you're redesigning or modifying the compartment structure. When you move the Oracle Fusion Data Intelligence instance to another compartment, the Oracle Analytics Cloud and Oracle Autonomous Data Warehouse instances associated with your Oracle Fusion Data Intelligence instance automatically move to the new compartment of your Oracle Fusion Data Intelligence instance.

1. Sign in to the Oracle Cloud Infrastructure Console.
2. In Oracle Cloud Infrastructure Console, click the Navigation menu icon.
3. Click **Analytics & AI**. Under Analytics, click **Data Intelligence**.
4. On the Instances page, use either of the options:
  - Click **Actions** (⋮) for an instance whose compartment you want to move, and then from **Actions**, click **Move Resource**.
  - Click the instance whose compartment you want to move to open the instance details page and then on the instance details page, click **More Actions** and then click **Move Resource**.




5. In Move Resource, select a compartment in **Destination Compartment** and then click **Move Resource**.

## Move resource

Move the resource from the **compartment (root)** compartment to the selected compartment.

Destination compartment

compartment (root) 

[Move resource](#) [Cancel](#)

## Update the Notification Email

You can view and update the notification email address set for an instance on the instance details page.

 [LiveLabs Sprint](#)

1. Sign in to the Oracle Cloud Infrastructure Console.
2. In Oracle Cloud Infrastructure Console, click the Navigation menu icon in the top left corner.
3. Click **Analytics & AI**. Under Analytics, click **Data Intelligence**.
4. On the Instances page, click an instance to open the instance details page.
5. On the instance details page, click **Update Email** to modify the current notification email address.
6. In Update Notification Email, enter the email address and click **Save Changes**.

## Update Notification Email

Notification Email

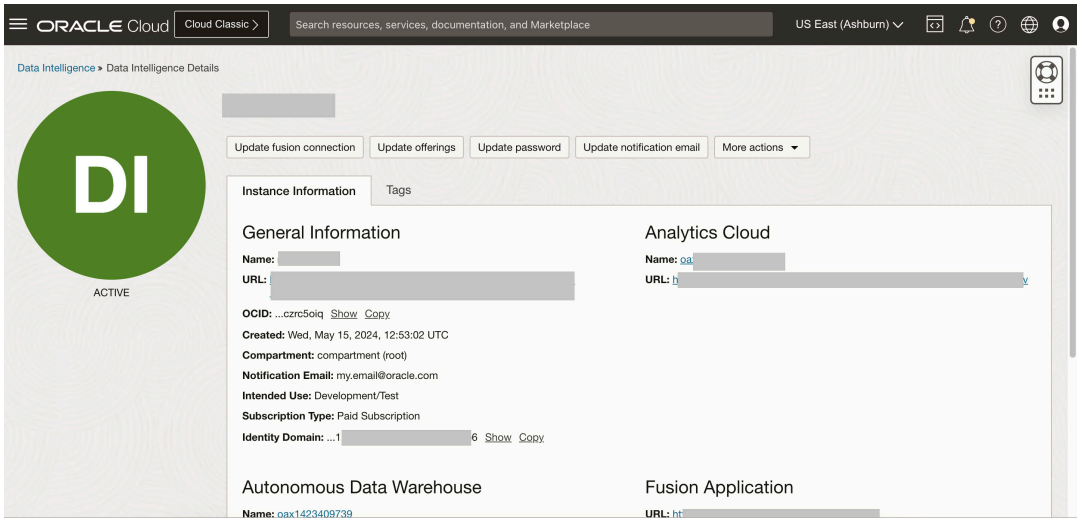
[Cancel](#)

## Scale Up Oracle Autonomous Data Warehouse

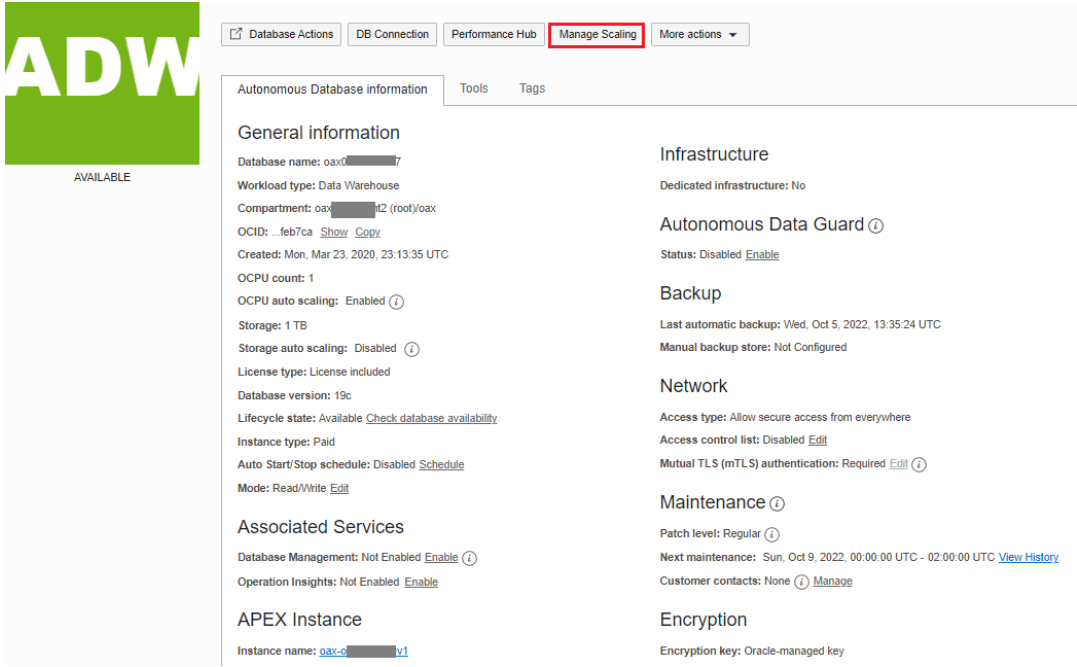
Oracle Fusion Data Intelligence provides the associated Oracle Autonomous Data Warehouse with certain capacities that are within its service limits. If you require additional storage or compute units (OCPUs) to meet your workload requirements, then you can scale up Oracle Autonomous Data Warehouse associated with Oracle Fusion Data Intelligence.

As a service administrator, you can scale up the default capacities within the service limits. You can view the service limits of Oracle Autonomous Data Warehouse associated with your Oracle Fusion Data Intelligence service using the Limits, Quotas and Usage page in the Oracle Cloud Infrastructure Console. See [Viewing Your Service Limits, Quotas and Usage](#). You can submit a request to increase your service limits from **Limits, Quotas, and Usage** page in Oracle Cloud Infrastructure Console. See [Requesting a Service Limit Increase](#).

1. Sign in to the Oracle Cloud Infrastructure Console.
2. In Oracle Cloud Infrastructure Console, click the Navigation menu icon.
3. In the navigation options, click **Analytics & AI**. Under Analytics, click **Data Intelligence**.
4. Navigate to your service instances page.
5. On the Instances page, click the instance for which you want to view the details.
6. On the instance details page, click the **Name** under Autonomous Data Warehouse.



7. On the Oracle Autonomous Data Warehouse instance details page, click **Manage Scaling**.



8. In Manage Scaling:
- a. To increase the compute units, in **OCPU count**, enter the required value or select **OCPU auto scaling** to enable expansion of the provisioned compute units as workload expands.
  - b. To increase storage capacity, in **Storage (TB)** enter a value or click the up arrow to select a value and then click **Apply**.

**Manage scaling** [Help](#)

OCPU count  
1  
The number of OCPU cores to enable. Available cores are subject to your tenancy's service limits.

OCPU auto scaling  
Allows systems to expand up to three times the provisioned OCPU as workload increases. [Learn more](#) about auto scaling.

Storage (TB)  
1  
The amount of storage to allocate.

Storage auto scaling  
Allows system to expand up to three times the reserved storage.

Allocated storage: 0.268 TB

**Shrink** Shrink storage manually. Use after deletion of a significant amount of data. [Learn more](#)

[Apply](#) [Cancel](#)

## Change Oracle Analytics Cloud Capacity

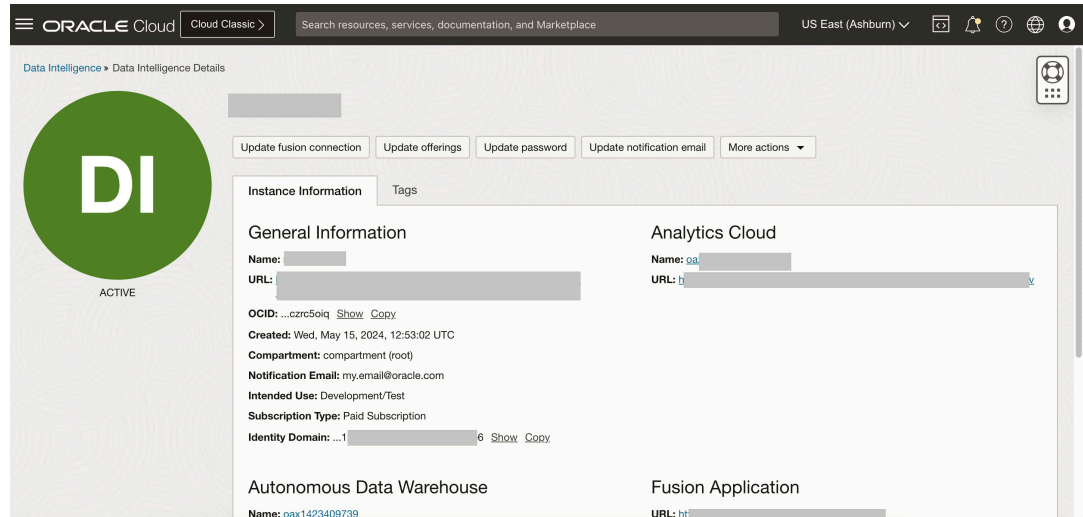
Oracle Fusion Data Intelligence provides the associated Oracle Analytics Cloud with certain capacities that are within its service limits. As a service administrator, you can scale up the default capacities within the service limits.

You can view the service limits of Oracle Analytics Cloud associated with your Oracle Fusion Data Intelligence service using the Limits, Quotas and Usage page in the Oracle Cloud Infrastructure Console. See [Viewing Your Service Limits, Quotas and Usage](#). You can submit a request to increase your service limits from **Limits, Quotas, and Usage** page in Oracle Cloud Infrastructure Console. See [Requesting a Service Limit Increase](#).

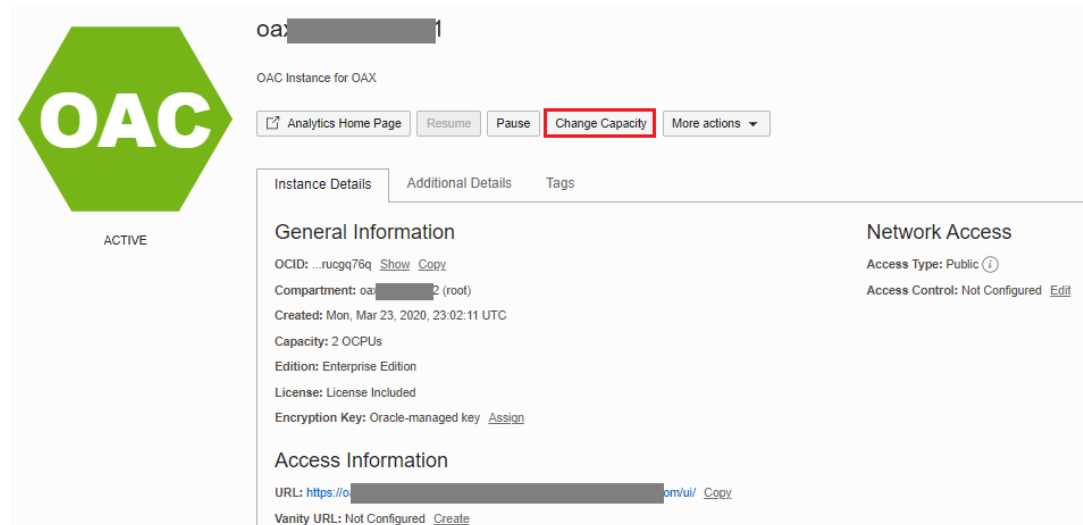
You can view the service managed and customer managed capacity for the associated Oracle Analytics Cloud instance in the Additional Details tab on the Oracle Analytics Cloud instance details page. For example, if you've a total capacity of 6 OCPUs, then you may see 4 as Service Managed Capacity and 2 as Customer Managed Capacity. You can only change the customer managed capacity and you can't change the capacity below the service managed capacity, for example, you can't change total capacity to 2 OCPU.

1. Sign in to the Oracle Cloud Infrastructure Console.
2. In Oracle Cloud Infrastructure Console, click the Navigation menu icon.

3. In the navigation options, click **Analytics & AI**. Under Analytics, click **Data Intelligence**.
4. Navigate to your service instances page.
5. On the Instances page, click the instance for which you want to view the details.
6. On the instance details page, click the **Name** under Analytics Cloud.



7. On the Oracle Analytics Cloud instance details page, click **Change Capacity**.



8. In Change Capacity, select the number of **OCPU Count** you want, and then click **Save Changes**.

 **Note:**

The values available to you depend on how many OCPUs your service currently uses. Remember that you can add or remove capacity within the OCPU range of your service.





Change Capacity

OCPU Count

2

Save Changes Cancel

## Provide Your Encryption Key for Oracle Autonomous Data Warehouse

You can change the default encryption key for Oracle Autonomous Data Warehouse associated with your Oracle Fusion Data Intelligence instance if your security policies require it.

Oracle Autonomous Data Warehouse provides two options for Transparent Data Encryption (TDE) to encrypt your database: Oracle-managed encryption keys and Customer-managed encryption keys. By default, the Oracle Autonomous Data Warehouse associated with Oracle Fusion Data Intelligence is set up using the Oracle-managed key. If your organization's security policies require customer-managed encryption keys, then you can configure Oracle Autonomous Data Warehouse to use an Oracle Cloud Infrastructure Vault master encryption key. With customer-managed master encryption keys, Oracle Autonomous Data Warehouse uses the master encryption key to generate the TDE master key. However, if your organizational policies change, you can revert to the Oracle-managed key. See [Manage Encryption Keys on Autonomous Database](#).

## Configure Advanced Options

You can set several advanced options using the Console.

### Topics:

- [About Advanced Configuration](#)
- [Set Advanced Options](#)

## About Advanced Configuration

Administrators can set more advanced, service-level options through the Systems Settings page.

### Topics:

- [Email Delivered by Agents Options](#)
- [Other Options](#)
- [Performance and Compatibility Options](#)
- [Preview Options](#)
- [Security Options](#)

## Email Delivered by Agents Options

You can use these options to customize the way agents deliver email.

System Setting	More Information
Maximum Email Size (KB)	<p>Specifies the maximum size (KB) of a single email.</p> <p>If you set a maximum email size, you can avoid situations when SMTP servers reject emails that are too large, and in the event that an email exceeds the set limit, the email recipients receive an error message instead of the agent failing and just alerting the email author.</p> <p><b>Valid Values: 0-20480</b></p> <p><b>Default: 0</b> (unlimited email size)</p> <p><b>API Key:</b> EmailMaxEmailSizeKB</p> <p><b>Edition:</b> Enterprise only</p>
Maximum Number of Recipients per Email	<p>Specifies the maximum number of recipients allowed in the To: or Bcc: line for a single email.</p> <p>You can set the maximum number of email recipients to avoid some SMTP servers from filtering out these emails as spam. If the recipient list exceeds the set limit, the list is split into smaller lists with the maximum number of allowed recipients in each list.</p> <p><b>Valid Values: 0-1024</b></p> <p><b>Default: 0</b> (unlimited number of email recipients)</p> <p><b>API Key:</b> EmailMaxRecipients</p> <p><b>Edition:</b> Enterprise only</p>
Safe Domains	<p>If you want to restrict the email domain that Oracle Analytics can send emails to, enter the name of the domain. For example, <code>examplemaildomain.com</code>.</p> <p>Use a comma to separate multiple domain names. For example, <code>exampledomain1.com,exampledomain2.com</code>. By default, there are no restrictions.</p> <p><b>API Key:</b> EmailSafeDomains</p> <p><b>Edition:</b> Enterprise only</p>
Use BCC	<p>Specifies whether to include the names of email recipients in the To: or Bcc: line. By default, email recipients are added to the Bcc: line.</p> <ul style="list-style-type: none"><li>• <b>On</b> — Add email recipients to the Bcc: line. Names of email recipients are hidden.</li><li>• <b>Off</b> — Add email recipients to the To: line. Everyone who receives the email sees the recipient list.</li></ul> <p><b>Default: On</b></p> <p><b>API Key:</b> EmailUseBcc</p> <p><b>Edition:</b> Enterprise only</p>

System Setting	More Information
Use RFC 2231 Encoding	<p>Specifies how to encode MIME email parameters. By default, RFC 2047 is used.</p> <ul style="list-style-type: none"> <li><b>On</b> — Use RFC 2231 to encode MIME email parameter values. RFC 2231 supports multi-byte languages. Select On if you deliver emails that contain multi-byte characters and use an email server that supports RFC 2231, such as Microsoft Outlook for Office 365 or Google Gmail.</li> <li><b>Off</b> — Use RFC 2047 to encode MIME email parameter values.</li> </ul> <p><b>Default:</b> Off <b>API Key:</b> EmailUseRFC2231 <b>Edition:</b> Enterprise only</p>

## Other Options

These system setting options in the Console enable you to set the behavior for a variety of actions such as database queries, default URLs, display defaults, and sorting.



### Note:

If you change one of these settings, you must apply the change for the new value to take effect unless we note it otherwise.

System Setting	More Information
Hide Loading Messages	<p>Specifies if a detailed message is displayed during data load processing.</p> <ul style="list-style-type: none"> <li><b>On</b> — Detailed loading messages are hidden and a simplified message <b>Loading...</b> is displayed instead.</li> <li><b>Off</b> — Detailed loading messages are displayed.</li> </ul> <p><b>Default:</b> Off <b>API Key:</b> HideLoadingMessages <b>Edition:</b> Professional and Enterprise</p>

## Performance and Compatibility Options

You use these options to configure performance and compatibility settings between Oracle BI Enterprise Edition and Oracle Analytics.



### Note:

If you change a performance and compatibility setting, you must apply the change for the new value to take effect unless mentioned otherwise.

System Setting	More Information
Brushing Enabled for Datasets	<p>Specifies whether brushing is enabled by default for workbooks that use dataset data.</p> <ul style="list-style-type: none"> <li>• <b>On</b> — Brushing is on by default for workbooks that use dataset data.</li> <li>• <b>Off</b> — Brushing is off by default for workbooks that use dataset data.</li> </ul> <p>Users can override this setting in the workbook and canvas properties.</p> <p><b>Default: On</b></p> <p><b>API Key:</b> EnableBrushingDatasets</p> <p><b>Edition:</b> Professional and Enterprise</p>
Brushing Enabled for Subject Areas	<p>Specifies whether brushing is enabled by default for workbooks that use data from subject areas.</p> <ul style="list-style-type: none"> <li>• <b>On</b> — Brushing is on by default for workbooks that use subject area data.</li> <li>• <b>Off</b> — Brushing is off by default for workbooks that use subject area data.</li> </ul> <p>Users can override this setting in the workbook and canvas properties.</p> <p><b>Default: On</b></p> <p><b>API Key:</b> EnableBrushingSubjectAreas</p> <p><b>Edition:</b> Enterprise only</p>
Enable Auto Insights on Datasets	<p>Specifies whether the Auto Insights feature is available when datasets are created or modified.</p> <ul style="list-style-type: none"> <li>• <b>On</b> — The Enable Insights option is available in the Dataset Inspect dialog and insights are automatically generated and available for workbooks that use datasets with the Enable Insights option selected.</li> <li>• <b>Off</b> — Auto Insights and its related features are disabled.</li> </ul> <p><b>Default: On</b></p> <p><b>Apply Change Required:</b> No, but when you change this setting, it may take a few minutes to take effect.</p>
Evaluate Support Level	<p>Specifies who can issue database functions: <code>EVALUATE</code>, <code>EVALUATE_ANALYTIC</code>, <code>EVALUATE_AGGR</code>, and <code>EVALUATE_PREDICATE</code>. By default (0), the <code>EVALUATE</code> database functions are disabled.</p> <ul style="list-style-type: none"> <li>• <b>1</b> — Service administrators only. Users with the BI Service Administrator application role can invoke <code>EVALUATE</code> database functions.</li> <li>• <b>2</b> — Anyone. Any user who signs in to can invoke <code>EVALUATE</code> database functions.</li> <li>• <b>0</b> (or any other value) — No one. All <code>EVALUATE</code> database functions are disabled in .</li> </ul> <p><b>Valid Values: 0, 1, 2</b></p> <p><b>Default: 0</b></p> <p><b>API Key:</b> EvaluateSupportLevel</p> <p><b>Edition:</b> Professional and Enterprise</p>

## Preview Options

Administrators can turn some preview features on and off. This way, your organization can evaluate and learn how to use new features before they roll out by default.

System Setting	More Information
Preview the Generic REST Connector	<p>Enable this option to try out the REST connector and visualize data from a data source with a REST endpoint. Use this connector to access data from a REST endpoint and create datasets. See <a href="#">Connect to Data from REST Endpoints and Create a Dataset from a REST Connection</a>.</p> <ul style="list-style-type: none"> <li>• <b>On</b> — Displays the <b>REST API</b> connection option on the Create Connection dialog.</li> <li>• <b>Off</b> — Hides the <b>REST API</b> connection option.</li> </ul> <p><b>Default:</b> Off  <b>Apply Change Required:</b> No  <b>API Key:</b> PreviewGenericRestConnector  <b>Edition:</b> Enterprise only</p>
Preview Workbook Email Scheduler	<p>Enable this option so that administrators can set up a schedule to regularly share their workbooks with one or more email recipients in PDF or PNG format. See <a href="#">Share Visualizations Using Workbook Email Schedules (Preview)</a>.</p> <ul style="list-style-type: none"> <li>• <b>On</b> — Displays the <b>Schedule</b> option in the <b>Actions</b> menu of a workbook to users with the BI Service Administrator application role with Read-Write access and the Edit share permission on the workbook.</li> <li>• <b>Off</b> — Disables and hides the <b>Schedule</b> option in the <b>Actions</b> menu of a workbook.</li> </ul> <p><b>Default:</b> Off  <b>Apply Change Required:</b> No  <b>API Key:</b> PreviewWorkbookEmailScheduler  <b>Edition:</b> Enterprise only</p>
Preview Workbook Email Scheduling with Bursting	<p>Enable this option to allow administrators to set bursting options when emailing workbooks saved in Shared Folders. This option requires Preview Workbook Email Scheduler to be enabled. See <a href="#">Share Visualizations Using Workbook Email Schedules (Preview)</a> and <a href="#">Create a Bursting Workbook Email Schedule (Preview)</a>.</p> <ul style="list-style-type: none"> <li>• <b>On</b> — Enables users with a BI Service Administrator application role with Read-Write access and the Edit share permission for the workbook to enable the <b>Bursting</b> option in the <b>Email</b> tab of a workbook schedule if the workbook is saved in Shared Folders.</li> <li>• <b>Off</b> — Disables the <b>Bursting</b> option in the <b>Email</b> tab of a workbook schedule.</li> </ul> <p><b>Default:</b> Off  <b>Apply Change Required:</b> No  <b>API Key:</b> PreviewWorkbookEmailBursting  <b>Edition:</b> Enterprise only</p>

## Security Options

Use Security options to control how users can perform specific actions in analyses and dashboards.

These options apply only to analyses and dashboards. They don't apply to data visualizations.

**Note:**

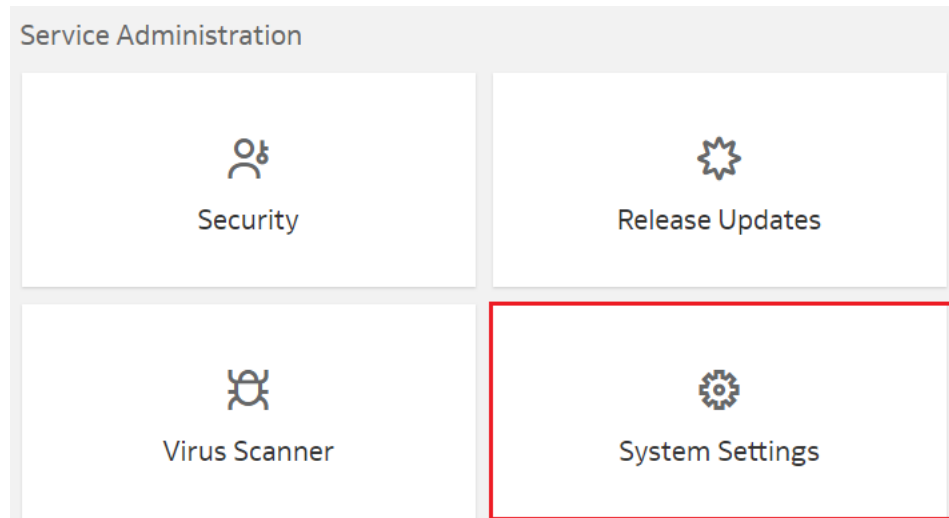
If you change a security setting, you must apply the change for the new value to take effect.

System Setting	More Information
Allow HTML/JavaScript/CSS Content	<p>Determines whether users can apply and save HTML, JavaScript, and CSS markup in various text fields for analyses and dashboards, and how any previously saved markup is used.</p> <ul style="list-style-type: none"> <li>• <b>Always</b> — Enables users to apply markup. Displays the <b>Contains HTML/JavaScript/CSS Markup</b> option in dialogs where additional formatting might be useful. For example: <ul style="list-style-type: none"> <li>– For analyses: Various dialogs in the analysis editor, Analysis Properties dialog, Column Properties (Column Format) dialog, Edit Column Formula dialog, Narrative dialog, Ticker dialog, Static Text dialog, and New Calculated Measure dialog.</li> <li>– For dashboards: Various dialogs in the dashboard editor, Text Properties dialog, and Edit Header and Edit Footer dialogs (under Print and Export Options).</li> </ul> </li> <li>• <b>Never</b> — Prevents users from applying markup. Hides the <b>Contains HTML/JavaScript/CSS Markup</b> option. Users can only enter plain text. Oracle Analytics ignores any markup that users previously entered and saved for their analyses and dashboards.</li> <li>• <b>HTML Only</b> — Enables users to apply HTML markup. Displays the <b>Contains HTML/JavaScript/CSS Markup</b> option in dialogs where additional formatting might be useful but only safe HTML is allowed (no JavaScript or CSS). When an analysis or dashboard opens, Oracle Analytics sanitizes any markup that users have entered and applies only the HTML markup.</li> <li>• <b>On Open</b> — Prevents users from applying additional markup (existing markup is retained). Hides the <b>Contains HTML/JavaScript/CSS Markup</b> option so users can enter only plain text. Any previously saved markup for analyses and dashboards continues to be applied. <p><b>Note:</b> The <b>On Open</b> option was previously named "Off".</p> </li> </ul> <p><b>API Key:</b> AllowHTMLJavaScriptCSSContent  <b>Edition:</b> Enterprise only</p>

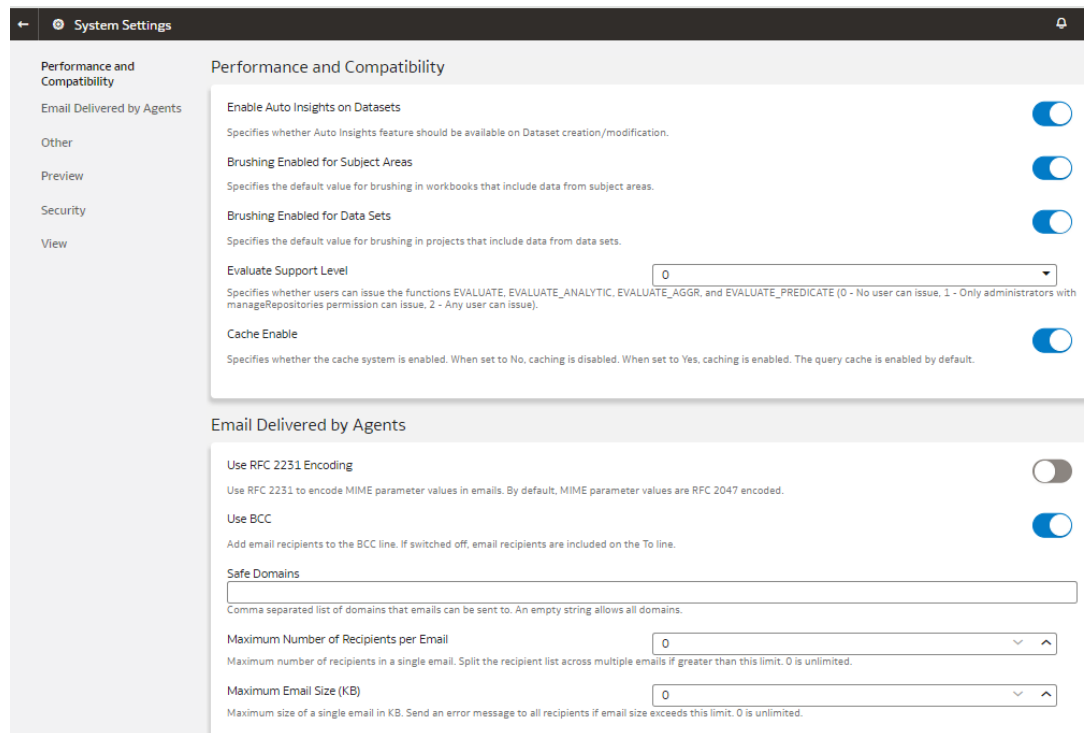
## Set Advanced Options

Use the service instance console to set advanced options for Oracle Fusion Data Intelligence.

1. In Oracle Fusion Data Intelligence, click **Console**.
2. Under **Service Administration**, click **System Settings**.



3. On the System Settings page, update the toggle option for the applicable advanced option.



# 4

## Configure Oracle Fusion Data Intelligence Data

As the cloud account administrator with the Functional Administrator or System Administrator application role, you specify the data load and reporting configuration details, and create data pipelines for functional areas that determine how the source data from Oracle Fusion Cloud Applications is loaded and displayed in the data warehouse.

For example, you might specify the Initial Extract Date as January 1, 2019, specify the global currency as US Dollars (USD), and select the exchange rate to convert transactions to the global currency.

### Note:

The times visible in the Console are in local time zone. However, Oracle Fusion Data Intelligence stores the values for the **Warehouse Refresh Date Time** and **Scheduled Date** in the Coordinated Universal Time (UTC) in the autonomous data warehouse.

Any data you load into the autonomous data warehouse in Oracle Fusion Data Intelligence is subject to the data access controls that may not always match those in the source system. For example, if User1 doesn't have the rights to access some data in your source system, then when you bring that data over to the autonomous data warehouse in Oracle Fusion Data Intelligence, this User1 can access that particular data. If you want to have the same controls on the data, then you must ensure that this particular User1 has the same data access rights as your source system in your Oracle Fusion Data Intelligence user setup.

### Topics:

- [Typical Workflow to Configure Data](#)
- [About Data Pipelines for Functional Areas](#)
- [About Data Refresh Performance](#)
- [About Pipeline Parameters](#)
- [Set Up the Pipeline Parameters](#)
- [Create a Data Pipeline for a Functional Area](#)
- [Edit a Data Pipeline for a Functional Area](#)
- [Activate a Data Pipeline for a Functional Area](#)
- [About Global Parameters](#)
- [Set Up the Global Report Parameters](#)
- [About Reporting Configurations](#)
- [Set Up the Reporting Configurations for Enterprise Resource Planning](#)
- [Set Up the Reporting Configurations for Human Capital Management](#)



- [Set Up the Reporting Configurations for Supply Chain Management](#)
- [Deactivate a Data Pipeline for a Functional Area](#)
- [Delete a Data Pipeline for a Functional Area](#)
- [Refresh a Data Pipeline for a Functional Area](#)
- [Reload Data for a Data Pipeline](#)
- [Reset the Data Warehouse](#)
- [Reset the Cache](#)
- [Reset and Reload the Data Source](#)
- [View Load Request History](#)
- [View the Audit Log](#)
- [View Records Rejected in Extraction](#)
- [Prioritize Datasets for Incremental Refresh \(Preview\)](#)
- [About Augmenting Your Data](#)
- [Create a Dimension Alias](#)
- [About Managing Data Connections](#)
- [Disable Data Pipeline](#)
- [View Notifications and Emails](#)
- [Enable Event Notifications \(Preview\)](#)
- [Schedule Frequent Refreshes of Data](#)
- [Schedule Periodic Full Reload of Functional Area Data](#)
- [Schedule Frequent Refreshes of Warehouse Tables](#)
- [Extend Data with Custom Data Configurations](#)

## Typical Workflow to Configure Data

Follow these tasks as a guide to configure Oracle Fusion Data Intelligence data.

Task	Description	More Information
Specify the pipeline parameters	Set up the pipeline parameters for your data model file before running your data pipelines for the functional areas.	<a href="#">Set Up the Pipeline Parameters</a>
Create a data pipeline for a functional area	To start analyzing your Oracle Fusion Cloud Applications data, create data pipelines for the functional areas to copy data to the data warehouse.	<a href="#">Create a Data Pipeline for a Functional Area</a>
Edit a data pipeline for a functional area	You can change any details of your data pipelines for the functional areas prior to activating them.	<a href="#">Edit a Data Pipeline for a Functional Area</a>

Task	Description	More Information
Activate a data pipeline for a functional area	You must activate the data pipeline for a functional area to run and load data into the data warehouse.	<a href="#">Activate a Data Pipeline for a Functional Area</a>
Specify the global parameter	As part of the reporting configurations, specify the parameter that you want to use across your Oracle Fusion Data Intelligence offerings. You can set up this parameter only after activating a data pipeline for a functional area.	<a href="#">Set Up the Global Report Parameters</a>
Specify the reporting configurations	Set up the reporting configurations for your data model file after activating a data pipeline for a functional area. Based on the functional area for which you've activated a data pipeline, you see the applicable reporting configurations. For example, if you've activated a data pipeline for a functional area in Oracle Fusion ERP Analytics, then you see the reporting configurations applicable for Oracle Fusion ERP Analytics.	<a href="#">Set Up the Reporting Configurations for Enterprise Resource Planning</a> <a href="#">Set Up the Reporting Configurations for Human Capital Management</a>
Deactivate a data pipeline for a functional area	You can deactivate all the incremental set up and ETL jobs of data pipelines for the functional areas.	<a href="#">Deactivate a Data Pipeline for a Functional Area</a>
Delete a data pipeline for a functional area	You can delete data pipelines for the functional areas prior to activating them.	<a href="#">Delete a Data Pipeline for a Functional Area</a>
Reload a data pipeline for a functional area	Perform this action to refresh the data for the selected functional area.	<a href="#">Refresh a Data Pipeline for a Functional Area</a>
Reset a data pipeline for a functional area	You can reset an activated data pipeline for a functional area. Resetting the data pipeline deletes all data from your data warehouse.	<a href="#">Reload Data for a Data Pipeline</a>
View request history	View the load request history by functional area, load type, and status.	<a href="#">View Load Request History</a>
Augment your data	Augment your reports by using datasets that you create with specific columns from various data stores.	<a href="#">Augment Your Data</a>

## About Data Pipelines for Functional Areas

Data pipelines for functional areas load data specific to a functional area into the data warehouse.

These pipelines hold configuration parameters specific to a functional area such as General Ledger functional area under Finance and Sales functional area under NetSuite.

## Allowed Actions for Data Pipelines

Here's a list of the actions allowed for data pipelines when they are in various states. This information enables you to know which actions you can and can't perform when a data pipeline is in a particular state.

Pipeline status	Available actions	Additional information
Saved	Edit and Delete	You can activate a data pipeline using the Edit wizard or can delete the data pipeline.
InActive	Edit, Activate, and Delete	You can activate a data pipeline using the Edit wizard or can delete the data pipeline.
Activation Scheduled	Edit and Delete	If you edit a scheduled data pipeline, then the previous data pipeline is unscheduled and a new data pipeline is scheduled.
Activation in Progress	View	You can view the data pipeline in Read-only mode.
Activation Complete	Edit, Delete, Reset, Deactivate, and Refresh Data	You can perform these actions: <ul style="list-style-type: none"> <li>Edit only the Attribute Selection, Column Options, Entity Options, Dimension Keys, Schedule, and Save steps.</li> <li>After the Edit action is completed, the data pipeline is ready for Refresh Data or AdHoc run. View the information icon that's displayed.</li> <li>Perform a reset that marks the data pipeline for data reset and view the displayed information icon. The next incremental job performs the actual action or you can perform the Refresh Data action to immediately reset the data.</li> <li>Refresh the data. If an incremental job isn't running, then the Refresh Data action initiates an AdHoc run immediately to refresh the data. It performs a full refresh if you had edited the data pipeline or performed a reset earlier.</li> <li>Deactivate the data pipeline to change its state to InActive.</li> </ul>

## About Data Refresh Performance

Oracle strives constantly to improve performance for data loading in pipelines.

The performance of loading data for your instance will vary. The time to complete data processing, both full warehouse loads and incremental data loads, depends on various factors. A data pipeline load includes the following:

- Extracting data from the Oracle Fusion Cloud Applications.
- Loading the data into Oracle Autonomous Data Warehouse.
- Transforming the data into the prebuilt schema.

The time to complete each of these steps is determined by various factors including:

- The availability of the source system.
- The size and complexity of the source data.
- The activated functional areas.
- Custom SQL queries that impact Oracle Autonomous Data Warehouse.
- Your queries running concurrently.
- Customizations made on the source system objects (which require a full load for those objects).
- The patching of source and target systems.

For daily refresh of data and pipeline execution to update all the resulting key metrics and dashboards, the execution time depends on many factors such as the amount of data getting incrementally refreshed. In order to plan your downstream workflow needs, ensure to perform these actions:

- Turn on the pipeline execution estimation using the Data Refresh Estimate preview feature on the Enable Features page. The estimated refresh completion details are visible on the Pipeline Settings page.
- Trigger any subsequent operations based on the estimated refresh completion time.
- Reach out to Oracle Support if the refresh isn't completed by the estimated completion time.
- Subscribe to Event Notifications, so you can receive an email notification as soon as there is any issue with the pipeline execution. See [Enable Event Notifications \(Preview\)](#).

Data refresh is typically completed daily unless the data pipeline jobs are turned off or stuck. You can observe data loading times for your specific source and warehouse configuration to estimate the time it takes for an incremental daily refresh and for a full warehouse load. This information can help you plan for the optimal time in the day to start your daily data refresh. You may want to schedule the data load to run during off-peak hours, for example, run initial full warehouse loads during weekends and incremental loads during weeknights to ensure that users aren't impacted.

### Preview

You can view the estimated refresh completion time for daily pipelines on the Pipeline Settings page in the Estimated Refresh Completion field as a Preview feature. This enables you to plan your tasks in the application.

## Data Pipeline

Data Pipeline Status	<input checked="" type="checkbox"/> Enabled
Last Refresh Date	May 26, 2023 10:32:48 AM IST
Estimated Refresh Completion	May 27, 2023 03:30:00 AM IST

## About Pipeline Parameters

The pipeline parameters apply to all functional areas.

The pipeline parameters that apply at the functional area levels are currency, exchange rate type, and initial extraction date and time to schedule the incremental job to run.

- **Analytics Language:** Specify the language in which you want the data to be extracted. The language that you can select in the **Analytics Language** parameter is based on the initialized Oracle Fusion Cloud Applications languages. You can only select one language at a time. Changes to this global parameter don't take effect immediately even after next refresh and may cause inconsistent results because the refresh brings in only the incremental data in the selected language. You must reset the warehouse to ensure that the changes are effective.
- **Analytics Currency:** Currency conversions are required because your business might have transactions captured in multiple currencies. To create meaningful enterprise-wide analyses, you must use a common currency. Oracle Fusion Data Intelligence allows you to specify an analytics currency to store amounts in the data warehouse using this common currency. The load process checks the specified currency value and determines the corresponding exchange rate based on the exchange rate basis defined for each subject area to convert the amounts to the analytics currency. You can review the details of the exchange rate basis used in each subject area in the respective subject area metric details page. Analytic currency isn't a substitute for translation or reporting ledger specific requirements related to Reconciliation or Statutory reporting. For example, if your organization is a multinational enterprise that has its headquarters in the United States, you probably want to choose **US dollars** (USD) as the analytics currency.
- **Exchange Rate Type:** Specify an exchange rate type that you want to use when converting the transaction amounts to the analytics currency. For example, you may set up **Corporate** as a standard exchange rate across your organization for a stable currency.
- **Initial Extract Date:** Initial extract date is used when you extract data for a full load. Transactional data created after the initial extract date processes and loads to the warehouse. It reduces the initial data load volume. After extracting the data for a functional area, avoid changing the initial extract date. If you need to change the initial extract date, then after changing the date, reset the data warehouse and reactivate the functional areas. See [Reset the Data Warehouse](#).
- **Data Refresh Schedule:** Specify the frequency and when you want the incremental data load to happen. While specifying the timezone, the recommendation is to use city names to handle the daylight savings. For example, instead of selecting timezone such as EST or PST, select Europe/Bucharest or America/Los\_Angeles. In this case, the data refresh process calculates the value mentioned in the Time field based on the local time irrespective of daylight savings.

## Set Up the Pipeline Parameters

Set up the pipeline parameters for your data model file before running your data pipelines for the functional areas.

 [LiveLabs Sprint: How do I configure the Pipeline Parameters?](#)

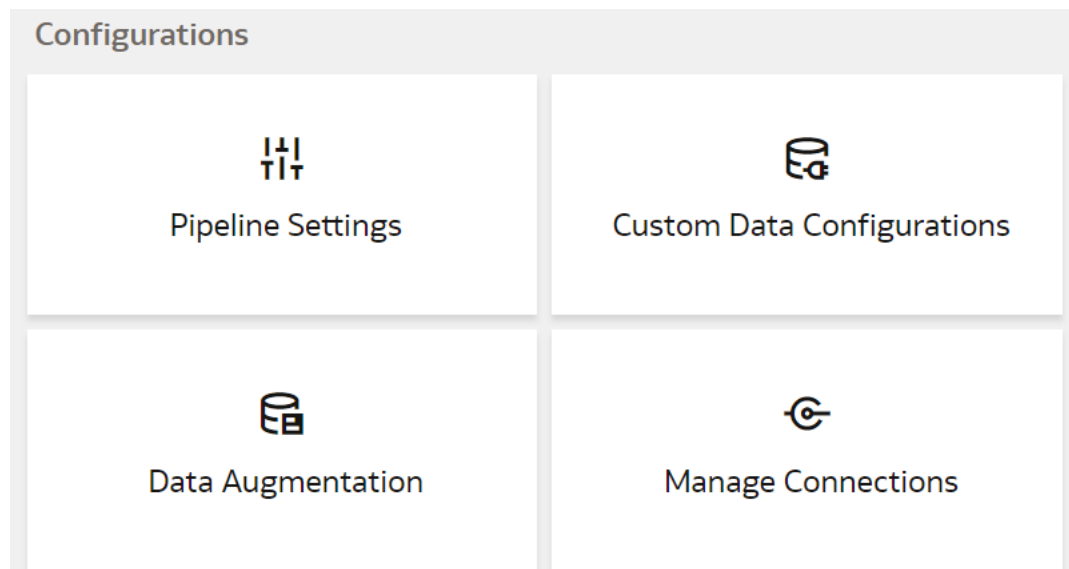
 [LiveLabs Sprint: Change Data Refresh Schedule](#)

 [LiveLabs Sprint: Verify Data Refresh Schedule](#)

Oracle Fusion Data Intelligence releases application updates at regular intervals that are visible on the Release Updates tile of the Console. See [About Application Updates](#). Some of the application updates involve an upgrade of the underlying data model. If a data model upgrade is available at the time that you specify for the daily incremental refresh, then the data model upgrade overrides the incremental refresh for the day. The data model upgrade is a lengthier process and the data refresh for the specific day may take much longer than the regular daily incremental refresh.

Any country that exercises time change forwards the time by an hour. For example, in the U.S.A., standard time changes to day light saving time on 2nd saturday of March, forwarding the time from 2 am to 3 am. As a result, any refresh schedules set between 2 am to 3 am of a day won't execute on that day. If you need to guarantee daily refresh, then ensure to schedule it either before 2 am or after 3 am.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
3. On the Data Configuration page, under **Configurations**, click **Pipeline Settings**.



4. On the Pipeline Settings page, under Global Parameters, from the **Analytics Language** list, select the language in which you want to extract the data.

Global Parameters

Analytics Language	American English (US)
Analytics Currency	US Dollar (USD)
Use Fusion Default Exchange Rate Type	NO (N)
Exchange Rate Type	Corporate (Corporate)
Initial Extract Date	Jan 1, 2015

5. From the **Analytics Currency** list, select the currency of the transaction data.
6. In **Use Fusion Default Exchange Rate Type**, specify whether you want to use the default exchange rate type from Oracle Fusion Cloud Applications.
7. From the **Exchange Rate Type** list, select an exchange rate type that you want to use when converting the transaction amounts to the global currency.
8. In **Initial Extract Date**, select the date from which to load the transaction data.
9. Under Data Refresh Schedule, from the **Interval** list, select the frequency of the data refresh. Depending on the selected interval, specify the time, day, and month when you want the incremental data load to happen.

Data Refresh Schedule

Interval	Daily
Time	02:00 PM
Timezone	GMT

10. Click **Save**.

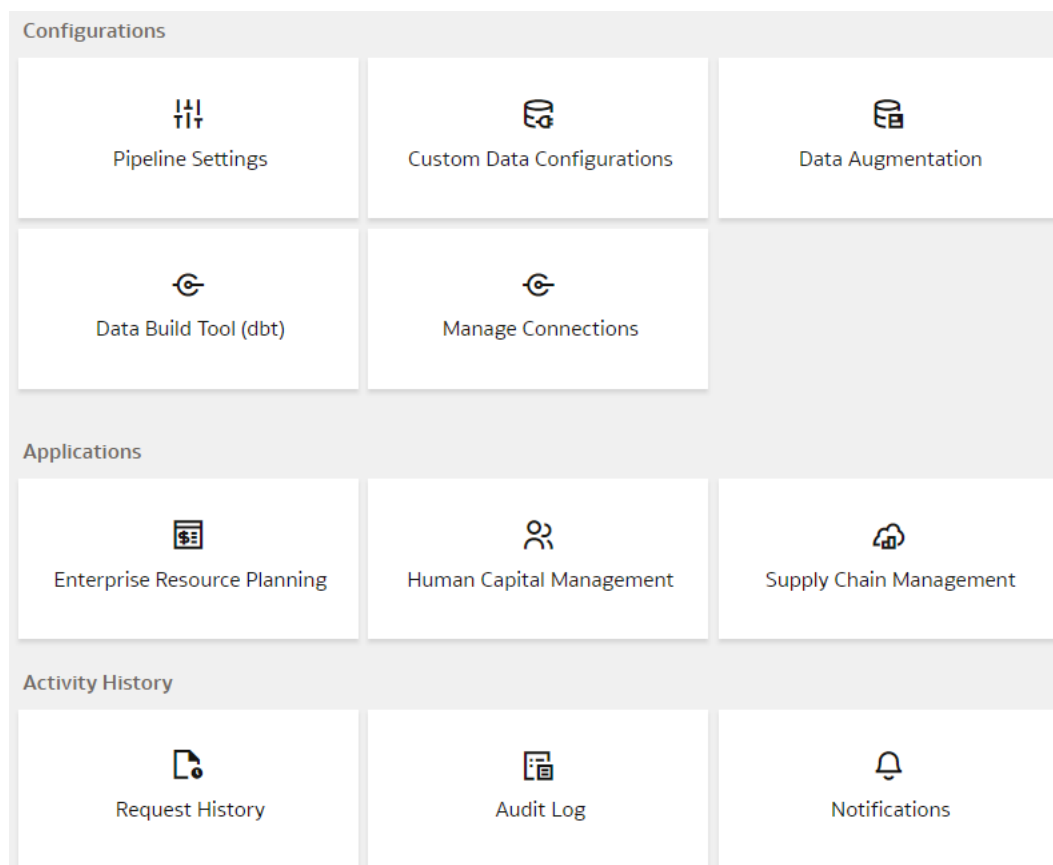
## Create a Data Pipeline for a Functional Area

As a functional administrator, create a data pipeline for a functional area to copy data to the data warehouse. Use these steps to select and schedule runs to update the Oracle Autonomous Data Warehouse instance with the latest data.

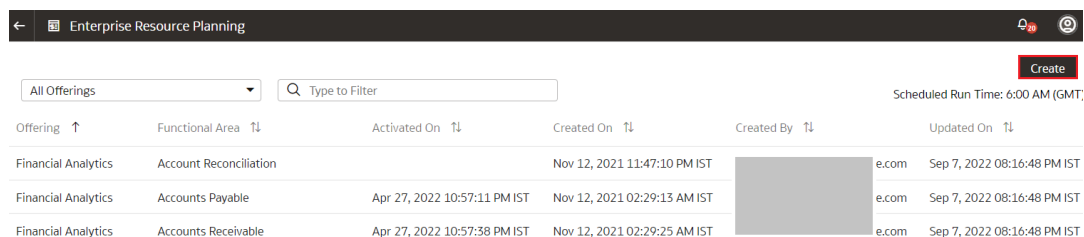


Perform this task only after you have set up the pipeline and report parameters. You can schedule an activation of a functional area even if activation of another functional area is in progress. However, you can't update the activation of a functional area that's in progress.

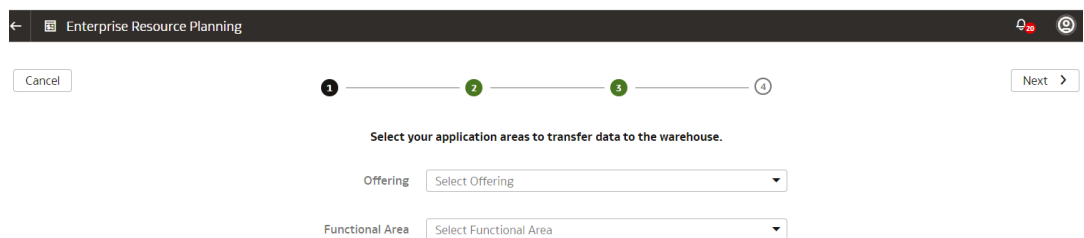
1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
3. On the Data Configuration page, click your service. For example, under Applications, click **Enterprise Resource Planning**.



- On the service page, for example, the Data Configuration: Oracle Financial Analytics page, click **Create**.



- On the Enterprise Resource Planning page, shown as an example, use the wizard to select your application areas to transfer data to the warehouse, and then click **Next**.



- Review the parameters and click one of the options:
  - Cancel**: To cancel the data pipeline for the functional area.



- **Save:** To save the data pipeline for the functional area but not activate it.
- **Activate:** To schedule when to run the data pipeline for the functional area. See [Activate a Data Pipeline for a Functional Area](#).

Oracle Fusion Data Intelligence extracts data only from the initial extract date that you specify. For example, if the initial extract date is 10th March and you've added data on 9th March in your source, then the data added on 9th won't be part of this data pipeline activation plan. You can see the data pipeline activation plan listed on the Data Configuration page.

## Edit a Data Pipeline for a Functional Area

You can change any details of your data pipeline for a functional area prior to activating it.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
3. On the Data Configuration page, click your service. For example, under Applications, click **Enterprise Resource Planning**.
4. On the service page, for example, the Data Configuration: Oracle Financial Analytics page, click the **Action** menu for the data pipeline for a functional area that you want to edit, and click **Edit**.

Offering	Functional Area	Activated On	Created On	Created By	Updated On	Updated By	Status
Financial Analytics	Account Reconciliation		Nov 12, 2021 11:47:10 PM IST	oracle.com	Sep 7, 2022 08:16:48 PM IST	io	...
Financial Analytics	Accounts Payable	Apr 27, 2022 10:57:11 PM IST	Nov 12, 2021 02:29:13 AM IST	oracle.com	Sep 7, 2022 08:16:48 PM IST	io	...
Financial Analytics	Accounts Receivable	Apr 27, 2022 10:57:38 PM IST	Nov 12, 2021 02:29:25 AM IST	oracle.com	Sep 7, 2022 08:16:48 PM IST	io	...
Financial Analytics	Assets	Apr 27, 2022 10:48:26 PM IST	Nov 16, 2021 07:27:38 PM IST	om	Sep 7, 2022 08:16:48 PM IST	io	...
Financial Analytics	Customer Collections Risk Prediction		Nov 19, 2021 04:07:15 PM IST	im	Sep 7, 2022 08:16:48 PM IST	io	...

5. Make the changes, review the changes, and then click **Save** or **Activate**.

## Activate a Data Pipeline for a Functional Area

You must activate the data pipeline for a functional area to run it and load the data into the data warehouse.

Ensure that you don't activate a data pipeline for a functional area in the following situations:

- **Load in progress:** If an incremental load is in progress.
- **An impending load:** If an incremental load is scheduled to run in the next hour.
- **Exceeded the number of daily refresh requests:** The maximum number of ad hoc data refresh requests for the day is four. If you've exceeded this number, then you can submit a request the following day.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
3. On the Data Configuration page, click your service. For example, under Applications, click **Enterprise Resource Planning**.

- On the service page, for example, the Data Configuration: Oracle Financial Analytics page, click the **Action** menu for the saved data pipeline for the functional area that you want to activate, and click **Edit**.
- Review the details of the data pipeline for the functional area and then click **Activate**.

Cancel

1 2 3 4 Save **Activate** >

Review your selections and save the functional area activation.

Data Selections:

Global Parameters

Extend Due Date by Days	0
Analytics Currency	US Dollar
Exchange Rate Type	Corporate
Analytics Language	American English
Initial Extract Date	2016-01-01

- In step 4 of the Data Configuration wizard, select **Scheduled Execution Data** to specify the date and time on which to run the data pipeline for the functional area. Select **Run Immediately** to create and run the data pipeline for the functional area immediately. Click **Finish**.



Cancel

1 2 3 4 **Finish**

Select when to initiate the functional area activation

Scheduled Execution Date

Asia/Calcutta

Extract Time 09/27/2022 12:00 AM  

Run Immediately

Oracle Fusion Data Intelligence runs the data pipeline for the functional area, loads data into your data warehouse, and displays your data pipeline for the functional area on the Data Configuration page. Once data is successfully loaded, the system updates the status of the data pipeline for the functional area to **Activation Completed**.

## About Global Parameters

As part of the reporting configurations, you specify a value for the Enterprise Calendar parameter to configure the reporting calendar used in Oracle Fusion Data Intelligence. All time options seen in the reporting layer are based off the calendar that you select as the parameter value.

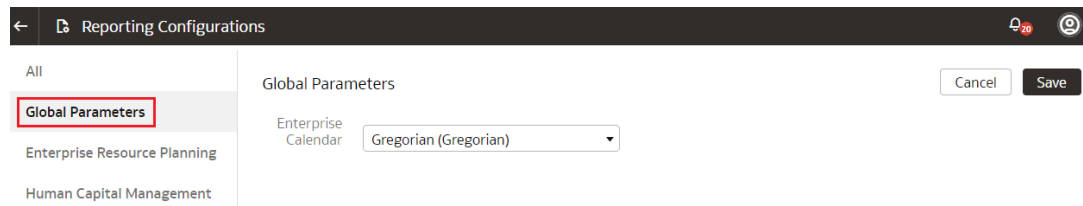
You must activate a data pipeline for a functional area to be able to set up the reporting configurations.

## Set Up the Global Report Parameters

Specify the report parameter that you want to use across your Oracle Fusion Data Intelligence offerings.

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1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Reporting Configuration** under **Application Administration**.
3. On the Reporting Configuration page, click **Global Parameters**.



4. In the Global Parameters region, select a calendar to configure the reporting calendar used in Oracle Fusion Data Intelligence.
5. Click **Save**.

## About Reporting Configurations

Set up the reporting configurations to specify how data is presented on the key metrics, workbooks, visualizations, dashboards, and reports in Oracle Fusion Data Intelligence.

You must activate a data pipeline for a functional area to be able to set up the reporting configurations. Based on the functional area for which you've activated a data pipeline, you see the applicable reporting configurations. For example, if you've activated a data pipeline for a functional area in Oracle Fusion ERP Analytics, then you see the reporting configurations applicable for Oracle Fusion ERP Analytics.

## About the Reporting Configuration for Enterprise Resource Planning

Specify a value for the Allow Financial Category Upload parameter as you configure reporting for Enterprise Resource Planning.

This parameter provides the ability to upload the financial category in Oracle Fusion Data Intelligence and maintain the mapping independent of Oracle Fusion Cloud Applications. The default value for this parameter is No. If you retain the default value, then Oracle Fusion Data Intelligence uses the financial Category mapping defined in Oracle Fusion Cloud Applications.

## About the Reporting Configuration for Human Capital Management

You specify values for these parameters as you configure reporting for Human Capital Management:

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- Human Capital Management Analytics parameters:
  - Worker Age Band: This parameter specifies the grouping of the ages of workers by certain ranges. For example, less than 30, 30 to 50, and greater than 50 years. Key metrics and analyses related to the headcount of the workers use these age bands. For example, the percentage of workers who are aged 50 and older.
  - Tenure Band: This parameter specifies the grouping of the service years of workers by certain ranges. For example, less than 5, 5 to 10, and greater than 10 years. Key metrics and analyses related to the headcount or diversity factors of the workers use these bands. For example, you can use this parameter to answer a business question such as "Show me the percentage of workers in my organization of various years of service."
  - Months of Service Band: This parameter specifies the grouping of the service months of workers by certain ranges. For example, less than 6 months, 6 to 12 months, and greater than 12 months. Key metrics and analyses related to the headcount or diversity factors of the workers use these bands. For example, you can use this parameter to answer a business question such as "Show me the number of hires grouped by their service months."
  - Performance Band: This parameter specifies the grouping of the performance ratings of workers by certain ranges. For example, high, medium, and low. Key metrics and analyses related to the performance rating of the workers use these performance bands. For example, you can use this parameter to answer a business question such as "Who are the top performers for the current review period in my organization."
  - Potential Band: This parameter specifies the grouping of potential ratings under various headers. For example, High, Medium, and Low. You can configure the rating ranges under these bands.
  - Compa-Ratio Band: This parameter specifies the grouping of worker compa-ratios under various headers. For example, Band 1 with range as 0-80 and Band 2 with range as 81-120.
  - Risk of Loss Band: This parameter specifies the grouping of risk of loss ratings under various headers. For example, High, Medium, and Low. You can configure the rating ranges under these bands.
  - Impact of Loss Band: This parameter specifies the grouping of impact of loss ratings under various headers. For example, High, Medium, and Low. You can configure the rating ranges under these bands.
  - Custom Performance Band: This parameter specifies the grouping of the performance ratings of workers by certain ranges and names defined by you. The other performance band leverages the predefined band names like high, low, and medium. However, in the custom performance band, you can specify custom names and the ranges for the performance ratings. Key metrics and analyses related to the performance rating of the workers can use these custom performance bands. For example, you can use this parameter to answer a business question such as "Who are the outstanding performers for the current review period in my organization." In this example, "Outstanding" could be one of the band names with certain performance rating range.
  - Custom Potential Band: This parameter specifies the grouping of the potential ratings of workers by certain ranges and names defined by the customers. The other potential band leverages the predefined band names like high, low, and medium. However, in the custom potential band, you can specify custom names and the ranges for the potential ratings. Key metrics and analyses related to the potential rating of the workers can use these custom potential bands. For example, you can use this parameter to answer a business question such as "What percentage of the workers

have been rated as uber high in their potential." In this example, "uber high" could be one of the band names with certain potential rating range.

- Learning Overdue Days Band: This parameter specifies the grouping of the learning records by the number of days that its overdue. For example, you can use this parameter to answer a business question such as "Provide the number of learning enrolments grouped by the number of days that they are overdue for completion."
- Workforce Management parameter specifies the reason for reorganization to compute the headcount gain or losses based on the reorganization factor.
- Succession Management parameter specifies the grouping of readiness levels of worker for their change in career under various headers.

## About the Reporting Configuration for Supply Chain Management

You specify values for these parameters as you configure reporting for Supply Chain Management:

For the Inventory FSN Analysis parameters under Supply Chain Management, you can configure the "Cumulative Annual Usage Percentage" value range under the FSN Analysis band:

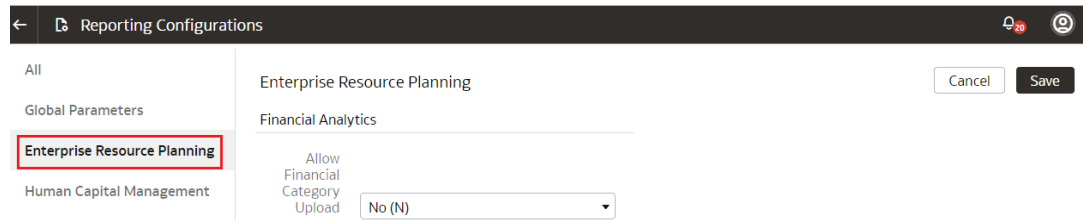
- Fast Moving(F): This parameter is the grouping of Items as "Fast Moving" based on the "Cumulative Annual Usage Percentage" values by certain range specified in the Min(%) and Max(%) columns. Example: If cumulative annual usage value(%) is between 0% to 90% , then classify the item as Fast (F).
- Slow Moving(S): This parameter is the grouping of Items as "Fast Moving" based on the "Cumulative Annual Usage Percentage" values by certain range specified in the Min(%) and Max(%) columns. Example: If cumulative annual usage value(%) is between 91% to 97% , then classify the item as Slow (S).
- Non Moving(N): This parameter is the grouping of Items as "Fast Moving" based on the "Cumulative Annual Usage Percentage" values by certain range specified in the Min(%) and Max(%) columns. Example: If cumulative annual usage value(%) is between 98% to 100% , then classify the item as Non-moving (N).
- The values in the Min(%) and Max(%) columns shouldn't be greater than 100.

## Set Up the Reporting Configurations for Enterprise Resource Planning

Set up the reporting configurations for the Enterprise Resource Planning data model file to specify how the Enterprise Resource Planning-related data is presented on the key metrics, workbooks, visualizations, dashboards, and reports.

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1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Reporting Configuration** under **Application Administration**.
3. On the Reporting Configuration page, click **Enterprise Resource Planning**.



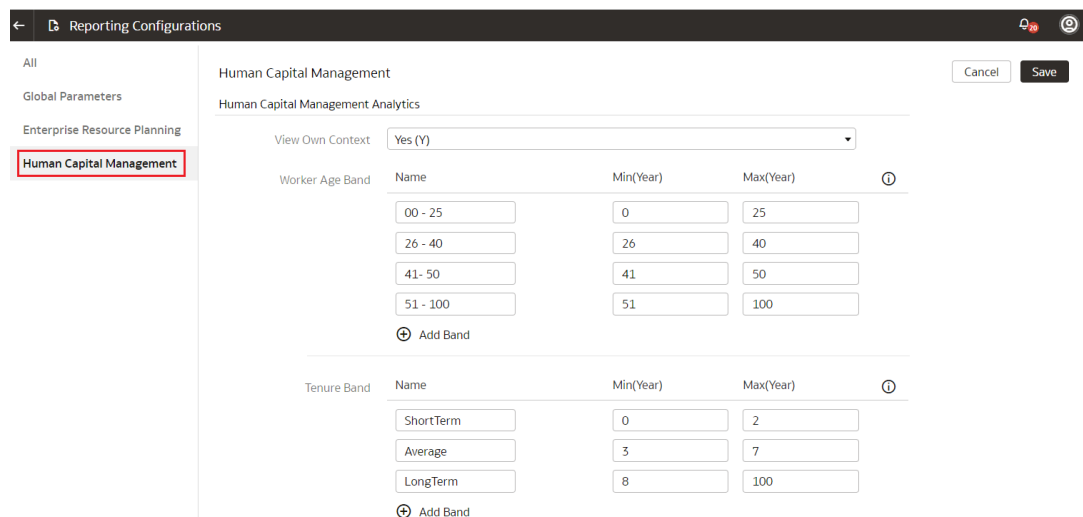
4. Optional: On the Enterprise Resource Planning page, in **Allow Financial Category Upload**, select **Yes** to enable the upload of financial categories to the applicable environment.
5. Click **Save**.

## Set Up the Reporting Configurations for Human Capital Management

Set up the report parameters for your data model file to specify how the Human Capital Management-related data is presented on the key metrics, workbooks, visualizations, dashboards, and reports.

You can use or update the default parameter values where available or set applicable values that meet your business requirements. The Custom Performance and Custom Potential bands don't work with metrics that use the performance ratings in their computation. For example, metrics such as High Performer Turnover, High Performer Retention, and Top Talent Worker Count. Additionally, the 9-box visualization of Performance versus Potential matrix doesn't work with these bands.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Reporting Configuration** under **Application Administration**.
3. On the Reporting Configuration page, click **Human Capital Management**.



4. On the Human Capital Management page, for **Worker Age Band**, specify the age range of the workers.

5. For **Tenure Band**, specify the range of service years of the workers.
6. For **Months of Service Band**, specify the range of service months of the workers.
7. For **Performance Band**, specify the range of worker performance ratings.
8. For **Potential Band**, specify the range of potential ratings for the workers.
9. For **Compa-Ratio Band**, specify the range of compa-ratio values for the workers.
10. For **Risk of Loss Band**, specify the range of risk of loss ratings for the workers.
11. For **Impact of Loss Band**, specify the range of impact of loss ratings for the workers.
12. For **Custom Performance Band**, specify the custom band names and the range of worker performance ratings.
13. For **Custom Potential Band**, specify the custom band names and the range of worker potential ratings.
14. For **Learning Overdue Days Band**, specify the band names and the range of overdue days.
15. In the Workforce Management region, select one or more reasons for reorganization to compute the headcount gain or losses based on the reorganization factor.
16. In the Succession Management region, select the readiness value for each of the readiness levels of the workers.
17. Click **Save**.

## Set Up the Reporting Configurations for Supply Chain Management

Specify the report parameters for your data model file to specify how the Supply Chain Management-related data is presented on the visualizations, dashboards, and reports.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Reporting Configuration** under **Application Administration**.
3. On the Reporting Configuration page, under the Basic tab, click **Supply Chain Management**.

FSN Analysis Band	Name	Min(%)	Max(%)
	Fast moving (F)	0	90
	Slow moving (S)	91	97
	Non-moving (N)	98	100

4. In the Inventory FSN Analysis region:
  - **Fast Moving(F)**: Enter the values in the **Min(%)** and **Max(%)** columns to specify the range for cumulative annual usage percentage for Fast Moving items.

- Slow Moving(S): Enter the values in the Min(%) and Max(%) columns to specify the range for cumulative annual usage percentage for Fast Moving items.
- Non Moving(N): Enter the values in the Min(%) and Max(%) columns to specify the range for cumulative annual usage percentage for Fast Moving items.

5. Click **Save**.

## Deactivate a Data Pipeline for a Functional Area

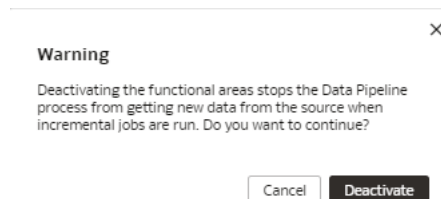
You can deactivate all the incremental setup and jobs of a data pipeline for a functional area.

Deactivating a data pipeline for a functional area ensures that future incremental jobs don't select the specific functional area when the data pipeline runs. You can view the deactivated status of the data pipeline on the Data Configuration page.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
3. On the Data Configuration page, click your service. For example, under Applications, click **Enterprise Resource Planning**.
4. On the service page, for example, the Data Configuration: Oracle Financial Analytics page, click the **Action** menu for the active data pipeline for the functional area that you want to deactivate, and click **Deactivate**.

Offering	Functional Area	Activated On	Created On	Created By	Updated On	Updated By	Status
Financial Analytics	Account Reconciliation		Nov 12, 2021 11:47:10 PM IST	ie.com	Sep 7, 2022 08:16:48 PM IST	ie.com	Active
Financial Analytics	Accounts Payable	Apr 27, 2022 10:57:11 PM IST	Nov 12, 2021 02:29:13 AM IST	ie.com	Sep 7, 2022 08:16:48 PM IST	ie.com	Active
Financial Analytics	Accounts Receivable	Apr 27, 2022 10:57:38 PM IST	Nov 12, 2021 02:29:25 AM IST	ie.com	Sep 7, 2022 08:16:48 PM IST	ie.com	Active
Financial Analytics	Assets	Apr 27, 2022 10:48:26 PM IST	Nov 16, 2021 07:27:38 PM IST	ie.com	Sep 7, 2022 08:16:48 PM IST	ie.com	Active
Financial Analytics	Customer Collections Risk Prediction		Nov 19, 2021 04:07:15 PM IST	ie.com	Sep 7, 2022 08:16:48 PM IST	ie.com	Active
Financial Analytics	Employee Expense	Apr 27, 2022 10:48:06 PM IST	Nov 12, 2021 02:29:01 AM IST	ie.com	Sep 7, 2022 08:16:48 PM IST	ie.com	Active

5. Review the warning message and then click **Deactivate**.



## Delete a Data Pipeline for a Functional Area

You can delete a data pipeline for a functional area prior to activating it.

Deleting a data pipeline for a functional area permanently removes it, so data refreshes of the warehouse won't occur.

1. Sign in to your service.



2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
3. On the Data Configuration page, click your service. For example, under Applications, click **Enterprise Resource Planning**.
4. On the service page, for example, the Data Configuration: Oracle Financial Analytics page, click the **Action** menu for the data pipeline for the functional area that you want to delete, and click **Delete**.

Offering	Functional Area	Activated On	Created On	Created By	Updated On	Updated By	Status
Financial Analytics	Account Reconciliation		Nov 12, 2021 11:47:10 PM IST	xcle.com	Sep 7, 2022 08:16:48 PM IST	o	Activated
Financial Analytics	Accounts Payable	Apr 27, 2022 10:57:11 PM IST	Nov 12, 2021 02:29:13 AM IST	xcle.com	Sep 7, 2022 08:16:48 PM IST	o	Activated
Financial Analytics	Accounts Receivable	Apr 27, 2022 10:57:38 PM IST	Nov 12, 2021 02:29:25 AM IST	xcle.com	Sep 7, 2022 08:16:48 PM IST	o	Activated
Financial Analytics	Assets	Apr 27, 2022 10:48:26 PM IST	Nov 16, 2021 07:27:38 PM IST	m	Sep 7, 2022 08:16:48 PM IST	o	Activated
Financial Analytics	Customer Collections Risk Prediction		Nov 19, 2021 04:07:15 PM IST	y	Sep 7, 2022 08:16:48 PM IST	o	Activated

5. Review the warning message and then click **Delete**.

#### Warning

If you delete this activation, it will be permanently removed along with any existing data copied to the data warehouse. All future data copies to the data warehouse will be discontinued as well.

Cancel Delete

## Refresh a Data Pipeline for a Functional Area

Refresh an activated data pipeline for a functional area to bring in new data for the selected functional area.



When you refresh the data pipeline, the system executes an incremental load immediately. The next scheduled run could take additional time to complete because of any new data. If you had reset a data pipeline for the functional area before refreshing data, then the system runs a full load immediately for that functional area.

#### Note:

Executing an on-demand data refresh while working on the data could cause temporary inconsistencies.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
3. On the Data Configuration page, click your service. For example, under Applications, click **Enterprise Resource Planning**.

- On the service page, for example, the Data Configuration: Oracle Financial Analytics page, click the **Action** menu for the data pipeline for the functional area whose data you want to refresh, and then click **Refresh Data**.

Offering	Functional Area	Activated On	Created On	Created By	Updated On	Updated By	Status
Financial Analytics	Account Reconciliation		Nov 12, 2021 11:47:10 PM IST		Sep 7, 2022 08:16:48 PM IST		Completed
Financial Analytics	Accounts Payable	Apr 27, 2022 10:57:11 PM IST	Nov 12, 2021 02:29:13 AM IST		Sep 7, 2022 08:16:48 PM IST		Completed
Financial Analytics	Accounts Receivable	Apr 27, 2022 10:57:38 PM IST	Nov 12, 2021 02:29:25 AM IST		Sep 7, 2022 08:16:48 PM IST		Completed
Financial Analytics	Assets	Apr 27, 2022 10:48:26 PM IST	Nov 16, 2021 07:27:38 PM IST		Sep 7, 2022 08:16:48 PM IST		Completed
Financial Analytics	Customer Collections Risk Prediction		Nov 19, 2021 04:07:15 PM IST		Sep 7, 2022 08:16:48 PM IST		Completed

- Review the warning message and then click **Refresh Data**.

**Warning**

Executing an on-demand data refresh while working on the data may cause temporary inconsistencies. Do you want to continue?

Cancel Refresh data

## Reload Data for a Data Pipeline

When you reload data for a data pipeline, you start the process of completely refreshing the data in the data warehouse for the functional area.

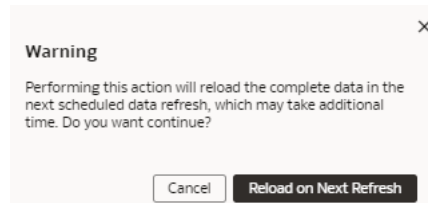
When you issue a request to reload data, the Request History page shows that the request is received and accepted. After you reload the data, the previous data still exists in the data warehouse related to the functional area. On the next data refresh, Oracle Fusion Data Intelligence discards the existing data and loads new data. After reloading the data for the data pipeline, you see the data pipeline for the functional area on the Data Configuration page with the **Completed** status.

In a 24-hour period, you can reload the data for only 4 functional areas's data pipelines.

- Sign in to your service.
- In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
- On the Data Configuration page, click your service. For example, under Applications, click **Enterprise Resource Planning**.
- On the service page, for example, the Data Configuration: Oracle Financial Analytics page, click the **Action** menu for the data pipeline for the functional area that you want to reload, and click **Reload Data**.

Offering	Functional Area	Activated On	Created On	Created By	Updated On	Updated By	Status
Financial Analytics	Account Reconciliation		Nov 12, 2021 11:47:10 PM IST		Sep 7, 2022 08:16:48 PM IST		Completed
Financial Analytics	Accounts Payable	Apr 27, 2022 10:57:11 PM IST	Nov 12, 2021 02:29:13 AM IST		Sep 7, 2022 08:16:48 PM IST		Completed
Financial Analytics	Accounts Receivable	Apr 27, 2022 10:57:38 PM IST	Nov 12, 2021 02:29:25 AM IST		Sep 7, 2022 08:16:48 PM IST		Completed
Financial Analytics	Assets	Apr 27, 2022 10:48:26 PM IST	Nov 16, 2021 07:27:38 PM IST		Sep 7, 2022 08:16:48 PM IST		Completed
Financial Analytics	Customer Collections Risk Prediction		Nov 19, 2021 04:07:15 PM IST		Sep 7, 2022 08:16:48 PM IST		Completed

5. Review the warning message and then click **Reload on Next Refresh**.



## Reset the Data Warehouse

Reset your data warehouse when your data source instance is refreshed from another environment, for example, when the environment is refreshed from production to a test environment. You may also want to reset the data warehouse when the data becomes corrupt.

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After resetting the data warehouse, you must activate all of the data pipelines for the functional areas. See [Activate a Data Pipeline for a Functional Area](#)

### Note:

Your data isn't available until Oracle Fusion Data Intelligence completes all the activations after resetting the data warehouse.

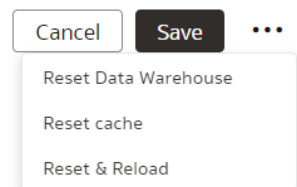
1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
3. On the Data Configuration page, under **Configurations**, click **Pipeline Settings**.
4. On the Pipeline Settings page, click **Actions** (⋮) and then click **Reset Data Warehouse**.

### Data Pipeline

Data Pipeline Status  Enabled

Last Refresh Date Feb 23, 2024 08:26:42 AM IST

Estimated Refresh Completion Not Available



5. Review the warning message, provide the details, and then click **Reset**.

**Warning**

Resetting your data warehouse will delete all your data. This action is irreversible. All the activated functional areas will be moved to Saved state and they need to be reactivated again. Do you want to continue?

Instance

Authorized By

Name

## Reset the Cache

The data augmentation source column information is cached in the browser cache and is maintained for a week. If your source has new columns and they don't display in the Data Augmentation wizard, then you can reset the browser cache and retry data augmentation.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
3. On the Data Configuration page, under **Configurations**, click **Pipeline Settings**.
4. On the Pipeline Settings page, click the **Reset Cache** menu option.

Data Pipeline

Data Pipeline Status  Enabled

Last Refresh Date Feb 23, 2024 08:26:42 AM IST

Estimated Refresh Completion Not Available

⋮

- Reset Data Warehouse
- Reset cache
- Reset & Reload

You see a message that cache has been cleared successfully.

# Pipeline Settings Cache successfully cleared   ⋮

Data Pipeline

Data Pipeline Status  Enabled

Last Refresh Date Not Available

Global Parameters

Analytics Language

Analytics Currency

Exchange Rate Type

Initial Extract Date

Data Refresh Schedule

Interval

## Reset and Reload the Data Source

As a functional administrator, you can reset and reload the data source for several reasons.

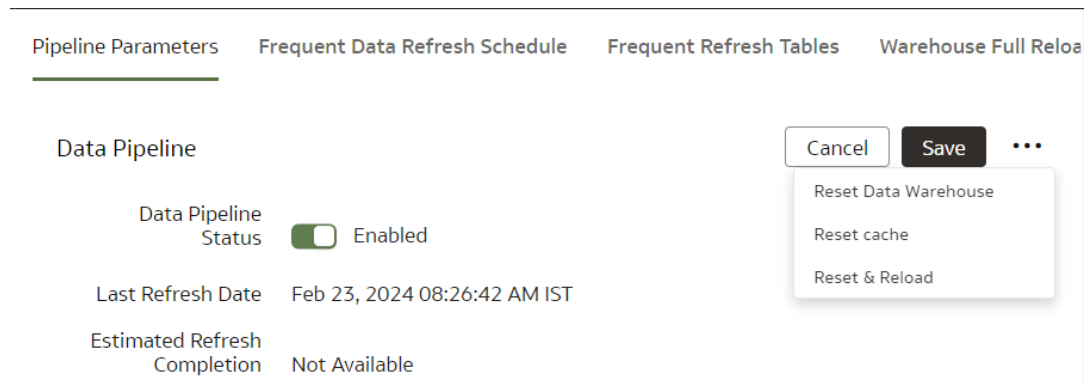
For example:

- If you need to change the data source for some reason, then you may want to reset the present data source back to the original state.
- If there is any data issue with the source system and you need to start the entire pipeline all over again.
- Initially if you set up the connection and the pipeline to test some things and then want to start from the beginning again.

You can reset and reload data for all the activated functional areas, augmentations, and custom data configurations. This request may take a long time as it requires all data to be discarded and fetched again. Other requests like the incremental and full load won't start until this request completes.

Ensure that **Reset and Reload the Data Source** is enabled in **Pipeline Features** under the Generally Available Features tab on the Enable Features page prior to resetting and reloading the data source. See [Enable Generally Available Features](#).

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
3. On the Data Configuration page, under **Configurations**, click **Pipeline Settings**.
4. On the Pipeline Settings page, click **Actions** (⋮) and then click **Reset & Reload**.



5. Review the warning message, provide the details, and then click **Submit**.

### Reset & Reload ✕

Reset and reload data for all activated functional areas, augmentations and custom data configurations. Note that this request may take a long time as it requires all data discarded and fetched again. Also other requests like Incremental and full load will not be started until this request completes.

**▲ Once the request is submitted, it can't be canceled.**



Select one or more source data to reload

Datasource

Schedule

Run Immediately

Schedule for later

Time   

Timezone Asia/Calcutta

Notes

Authorized By

Comments

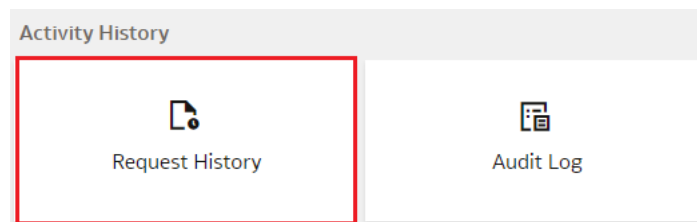
## View Load Request History

You can view the data pipeline load request history by functional area, load type, and status along with other details for tracking and reference purposes.

The request history doesn't display the incremental loads. Because the request history shows only past load requests, any unscheduled loads don't affect the existing pipelines and you can reactivate any functional area or augmentation.

### LiveLabs Sprint

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
3. On the Data Configuration page, under **Activity History**, click **Request History**.



4. On the Request History page, view the history of loads that have been performed.

## About Request Types and Statuses

When you perform tasks on a functional area, you can review the different types of requests involved with those tasks in the Request History area.

### Request Types

Request Type	Description
Batch Request	An operation that performs multiple functions such as mapping attributes, or importing and export objects.
Content Patch	A content patch upgrade run.
Full Load (Adhoc)	A full load run that happens immediately upon request.
Full Load (Scheduled)	A request to schedule a full load run.
Module Reset	A request to delete an active functional area or source table.
Refresh Data	The system ran a request to refresh data.
Reset	A request to refresh the data in the data warehouse for the functional area.
Reset Data Warehouse	A request to reset the warehouse. This reset deletes all the customer-added warehouse data.
Target Model Upgrade	A request to upgrade the target model to the latest available version.

### Request Statuses

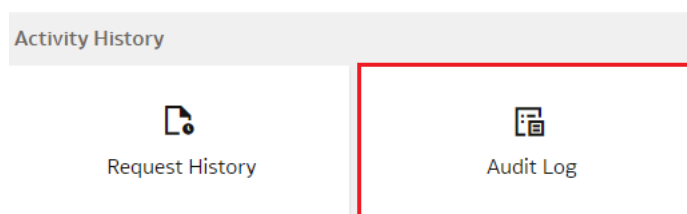
Request Status	Description
Activation Completed	The job ran successfully and is now complete.
Activation in Progress	<ul style="list-style-type: none"> <li>• The job is running.</li> <li>• The job is resolving.</li> </ul>
Activation Scheduled	<ul style="list-style-type: none"> <li>• Job is scheduled to run within one minute.</li> <li>• Job is scheduled to run at the specified date and time.</li> </ul>
Deactivation Complete	The job is removed from Active status.
InActive	The job isn't saved or scheduled to run.
Received	The job request is submitted.
Saved	Job is saved but not scheduled to run.
Troubleshooting	The job is taking a long time and Oracle is investigating it.

## View the Audit Log

You can view the data configuration-related actions that were performed such as activation of a data pipeline for a functional area, setting up of reporting parameters, and saving a data augmentation.

 LiveLabs Sprint

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
3. On the Data Configuration page, under **Activity History**, click **Audit Log**.



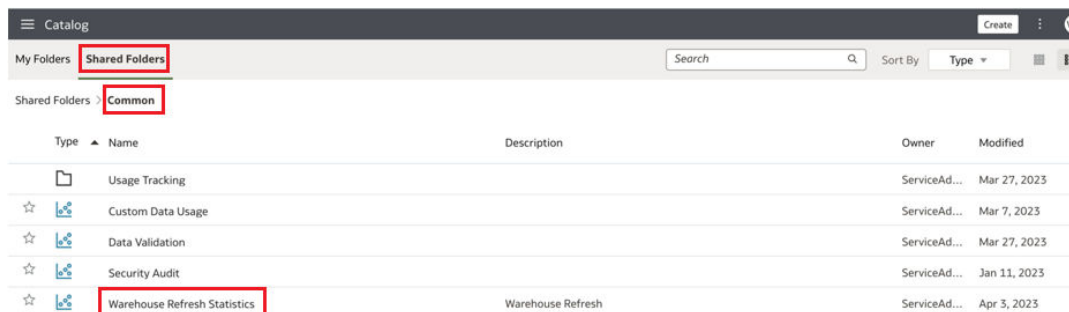
4. On the Audit Log page, view the list of all the performed actions.

## View Records Rejected in Extraction






The extraction service stores rejected records in the Warehouse Refresh Statistics dashboard. You can view this dashboard to see which records were rejected and analyze why they were rejected.

For example, you can currently view the rejected records in Oracle Fusion HCM Analytics. See [Tables With Data Rejection Details](#).

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence click **Projects**.
3. On the Catalog page, click **Shared Folders**, click **Common**, and then click **Warehouse Refresh Statistics**.



The screenshot shows the Oracle Fusion Data Intelligence Catalog page. The 'Shared Folders' and 'Common' tabs are highlighted with red boxes. Below the tabs is a table listing various folders. The 'Warehouse Refresh Statistics' folder is highlighted with a red box in the table.

Type	Name	Description	Owner	Modified
	Usage Tracking		ServiceAd...	Mar 27, 2023
	Custom Data Usage		ServiceAd...	Mar 7, 2023
	Data Validation		ServiceAd...	Mar 27, 2023
	Security Audit		ServiceAd...	Jan 11, 2023
	Warehouse Refresh Statistics	Warehouse Refresh	ServiceAd...	Apr 3, 2023

4. In the Warehouse Refresh Statistics dashboard, click the Related Reject Records tab to view the records that were rejected.



Warehouse Refresh Statistics

Job Identifier | Reject Record Description | Table Name | Year | Quarter | Month | Week | Process Description

Related Reject Records

Key Values	Primary Key Columns	Count of Reject Records
0	EvalItemid	2
0    null    null    0    null	CandProfileUsageld    EffectiveEndDate    EffectiveLatestChange    EffectiveSequence    EffectiveStartDate	2
100000233056497    300000142100870    S-005-10001	InventoryItemid    LotNumber    Organizationid	2
100000471894766    300000178527892    BBL100000	InventoryItemid    LotNumber    Organizationid	2
100000471894766    300000178527892    FFL100000	InventoryItemid    LotNumber    Organizationid	2
100000471894766    300000178527892    FFL100001	InventoryItemid    LotNumber    Organizationid	2
100000471894766    300000180500778    BBL10001	InventoryItemid    LotNumber    Organizationid	2
100000471894766    300000180500778    FFL10001	InventoryItemid    LotNumber    Organizationid	2
100000471894766    300000180500787    BBL10001	InventoryItemid    LotNumber    Organizationid	2
100000471894766    300000180500787    FFL10001	InventoryItemid    LotNumber    Organizationid	2
100000471894766    300000180500796    BBL10001	InventoryItemid    LotNumber    Organizationid	2
100000471894766    300000180500796    FFL10001	InventoryItemid    LotNumber    Organizationid	2
100000490929546	PROFILE_ITEM_ID	85
100000490929548	PROFILE_ITEM_ID	85
100000490929568	PROFILE_ITEM_ID	85
100000490929570	PROFILE_ITEM_ID	85
100000490929585	PROFILE_ITEM_ID	85

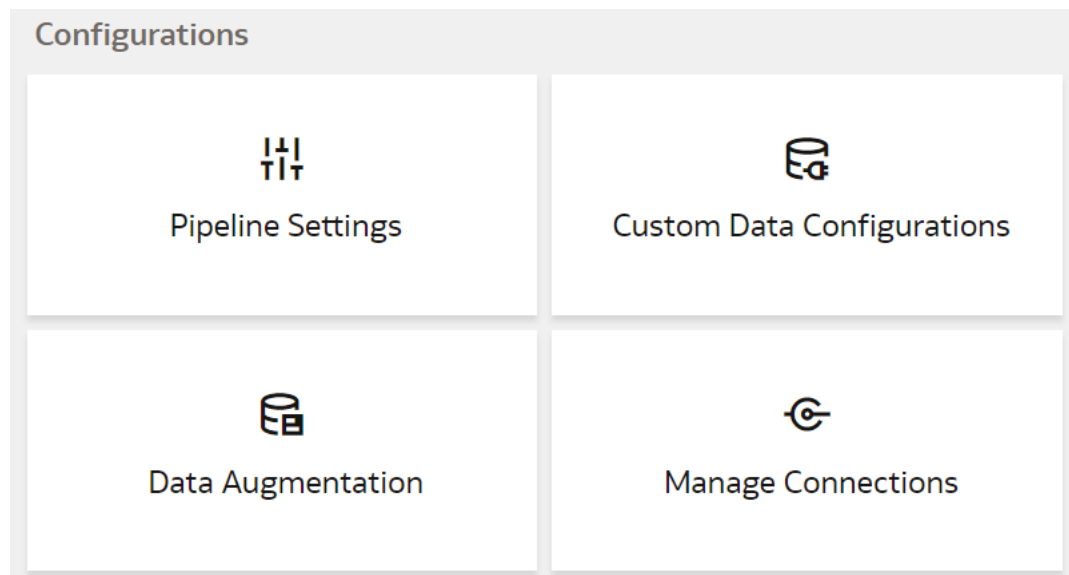
Overview | Job Details | **Related Reject Records**

## Prioritize Datasets for Incremental Refresh (Preview)

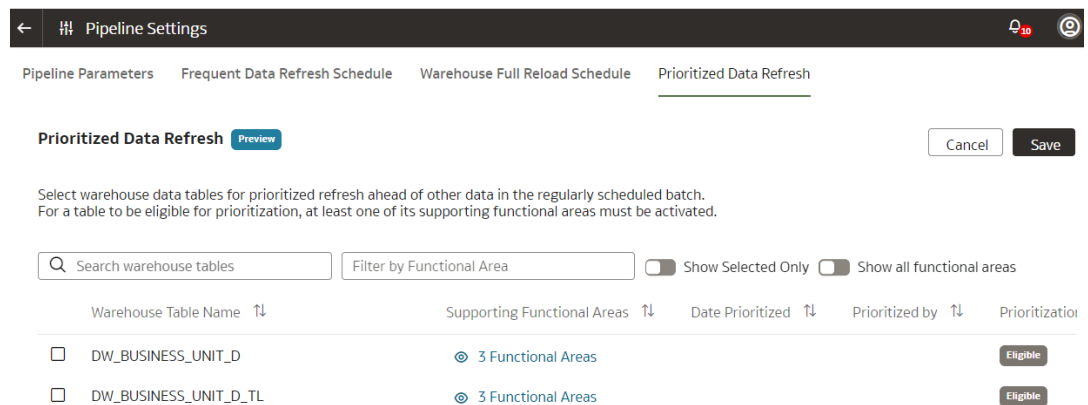
As a functional administrator, you can select datasets to prioritize for incremental refresh over others. For example, at the end of the quarter, you want to prioritize some of the datasets that have bookings data over other datasets.

You can search for and choose datasets based on the functional areas. The incremental refresh process automatically selects the dependent datasets. For example, if you select DW\_GL\_JOURNAL\_CF, then the incremental refresh process automatically pulls in DW\_GL\_JOURNAL\_F. The incremental refresh process runs the priority dataset refresh first from end-to-end, followed by the regular incremental refresh. The objects processed in the priority dataset refresh are reprocessed in the regular incremental refresh. The prioritized datasets are automatically available for frequent data refresh. See [Schedule Frequent Refreshes of Data](#).

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
3. On the Data Configuration page, under **Configurations**, click **Pipeline Settings**.



4. On the Pipeline Settings page, click the Prioritized Data Refresh tab.



5. In the Prioritized Data Refresh section, select the datasets that you want for the priority refresh.
6. Click **Save**.

## About Augmenting Your Data

Enhance the data used in your analytics with additional data, various calculations, and combinations to enable comprehensive analytics and multi-faceted visualizations. By augmenting the data, you can reduce or even eliminate the manual intervention in developing meaningful insight of the business data.

 [LiveLabs Sprint](#)

Data augmentation enables you to augment the data you bring from Oracle Fusion Cloud Applications and other sources that you can connect to using the Oracle Fusion Data Intelligence connectors. See the *Connectors* section in [Preview Features](#). You can add data to your reports from various data stores (Business Intelligence view objects) of the Oracle Fusion Cloud Applications data sources. You can augment your reports with datasets created by

extending an existing entity or group of facts, by adding a new dimension in the target instance, and by adding a new fact in the target instance.

Select the columns from data stores, create an augmentation dataset, and use that dataset to create data pipelines for functional areas. Using an augmentation dataset enables you to seamlessly extract and load data from additional Oracle Fusion Cloud Applications data stores and make the data available to tables in the data warehouse. You can then use the data for visualization and analysis. To find the data stores that are available for extraction using augmentation, see the *Data Stores* section in *Reference for Oracle Fusion SCM Analytics*, *Reference for Oracle Fusion HCM Analytics*, and *Reference for Oracle Fusion ERP Analytics*. Although there is no technical limit, you can create a maximum of hundred data augmentations for a single tenant to ensure optimal performance of all data pipelines. Contact Oracle Support if you have further questions.

Here are a few use cases when augmenting your Oracle Fusion Cloud Applications data with data from several data stores enables in-depth and focused insights:

- Product sales – Add similar product information from different data sources to create a report that compares similar products in a specific region.
- Average of expense invoices – Add various expense invoices to create an average of periodic expenses.

## Augment Your Data

You can supplement the data in your reports by using datasets that you create with specific columns from various data stores (Business Intelligence view objects) of the Oracle Fusion Cloud Applications data sources.

Refer to [Review Database Lineage Mappings and View Objects](#) while deciding which view objects to use in the data augmentations.

While creating a data augmentation, you can select these:

- Augmentation Type: When you want to create a data augmentation on the data loaded from a connector or from the Oracle Fusion Cloud Applications source, you need to create a dimension with a column identified as "primary key" and then join this dimension table with a fact table where the same column is assigned the Dimension attribute, so that column is your join key. In this drop-down list, you can select the appropriate step.
- Source Dataset Type: For a dataset that doesn't require any transform, select Supplemental Data. If transform is required, then select the Transformation option.
- Pillar: This option is available if your source is Oracle Fusion Cloud Applications. Select the applicable pillar as the data source. For sources that have only one pillar or don't have any pillars, this option isn't visible.
- Source Table Type: You can use the system provided or customer provided source tables. The system provided tables are pre-validated by Oracle Fusion Data Intelligence. The customer provided tables are other source tables that are available for extraction but aren't validated by Oracle Fusion Data Intelligence. As a user with the functional administrator or system administrator application role, you can allow usage of a particular table that isn't pre-validated by Oracle Fusion Data Intelligence. However, Oracle can't ensure the success of processing such custom tables or any performance impacts, such as delays in the daily refreshing of data. For the remote agent sources like on-premises E-Business Suite, PeopleSoft, and JD Edwards, use the system provided source tables option. The extract service can't connect to these remote sources directly to fetch the column list for the customer provided table.

- **Source Table:** You can provide a single table name or a comma separated list of source table names in this field.

While creating a data augmentation, you can change the size of a column. However, you must ensure that the maximum size is within the allowed permission limit for a given datatype in the target database. To determine the maximum permissible size for each data type, see the "Oracle Built-in Data Types" section in the Oracle database documentation. Currently, the allowed datatypes in data augmentation are DATE, NUMBER, TIMESTAMP, and VARCHAR2.

After you create the augmentations, you see them on the Data Augmentation page with one of these statuses:

- **Activation in Progress** - You can't edit, delete, or schedule a data augmentation pipeline job while activation is in progress.
- **Activation Completed** - You can edit the data augmentation to add or delete attributes of the view objects and save the changes. You can't modify the schedule in this status.
- **Activation Scheduled** - You can edit the data augmentation to add attributes of the view objects, save the changes while retaining the existing schedule, reschedule the execution date and time, or execute the plan immediately.

 **Note:**

During the activation process, if the number of invalid records is substantial, then Oracle Fusion Data Intelligence rejects the data augmentation. You can view the DW\_ERR\_RECORDS table to understand why the input data has been rejected.

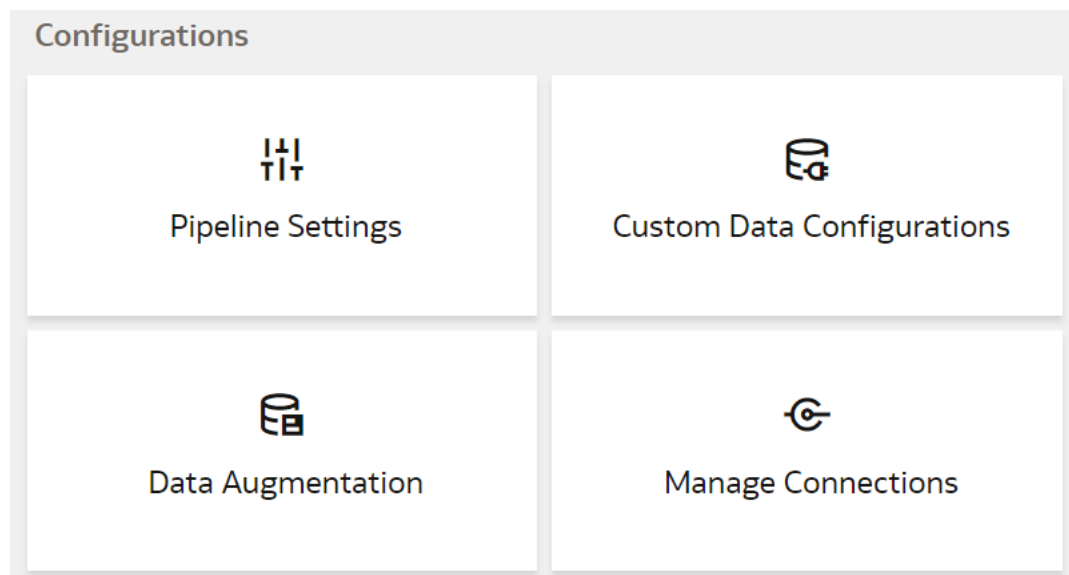
You can change the names of the columns that you've added from the various data sources in your data augmentation. Later if you delete a data augmentation, then you must wait for the daily incremental run to complete to see the change in the reports, visualizations, and workbooks.

When you edit an augmentation, Oracle Fusion Data Intelligence submits a request to refresh the data immediately. During this time, you can't perform another edit action. You must ensure not to modify the definition of the data augmentation pipeline job while the job is in process. In case you need to modify the job definition while in process, then you must resubmit the data augmentation pipeline job.

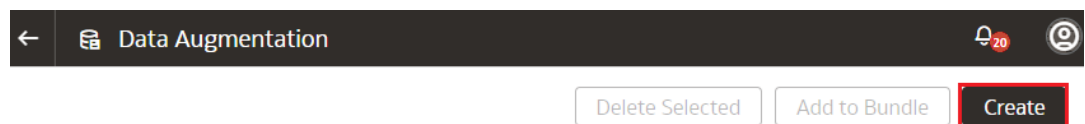
Recommended practices:

- Don't name two data augmentations the same to avoid failure.
- Specify incremental keys to ensure daily refresh.
- Ensure that the concatenation of the Primary Key columns doesn't exceed the maximum length of 8192 to avoid failure of your data augmentation.
- Don't specify a subject area if you've a complex semantic model; not specifying results in extract, transfer, and load only.
- Data augmentations have lower priority than the prebuilt pipelines and may get rejected if they overlap during the scheduled pipeline incremental runs.
- If using frequent data refresh for specific datasets, then don't schedule data augmentations on the same sources or targets. For example, don't run Extend Entity for an invoice, while frequent data refresh for invoice is on.
- Use data augmentations for specific, targeted extracts. For larger scale or complex projects, consider custom ETL.

- If the one primary key that you defined might not make the record unique, then consider changing the primary key to include more columns to make the record unique.
  - Ensure that you apply a filter on the column selection if the data augmentation takes a long time and fails with timeout error. This avoids long running data augmentations.
  - If you've enabled the Extract Date option in a data augmentation, then the records that are created before the extract date won't be available in Oracle Fusion Data Intelligence. To bring the data before the extract date, deselect the Extract Date option by editing the data augmentation. Once changes are done, reset and refresh data to enable the data augmentation to re-extract in full.
1. Sign in to your service.
  2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
  3. On the Data Configuration page, under Configurations, click **Data Augmentation**.



4. On the Data Augmentation page, click **Create**.



You can create the following augmentation types:

- [Create a dimension](#)
- [Create a fact](#)
- [Extend an entity](#)
- [Create an input dataset](#)

## Create Dimension Augmentation Type

You can augment your reports with datasets created by adding a new dimension in the target instance.

Ensure that the custom dimensions that you create in augmentations are used by facts. If they aren't used, then the custom dimensions aren't visible in the subject areas. See [Create Fact Augmentation Type](#).

You must ensure that any column with primary key doesn't have null values, otherwise the extract process rejects the entire dataset or table. If there are multiple columns with primary keys, then you must ensure that none of those columns have null values. If any of them have null values, then Oracle Fusion Data Intelligence rejects the entire extraction job. If Oracle Fusion Data Intelligence rejects the extraction job, then the corresponding augmentation is also rejected.

1. In step 1 of the Data Augmentation wizard, select **Create Dimension** in **Augmentation Type** to add a new dimension in the target instance.

2. Select **Supplemental Data (Regular)** in **Source Dataset Type**.
3. In **Pillar**, select a product pillar; for example, **Enterprise Resource Planning**.
4. In **Source Table Type**, specify the source table type using either of the options and then click **Next**:
  - Select **System Provided** and then in **Source Table**, select a table to which you want to add the new dimension.
  - Select **Customer Provided** and then in **Source Table**, enter the name of the table to which you want to add the new dimension.
5. In step 2 of the wizard, select the check box for the attributes from the source table that you want in your new dimension, and then click **Next**.
6. In step 3 of the wizard, click **Action** icon for each of the selected attributes to specify the **Type** and **Treat as** settings, and then click **Next**.
7. In step 6 of the wizard, provide the following details and click **Finish** to save and schedule your data augmentation pipeline job:

- a. Name your augmentation pipeline job; for example, `Customer Class Code`.
- b. Enter a suffix for the target table name using underscore in place of spaces between words and don't use special characters; for example, `Customer_Class_D`. The augmentation process automatically creates the target table name.
- c. Provide a description.
- d. Select the functional area and one or multiple subject areas in which you want to include this augmentation pipeline job.
- e. Specify the options to save the data augmentation pipeline job without executing it, or schedule the execution date and time, or execute it immediately.

## Create Fact Augmentation Type

You can augment your reports with datasets created by adding a new fact in the target instance.

If you've created custom dimensions for augmentations, then you can select such dimensions to map to the column that you identify as the Dimension entity type. This enables the custom dimensions to be visible in the subject areas.

You must ensure that any column with primary key doesn't have null values, otherwise the extract process rejects the entire dataset or table. If there are multiple columns with primary keys, then you must ensure that none of those columns have null values. If any of them have null values, then Oracle Fusion Data Intelligence rejects the entire extraction job. If Oracle Fusion Data Intelligence rejects the extraction job, then the corresponding augmentation is also rejected.

1. In step 1 of the Data Augmentation wizard, select **Create Fact** in **Augmentation Type** to add a new fact table in the target instance.

2. Select **Supplemental Data (Regular)** in **Source Dataset Type**.
3. In **Pillar**, select a product pillar; for example, **Enterprise Resource Planning**.
4. In **Source Table Type**, specify the source table type using either of the options and click **Next**:

- Select **System Provided** and then in **Source Table**, select a table to which you want to add the new dimension.
  - Select **Customer Provided** and then in **Source Table**, enter the name of the table to which you want to add the new dimension.
5. In step 2 of the wizard, select the check box for the attributes from the source table that you want in your new fact, and then click **Next**.
  6. In step 3 of the wizard, click **Action** icon for each of the selected attributes to specify the **Type** and **Treat as** settings and then click **Next**.  
Ensure that you select at least one attribute as a measure to proceed through the wizard.
  7. In step 5 of the wizard, specify the dimension in the data warehouse that you want to map to the column that you identified as the Dimension entity type and then click **Next**.
  8. In step 6 of the wizard, provide the following details and click **Finish** to save and schedule your data augmentation pipeline job:
    - a. Name your augmentation pipeline job; for example, `AP Distribution`.
    - b. Enter a suffix for the target table name using underscore in place of spaces between words and don't use special characters; for example, `AP_DISTRIBUTION_F`. The augmentation process automatically creates the target table name.
    - c. Provide a description.
    - d. Select the functional area and one or multiple subject areas in which you want to include this augmentation pipeline job.
    - e. Specify the options to save the data augmentation pipeline job without executing it, or schedule the execution date and time, or execute it immediately.

## Extend an Entity

You can augment your reports with datasets created by extending an existing entity or group of facts.

While extending an entity or group of facts, ensure that you select Descriptive Flex Field (New) as the source dataset type to select the necessary columns for the augmentation. The existing approach of skipping the column selection is deprecated and won't be available from a future release.

You must ensure that any column with a primary key doesn't have null values, otherwise the extract process rejects the entire dataset or table. If there are multiple columns with primary keys, then you must ensure that none of those columns have null values. If any of them have null values, then Oracle Fusion Data Intelligence rejects the entire extraction job. If Oracle Fusion Data Intelligence rejects the extraction job, then the corresponding augmentation is also rejected.

1. In step 1 of the Data Augmentation wizard, select **Extend Entity** in **Augmentation Type**.



2. Select **Descriptive Flex Field (New)** in **Source Dataset Type**.
3. In **Pillar**, select a product pillar; for example, **Enterprise Resource Planning**.
4. In **Source Table Type**, specify the source table type using either of the options:
  - Select **System Provided** and then in **Source Table**, select a table to which you want to add the new dimension.
  - Select **Customer Provided** and then in **Source Table**, enter the name of the table to which you want to add the new dimension.
5. Select a source table from the list of view objects that support descriptive flex fields and then click **Next**.
6. In step 2 of the wizard, select the check box for the attributes from the source table that you want in your target table, and then click **Next**.
7. In step 3 of the wizard, click the **Action** icon for each of the selected attributes to specify the **Type** and **Treat as** settings, and then click **Next**.
8. In step 4 of the wizard, select the entity or group of fact tables to extend and its primary keys, and then click **Next**. For example, if you select **ARTransaction** as the entity to extend, then this process joins the prebuilt **InvoiceID** descriptive flex field using the **s\_k\_5000** primary join key with all the fact tables in the ARTransaction entity.
9. In step 5 of the wizard, choose the primary keys for the attributes that you had specified to be treated as dimensions.
10. In step 6 of the wizard, provide the following details and click **Finish** to save and schedule your data augmentation pipeline job:
  - a. Name your augmentation pipeline job; for example, `AP Invoice Header`.
  - b. Enter a suffix for the target table name using underscore in place of spaces between words and don't use special characters; for example, `AP_Invoice_Header_DFF`. The augmentation process automatically creates the target table name.
  - c. Provide a description.
  - d. Select the functional area and one or multiple subject areas in which you want to include this augmentation pipeline job.
  - e. Specify the options to save the data augmentation pipeline job without executing it, or schedule the execution date and time, or execute it immediately.

## Create Input Dataset Augmentation Type

You may require a dataset to be copied into a target warehouse table, as is, and then perform semantic model extension on it. In such cases, create an input dataset.

This dataset isn't associated with any other augmentations. Based on the incremental schedule, the data in this dataset gets refreshed during scheduled pipeline refresh. But unlike other augmentations, this augmentation isn't linked to other augmentations, and you can't change the attributes as dimension or measure. This dataset isn't associated with any subject area because it copies the dataset from source and creates a warehouse table. You can perform semantic model extension after the table is created. To use this dataset to build the joins or incorporate an object from the dataset into your semantic model, you must run an incremental load prior to using it because the incremental load populates the dataset.

1. In step 1 of the Data Augmentation wizard, select **Create Input Dataset** in **Augmentation Type** to add a new warehouse table.

← Fusion > Data Augmentation

Cancel 1 Source Selection 2 Attribute Selection 3 Column Options 4 Entity Options 5 Dimension Keys 6 Schedule and Save Next →

Select a pillar and a source table to add a data augmentation to the warehouse.

Augmentation Type: Create Input Dataset

Source Dataset Type: Supplemental Data

Pillar: Enterprise Resource Planning

Source Table Type: System Provided

Source Table: Select Source Table

2. Select **Supplemental Data** in **Source Dataset Type**.
3. In **Pillar**, select a product pillar; for example, **Enterprise Resource Planning**.
4. In **Source Table Type**, specify the source table type using either of the options and then click **Next**:
  - Select **System Provided** and then in **Source Table**, select a table whose attributes you want to add into the input dataset.
  - Select **Customer Provided** and then in **Source Table**, enter the name of the table whose attributes you want to add into the input dataset
5. In step 2 of the wizard, select the check box for the attributes from the source table to add to the target table, and then click **Next**.
6. In step 3 of the wizard, select the settings for the selected columns, and then click **Next**.
7. In step 6 of the wizard, provide the following details and click **Finish** to save and schedule your data augmentation pipeline job:

- a. Provide a name and description for your augmentation.
- b. Enter a suffix for the target table name using underscore in place of spaces between words and don't use special characters; for example, `Customer_Class_D`. The augmentation process automatically creates the target table name.
- c. Specify the options to save the data augmentation pipeline job without executing it, or schedule the execution date and time, or execute it immediately.

## Create a Dimension Alias

Dimension alias are alias names on the warehouse dimension tables. You can specify the alias names for the Dimension type augmentations and the data that's in the warehouse already as dimensions. The alias names enable you to reuse the existing warehouse tables with different names in the subject areas.

You create dimension aliases as a type of augmentation. This is useful when you want to reinstate a dimension for analysis. For example, if the Purchase Requisition has columns such as "Requested By", "Ordered By", and "Received By", all of which are different types of employees, and you need to analyze for each type, then you need to join the fact table to the employee table for each type. In this case, the employee dimension is aliased as "Requested By Employee Dim", "Ordered By Employee Dim" and "Received By Employee Dim" and joined to the fact table using the appropriate keys.

When you create the aliases, Oracle Fusion Data Intelligence doesn't copy the data for the dimension aliases. These augmentations don't have a pipeline status, but they are visible in the subject area.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
3. On the Data Configuration page, under **Configurations**, click **Data Augmentation**.
4. On the Data Augmentation page, click **Create**, and select **Dimension Alias**.



5. In the Add Dimension Alias dialog, in **Source Dimension**, select a dimension from the source tables such as Employee.

### Add Dimension Alias ✕

Select a source dimension to present with an aliased name in selected Subject Areas.

Source Dimension \*

Select a dimension ▼

Dimension alias \*

Provide an alias name for display

Table Name \*

DW\_FA\_X\_

Subject Areas to expose alias

Select one or more Subject Areas

Description \*

Enter dimension alias description

---

Cancel Save

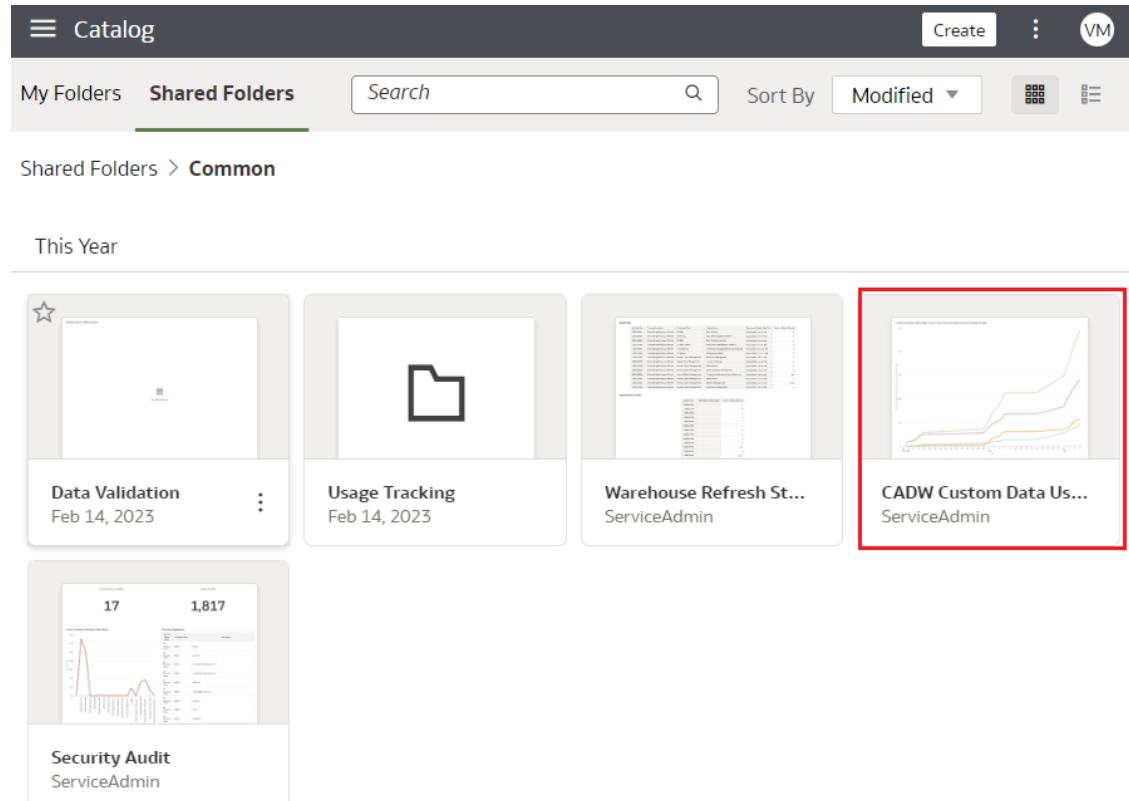
6. In **Dimension Alias**, enter a name such as Employee Dim.  
In **Table Name**, Oracle Fusion Data Intelligence displays the name such as DW\_FA\_X\_EMPLOYEE\_DIM.
7. In **Subject Areas to expose alias**, select one or more subject areas from the subject areas where the original source dimension exists.
8. Add a description of the dimension alias.
9. Click **Save**.

## About Managing Data Connections

You can connect to a variety of data sources and remote applications to provide the background information for reports. You can blend the additional data from the various data sources with the prebuilt datasets to enhance business analysis.

Oracle Fusion Data Intelligence can connect to other pre-validated data sources such as Oracle Object Storage, cloud applications such as Google Analytics, and on-premises applications such as Oracle E-Business Suite.

You can view the usage of capacity for custom data that's loaded into Oracle Fusion Data Intelligence through the connectors in the Custom Data Usage dashboard available in the Common folder. The dashboard shows data loaded daily and monthly from each of the activated external data sources.



## Topics

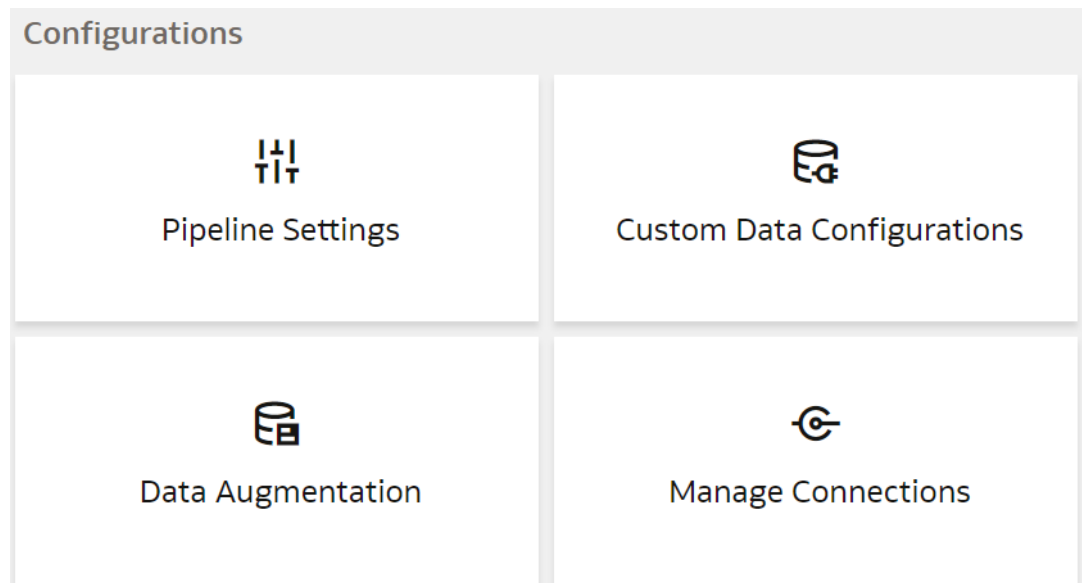
- [About Date and Timestamp Formatting for CSV File-based Extractors](#)
- [Create a Data Connection Type](#)
- [Edit a Data Connection Type](#)
- [Delete a Data Connection Type](#)
- [Create a Data Connection](#)
- [Test a Data Connection](#)
- [Update a Data Connection](#)
- [Delete a Data Connection](#)
- [Connect With On-premises Sources](#)
- [Connect with Cloud File Storage Sources](#)
- [Connect With Cloud Sources](#)

## Create a Data Connection Type

Connection Type specifies the source to which you're connecting. A connection type can have multiple connections.

You can create a custom data source type for any remote data connection.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
3. On the Data Configuration page, click **Manage Connections** under **Configurations**.



4. On the Manage Connections page, click **Create** and then click **Connection Type**.



5. In the Create Connection Type dialog, enter the **Name**, **Identifier**, and **Prefix for warehouse** for the connection type.

6. Click **Add Property** and enter the parameters for each property that defines the connection.
7. When you've finished adding the connection properties, you can reorder them as needed.
8. Click **Save the Connection Type**.

The new connection is available on the Connections page.

## Edit a Data Connection Type

If the properties or parameters for a data connection type change, you can edit them.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
3. On the Data Configuration page, click **Manage Connections** under **Configurations**.
4. On the Manage Connections page, click **Connection Types** and then click or search for the connection type you want to edit.

You can't edit or delete Oracle-managed connections.

5. Click the **Action** button next to the connection type you want to change.
6. In the dialog box for the connection type, edit the details for your connection type, and then click **Save**.

## Delete a Data Connection Type

You can delete a data connection type if you don't need it anymore.



### Note:

After you delete a connection type, you can't create new data connections to it.

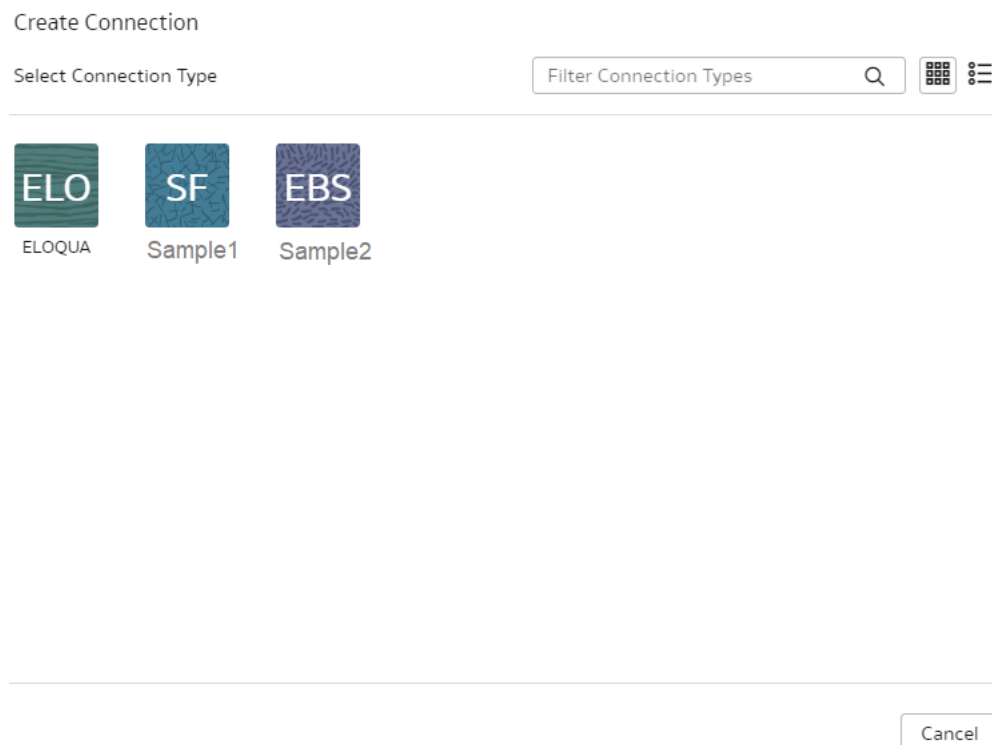
1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.

3. On the Data Configuration page, click **Manage Connections** under **Configurations**.
4. On the Manage Connections page, click **Connections** and then select or search for the connection you want to test.
5. Click the **Action** menu for the connection and select **Delete**.
6. In the Delete Connection dialog box, click **Delete**.

## Create a Data Connection

You create a data connection to a data source to load data from that source into Oracle Fusion Data Intelligence. You can create a connection for any available connection type.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
3. On the Data Configuration page, click **Manage Connections** under **Configurations**.
4. On the Manage Connections page, click **Create** and then click **Connection**.
5. In the Create Connection dialog, click or search for the connection type you want to create.



6. In the dialog box for the connection, enter the details for your connection in the fields.
7. Click **Save**.

The new connection is available on the Connections page.

## Test a Data Connection

After you create a data connection, you should test it to ensure it works properly.



1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
3. On the Data Configuration page, click **Manage Connections** under **Configurations**.
4. On the Manage Connections page, click **Connections**, then select or search for the connection you want to test.
5. Click the **Action** menu for the connection and select **Test Connection**.
6. On the Request History page, check the status of the request to test the connection.

## Update a Data Connection

When you first make a data connection, or when you make changes, you need to initialize and refresh it.

1. Sign in to the Oracle Cloud Infrastructure Console.
2. In Oracle Cloud Infrastructure Console, click the Navigation menu icon in the top left corner.
3. Click **Analytics & AI**. Under Analytics, click **Fusion Analytics Warehouse**.
4. Navigate to your service instances page.
5. On the Instances page, click the instance for which you want to update the service.
6. Click **Connections**, then select or search for the connection you want to test.
7. Click the **Action** menu for the connection and select **Initialize/Refresh Connection**.

## Delete a Data Connection

You can delete a custom data connection if you don't need it anymore.

Ensure that you delete the functional areas, data augmentations, and custom data configurations related to the data connection before deleting it. You can't update or load data from deleted data connections to the warehouse.

### Note:

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
3. On the Data Configuration page, click **Manage Connections** under **Configurations**.
4. On the Manage Connections page, click **Connections**, then select or search for the connection you want to test.
5. Click the **Action** menu for the connection and select **Delete**.
6. In the Delete Connection dialog box, click **Delete**.

## Connect With On-premises Sources

Connect with your on-premises applications to provide the background information for reports.

You can blend the additional data from these data sources with the prebuilt datasets to enhance business analysis.

## Set up the Remote Agent to Load Data into Fusion Data Intelligence (Preview)

As a service administrator, you can use an extract service remote agent to connect to your on-premises systems such as E-Business Suite, Peoplesoft, and JD Edwards, load data from these on-premises systems into Oracle Fusion Data Intelligence, and then use the on-premises data to create data augmentations.

After connecting to your on-premises system, the remote agent extracts the data and loads it into the autonomous data warehouse associated with your Oracle Fusion Data Intelligence instance. The remote agent pulls the metadata through the public extract service REST API and pushes data into object storage using the object storage REST API. You can extract and load the on-premises data into Oracle Fusion Data Intelligence only once in 24 hours.

### Note:

After configuring the remote agent on the Data Configuration page, wait for few minutes, refresh the remote agent page, and when you see the Agent Initialised message, you can proceed with other operations such as testing the connection to the remote agent, testing the connection to the remote source like EBusiness Suite, and refreshing the metadata. This enables you to run these jobs without timeout failures because data pipeline has a default timeout of 15 minutes.

Ensure that **Remote Agent** is enabled on the Enable Features page prior to creating this connection. See [Make Preview Features Available](#).

1. Download the remote agent Docker image from [here](#).
2. Identify a host to deploy the remote agent.

The host that you identify must meet these minimum system requirements for the basic configuration of a single source agent:

- CPU: 4 (CORE/CPU)
- Memory: 8 GB
- Storage: 8 GB

### Note:

The host must be able to make a JDBC connection to the applicable database.

3. Copy the Docker image to the host and load it using this script:

```
docker load -i <docker image zip>
//List the images docker images
```

#### 4. Create and run the Docker container using this script:

```
docker run -d -p 9091:9091 --name remoteagent -v /faw/software/remoteagent/  
config:/faw/software/remoteagent/config/ -v /faw/logs/RemoteAgent:/faw/  
logs/RemoteAgent <docker image Id>
```

If the remote agent user interface isn't accessible, then run this script:

```
sudo docker run -d -p 9091:9091 --name remoteagent --network host -v /faw/  
software/remoteagent/config:/faw/software/remoteagent/config/ -v /faw/  
logs/RemoteAgent:/faw/logs/RemoteAgent <docker image Id>
```

 **Note:**

Ensure that the logs directory in `/faw/logs/RemoteAgent/` has write permissions and the `config` folder in `/faw/software/remoteagent/config/` is present in case you need to add custom properties.

5. If you've a firewall that prevents you from accessing the remote agent, then ensure that you complete these steps before starting the Docker container for the first time:
  - a. Disable the firewall in the Linux host where Docker is deployed.
  - b. Start the Docker container.
  - c. Check the logs to see if the container is started.
  - d. Enable the firewall.
  - e. Open the port using this script:

```
sudo firewall-cmd --zone=public --add-port=9091/tcp --permanent  
sudo firewall-cmd --reload  
sudo iptables-save | grep 9091
```

#### 6. Verify that the container has started successfully using this script:

```
run '$ docker ps'
```

#### 7. Configure the extract service URL to connect using this information:

- a. Sign in to the remote agent user interface using `http://<host>:9091/extractservice-remoteagent/index.html`.
- b. Configure the extract service URL that the remote agent connects to and configure any outgoing proxies if required using the applicable extract service end points. You can form the extract service url based on your Oracle Fusion Data Intelligence URL by replacing `ui/oax/` with the extract service context path. For example, if your product URL is `https://myinstance.example.com/ui/oax/` then the extract service URL would be `https://myinstance.example.com/extractservice`.

8. In the remote agent user interface, click **Configure** to configure the agent.
9. Copy the configuration details from the text box or download the configuration details.

You use it to set up the connection on the Data Configuration page in Oracle Fusion Data Intelligence.

10. Optional: If you need to upgrade the remote agent, then use the following script:

```
Stop Remoteagent docker
sudo docker stop remoteagent
```

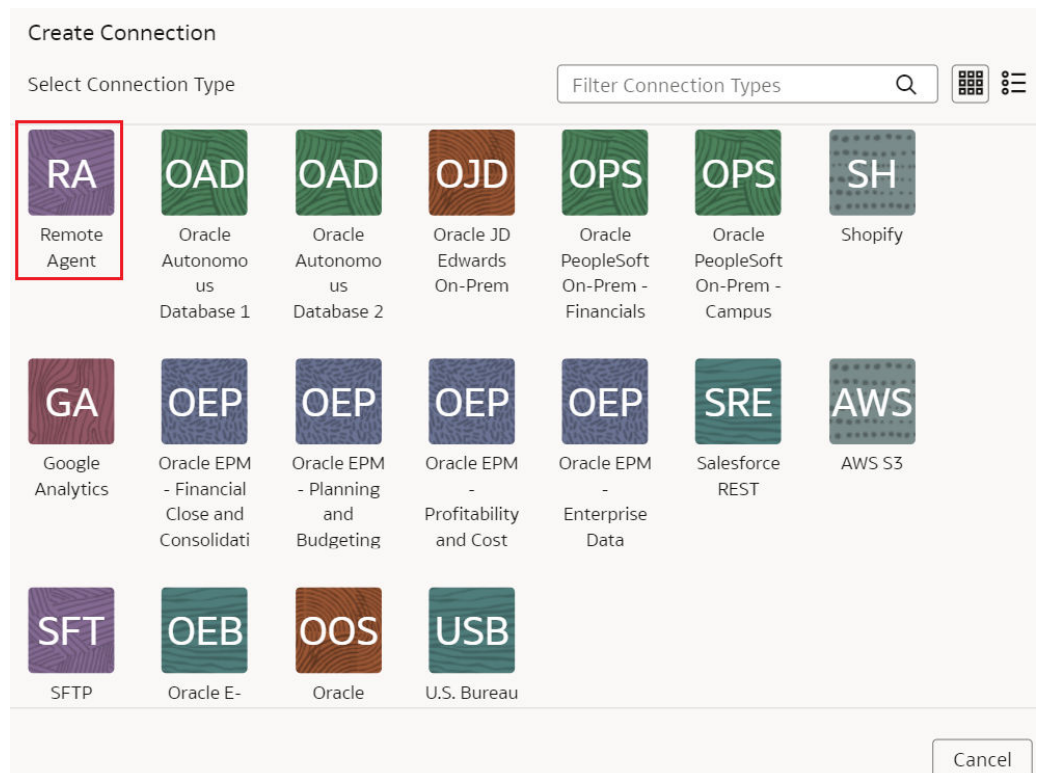
```
Remove Remoteagent docker
sudo docker rm remoteagent
```

```
load the image from tar ball
docker load -i <docker image zip>
```

```
Get Image ID from below
sudo docker images
```

```
Run the image:
sudo docker run -d -p 9091:9091 --name remoteagent -v /faw/software/
remoteagent/config:/faw/software/remoteagent/config:Z -v /faw/logs/
RemoteAgent:/faw/logs/RemoteAgent:Z <imageid>
```

11. Configure the remote agent on the Data Configuration page in Oracle Fusion Data Intelligence using these instructions:
- On the **Console**, click **Data Configuration** under **Application Administration**.
  - On the Data Configuration page, click **Manage Connections**.
  - On the Manage Connections page, click **Create** and then click **Connection**.
  - In Create Connection, select **Remote Agent** as the connection type.



- e. In the Create Connection Remote Agent dialog, in **Connection Name**, you can modify the default name and verify that **Remote** is displayed in **Connectivity Type**.

← Create Connection

Remote Agent

Connection Name: Remote Agent

\* Connectivity Type: Remote

Notification Email: Enter Notification Email

\* Identifier: [Empty field]

\* Host: [Empty field]

\* Public Key: [Empty field]

Buttons: Cancel, Paste from clipboard, Upload File or Drop Above, Save

- f. Enter an email address to receive notifications in **Notification Email**, provide the **Identifier** and **Host**, in **Public Key**, click **Upload File or Drop Above** to fill in the details of the remote agent, and then click **Save**. You can add the configuration details file that you had downloaded or use the configuration details that you had copied after configuring the remote agent.

## Load Data from On-premises E-Business Suite into Fusion Data Intelligence (Preview)

As a service administrator, you can use an extract service remote agent to connect to your on-premises Oracle E-Business Suite system.

After connecting to your on-premises system, the remote agent extracts the data and loads it into the autonomous data warehouse associated with your Oracle Fusion Data Intelligence instance. The remote agent pulls the metadata through the public extract service REST API and pushes data into object storage using the object storage REST API. You can extract and load the on-premises data into Oracle Fusion Data Intelligence only once a day. Ensure that the user credentials you provide have access to the specific tables they need to extract data from within the EBS schema, whose URL you provide while creating the connection.

Ensure that **Oracle E-Business Suite On-Prem** is enabled on the Enable Features page prior to creating this connection. See [Make Preview Features Available](#).

1. Set up the remote agent to load data from your on-premises Oracle E-Business Suite system into Oracle Fusion Data Intelligence.

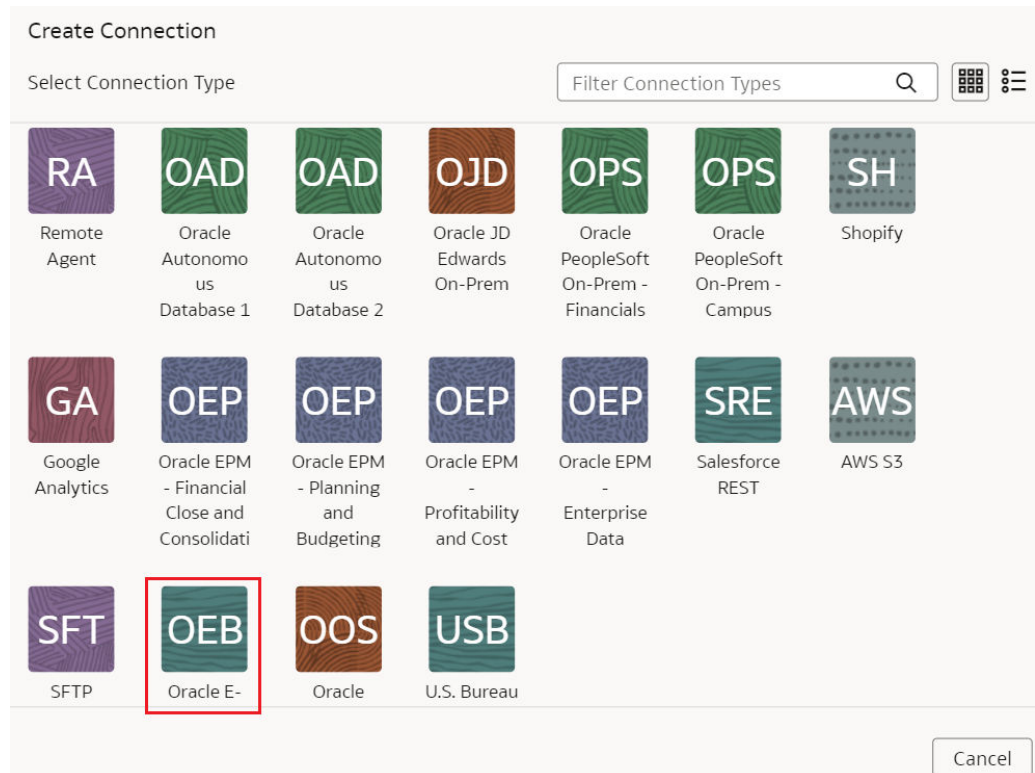
See [Set up the Remote Agent to Load Data into Fusion Data Intelligence \(Preview\)](#).

2. Configure the remote agent and E-Business Suite data source on the Data Configuration page in Oracle Fusion Data Intelligence using these instructions:
  - a. On the **Console**, click **Data Configuration** under **Application Administration**.
  - b. On the Data Configuration page, click **Manage Connections**.
  - c. On the Manage Connections page, click **Create** and then click **Connection**.
  - d. In Create Connection, select **Remote** as the remote agent connection type.

 **Note:**


The "Remote" and "EBS" connection types are prebuilt.

- e. Click **Add File or drop down** to fill in the details of the remote agent. You can add the configuration details file that you had downloaded or use the configuration details that you had copied after configuring the remote agent. See [Create a Data Connection](#).
- f. In Create Connection, select **Oracle E-Business Suite** as the connection type.



- g. In Create Connection for Oracle E-Business Suite On-Prem, select **Remote** as connectivity type.

← Create Connection



Oracle E-Business Suite On-Prem

**Connection Name**

\* **Connectivity Type**

\* **Remote Agent**   
❗ The remote agent doesn't exist. Create the remote agent prior to creating a remote connection.

**Notification Email**

\* **User Name**

\* **Password**

\* **URL**

\* **Offerings**

- h. In the **Remote Agent** field, select the remote agent connection that you created, for example, **EBS-Remote Agent**. Enter an email address to receive notifications in **Notification Email**, provide the credentials in **User Name** and **Password**, the E-Business Suite connection using the JDBC format such as `jdbc:oracle:thin:@<HOST>:<PORT>/<DB_NAME/SID_NAME>` in **URL**, and select **Application Object Library** and **General Ledger** offerings mandatorily, and any other E-Business Suite offerings that you want to load data from in **Offerings**.
- i. Confirm that you see the Remote Agent and E-Business Suite connections on the Manage Connections page.
- j. On the Manage Connections page, select **Actions** (⚙️) for the E-Business Suite connection and then select **Refresh Metadata**.

 **Note:**

You can't create augmentations for E-Business Suite unless you perform a metadata extract.

- k. Test both the connections by selecting the **Test Connection** option in **Actions**. You can check the statuses of all these requests on the Data Configuration Request History page.
3. After the connections are successfully established, navigate to the Data Augmentation tile on the Data Configuration page and create a data augmentation using the E-Business Suite data. Ensure that you select **Regular** as the source dataset type and **EBS** as the pillar. Select the applicable E-Business Suite source tables. See Augment Your Data.

## Load Data from On-premises MySQL Database into Fusion Data Intelligence (Preview)

As a service administrator, you can use an extract service remote agent to connect to your on-premises MySQL database.

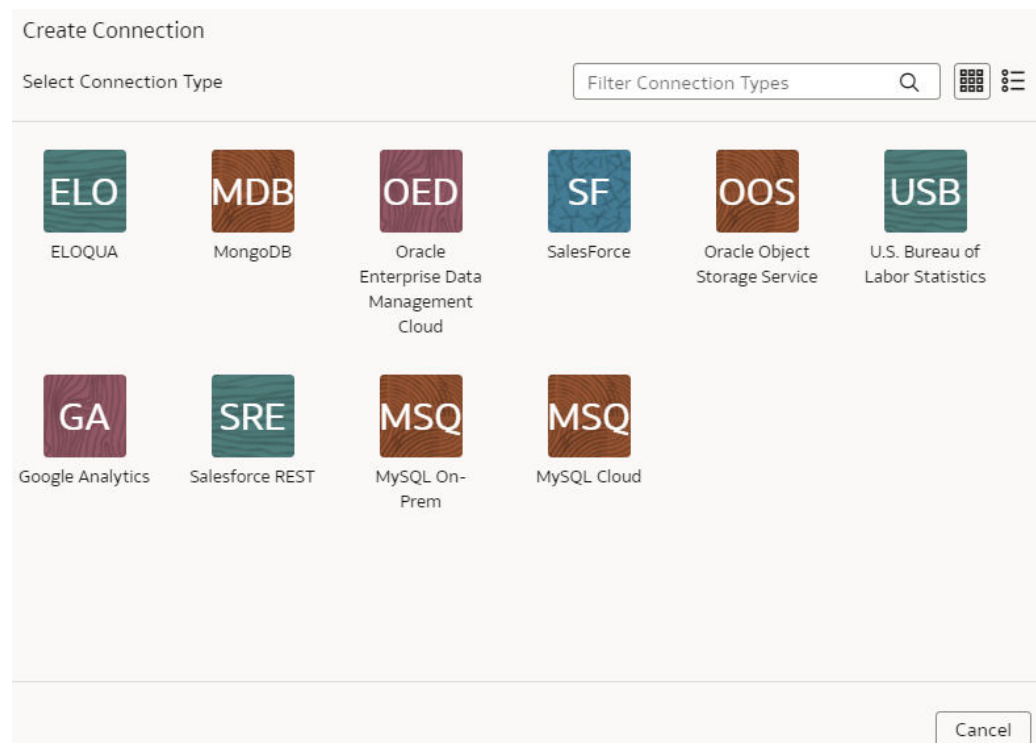
After connecting to your on-premises system, the remote agent extracts the data and loads it into the autonomous data warehouse associated with your Oracle Fusion Data Intelligence instance. The remote agent pulls the metadata through the public extract service REST API and pushes data into object storage using the object storage REST API. You can extract and load the on-premises data into Oracle Fusion Data Intelligence only once a day.

Ensure that **MySQL On-Prem** is enabled on the Enable Features page prior to creating this connection. See [Make Preview Features Available](#).

1. Set up the remote agent to load data from your on-premises MySQL database into Oracle Fusion Data Intelligence.

See [Set up the Remote Agent to Load Data into Fusion Data Intelligence \(Preview\)](#).

2. Check the port number for your on-premises MySQL database and create a service request with server host and port details to enable network connectivity to the on-premises MySQL server.
3. Configure the remote agent and on-premises MySQL database on the Data Configuration page in Oracle Fusion Data Intelligence by following these steps:
  - a. On the **Console**, click **Data Configuration** under **Application Administration**.
  - b. On the Data Configuration page, click **Manage Connections**.
  - c. On the Manage Connections page, click **Create** and then click **Connection**.
  - d. In Create Connection, select **MySQL On-Prem** as the connection type.





- e. In **Connectivity Type**, select **Remote**.
- f. In the **Remote Agent** field, select the remote agent connection that you created, for example, **MySQL-Remote Agent**. Enter an email address to receive notifications in **Notification Email**, and provide these details:
  - **Host Name**: Enter the host name of MySQL server such as 100.111.252.64
  - **Port Number**: Enter the port number where the server is listening such as 3306
  - **Database**: Enter the database name you need to connect to such as airportdb
  - Credentials to access the database in **User Name** and **Password**
  - **Last Update Date Column Pattern**: Enter "%r%a%o%"

 **Note:**

If column name matches with pattern provided, then Fusion Data Intelligence marks the column name with `isLastUpdateDate = true` and uses it for the incremental extract. For example, if pattern provided is "%mo%fie%te%", then the column name `modifiedDate` is marked as `isLastUpdateDate = true`.

- **Initial Extract Date Column Pattern**: Enter "%e%art%new"

 **Note:**

If column name matches with pattern provided, then Fusion Data Intelligence marks the column name with `isCreationDate = true` and uses it for the initial extract date extraction. For example, if pattern provided is: "%cr%ted%te%", then the column name `createdDate` is marked as `isCreationDate = true`.

← Create Connection

Connection Name

\* Connectivity Type

\* Remote Agent

Notification Email

\* Host Name

Port Number

\* Database

\* User Name

\* Password

Last Update Date Column Pattern

Initial Extract Date Column Pattern

- g. Confirm that you see the Remote Agent and on-premises MySQL database connections on the Manage Connections page.
- h. On the Manage Connections page, select **Actions** (⚙️) for the on-premises MySQL database connection and then select **Refresh Metadata**.

 **Note:**

You can't create augmentations for on-premises MySQL database unless you perform a metadata extract.

- i. Test both the connections by selecting the **Test Connection** option in **Actions**. You can check the statuses of all these requests on the Data Configuration Request History page.
4. After the connections are successfully established, navigate to the Data Augmentation tile on the Data Configuration page and create a data augmentation using the on-premises MySQL database data. Ensure that you select **Regular** as the source dataset type and **EBS** as the pillar. Select the applicable on-premises MySQL database source tables. See *Augment Your Data*.

## Load Data from On-premises PeopleSoft into Fusion Data Intelligence (Preview)

As a service administrator, you can use an extract service remote agent to connect to your on-premises Oracle PeopleSoft system.

After connecting to your on-premises system, the remote agent extracts the data and loads it into the autonomous data warehouse associated with your Oracle Fusion Data Intelligence instance. The remote agent pulls the metadata through the public extract service REST API

and pushes data into object storage using the object storage REST API. You can extract and load the on-premises data into Oracle Fusion Data Intelligence only once in 24 hours. Ensure that **Remote Agent** and depending on the functional module you want to connect to, the applicable feature is enabled on the Enable Features page prior to creating this connection:

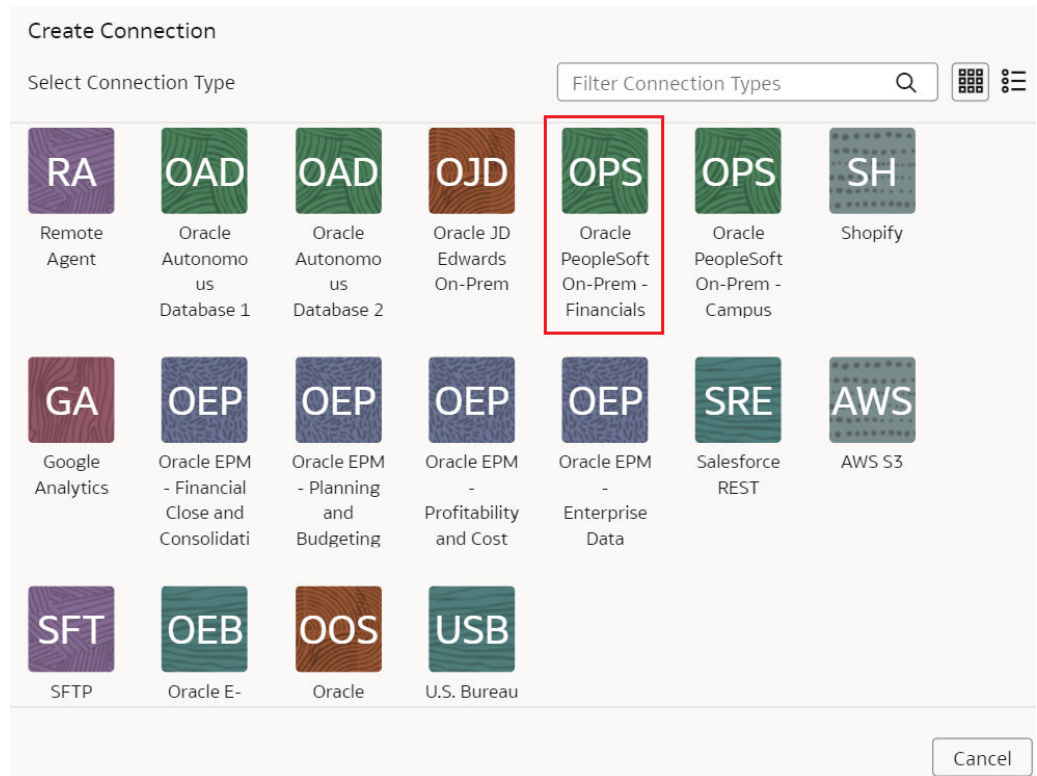
- **Oracle PeopleSoft On-Prem - Campus Solutions**
- **Oracle PeopleSoft On-Prem - Financials**
- **Oracle PeopleSoft On-Prem - Human Resources**
- **Oracle PeopleSoft On-Prem - Learning Management**

See [Make Preview Features Available](#).

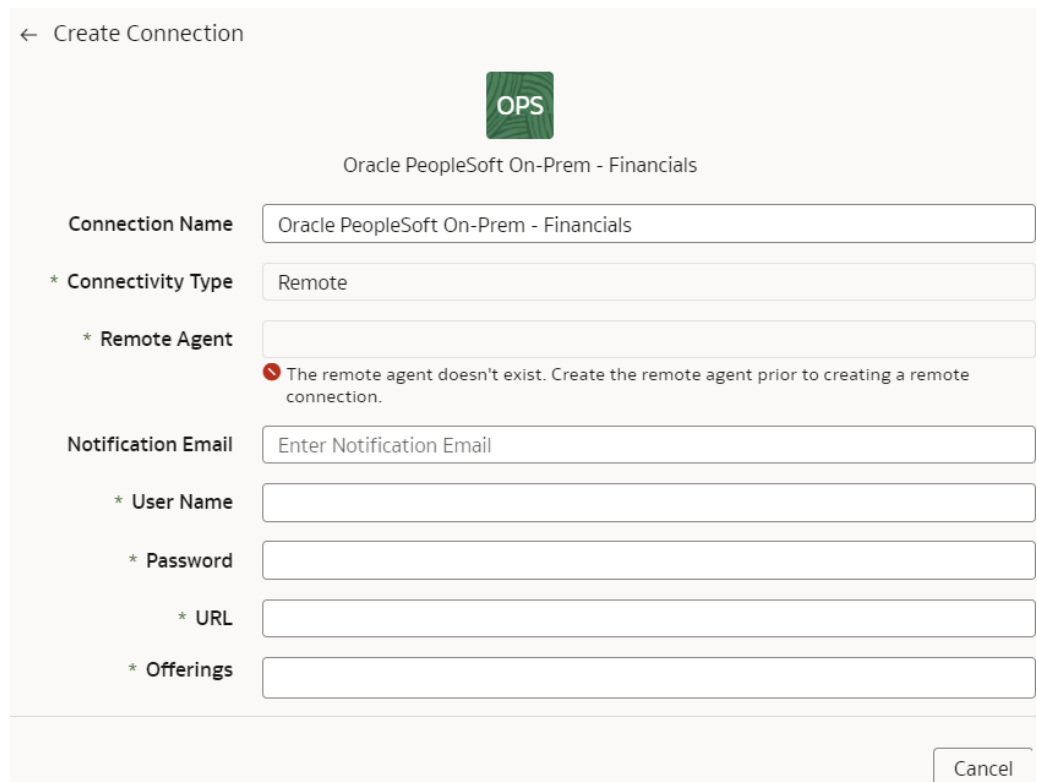
1. Set up the remote agent to load data from your on-premises Oracle E-Business Suite system into Oracle Fusion Data Intelligence.

See [Set up the Remote Agent to Load Data into Fusion Data Intelligence \(Preview\)](#).

2. Configure the remote agent and PeopleSoft data source on the Data Configuration page in Oracle Fusion Data Intelligence using these instructions:
  - a. On the **Console**, click **Data Configuration** under **Application Administration**.
  - b. On the Data Configuration page, click **Manage Connections**.
  - c. On the Manage Connections page, click **Create** and then click **Connection**.
  - d. In Create Connection, select **Remote Agent** as the connection type.
  - e. In the Create Connection Remote Agent dialog, in **Connection Name**, you can modify the default name and verify that **Remote** is displayed in **Connectivity Type**.
  - f. Enter an email address to receive notifications in **Notification Email**, provide the **Identifier** and **Host**, in **Public Key**, click **Upload File or Drop Above** to fill in the details of the remote agent, and then click **Save**. You can add the configuration details file that you had downloaded or use the configuration details that you had copied after configuring the remote agent.
  - g. Navigate to the Manage Connections page, click **Create** and then click **Connection**.
  - h. In Create Connection, select the connection type based on the functional module that you want to connect to. For example, to connect to the "Financials" module, select **Oracle PeopleSoft On-Prem - Financials** as the connection type.



- i. In Create Connection for Oracle PeopleSoft On-Prem - Financials dialog, in **Connectivity Type**, verify that **Remote** is selected automatically.



- j. In **Remote Agent**, select the remote agent connection that you created earlier, for example, **Remote Agent**.
- k. Enter an email address to receive notifications in **Notification Email**, provide credentials for your PeopleSoft source in **User Name** and **Password**, and the URL of your PeopleSoft source in **URL**.
- l. Confirm that you see the Remote Agent and PeopleSoft connections on the Manage Connections page.
- m. On the Manage Connections page, select **Actions** (⚙️) for the PeopleSoft connection and then select **Refresh Metadata**.

 **Note:**

You can't create augmentations for PeopleSoft unless you perform a metadata extract.

- n. Test both the connections by selecting the **Test Connection** option in **Actions**. You can check the statuses of all these requests on the Data Configuration Request History page.
3. After the connections are successfully established, navigate to the Data Augmentation tile on the Data Configuration page and create a data augmentation using the PeopleSoft data. Ensure that you select **Regular** as the source dataset type and **PSFT** as the pillar. Select the applicable PeopleSoft source tables. See [Augment Your Data](#).

## Load Data from On-premises JD Edwards into Fusion Data Intelligence (Preview)

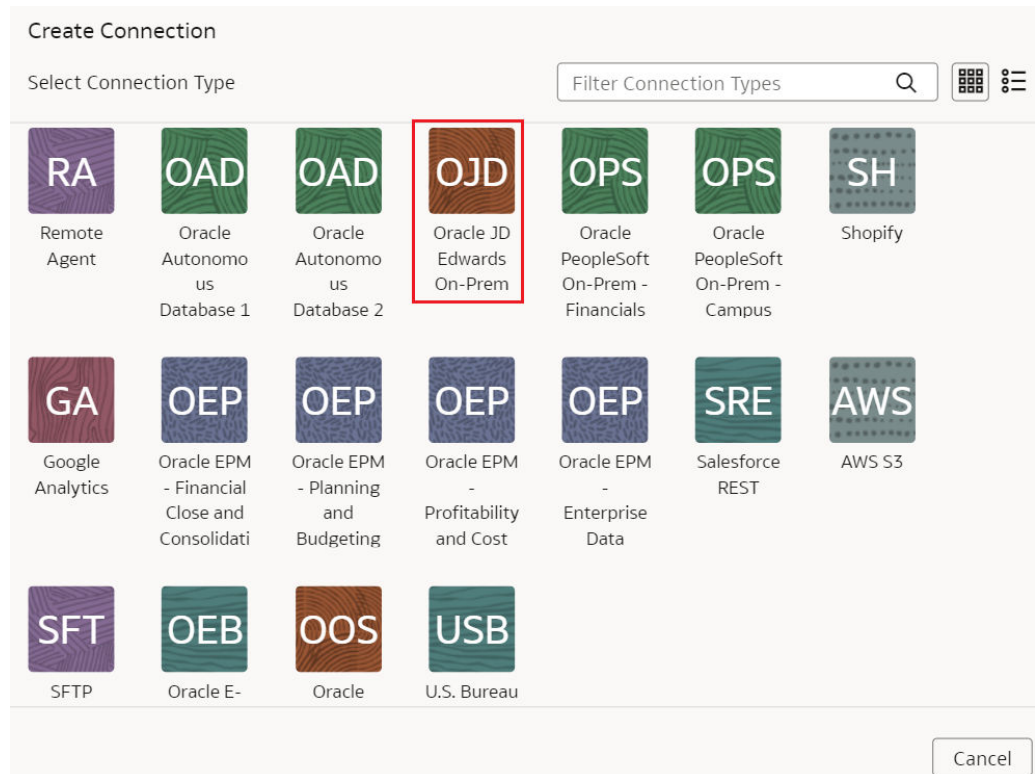
As a service administrator, you can use an extract service remote agent to connect to your on-premises JD Edwards system and use the JD Edwards data to create data augmentations.

After connecting to your on-premises system, the remote agent extracts the data and loads it into the autonomous data warehouse associated with your Oracle Fusion Data Intelligence instance. The remote agent pulls the metadata through the public extract service REST API and pushes data into object storage using the object storage REST API. You can extract and load the on-premises data into Oracle Fusion Data Intelligence only once in 24 hours. Ensure that **Remote Agent** and **Oracle JD Edwards On-Prem** are enabled on the Enable Features page prior to creating this connection. See [Make Preview Features Available](#).

1. Set up the remote agent to load data from your on-premises Oracle E-Business Suite system into Oracle Fusion Data Intelligence.  
See [Set up the Remote Agent to Load Data into Fusion Data Intelligence \(Preview\)](#).
2. Configure the remote agent and JD Edwards data source on the Data Configuration page in Oracle Fusion Data Intelligence using these instructions:
  - a. On the **Console**, click **Data Configuration** under **Application Administration**.
  - b. On the Data Configuration page, click **Manage Connections**.
  - c. On the Manage Connections page, click **Create** and then click **Connection**.
  - d. In Create Connection, select **Remote Agent** as the connection type.
  - e. In the Create Connection Remote Agent dialog, in **Connection Name**, you can modify the default name and verify that **Remote** is displayed in **Connectivity Type**.
  - f. Enter an email address to receive notifications in **Notification Email**, provide the **Identifier** and **Host**, in **Public Key**, click **Upload File or Drop Above** to fill in the


details of the remote agent, and then click **Save**. You can add the configuration details file that you had downloaded or use the configuration details that you had copied after configuring the remote agent.

- g. Navigate to the Manage Connections page, click **Create** and then click **Connection**.
- h. In Create Connection, select **Oracle JD Edwards On-Prem** as the connection type.



- i. In Create Connection for Oracle JD Edwards On-Prem, in **Connectivity Type**, verify that **Remote** is selected automatically.

← Create Connection




Oracle JD Edwards On-Prem

**Connection Name**

\* **Connectivity Type**

\* **Remote Agent**

 The remote agent doesn't exist. Create the remote agent prior to creating a remote connection.

**Notification Email**

\* **User Name**

\* **Password**

\* **URL**

\* **Schema Names**

- j. In **Remote Agent**, select the remote agent connection that you created earlier, for example, **Remote Agent**.
- k. Enter an email address to receive notifications in **Notification Email**, provide credentials for your JD Edwards source in **User Name** and **Password**, and the URL of your JD Edwards source in **URL**.
- l. Confirm that you see the Remote Agent and JD Edwards connections on the Manage Connections page.
- m. On the Manage Connections page, select **Actions** (⚙️) for the JD Edwards connection and then select **Refresh Metadata**.

 **Note:**

You can't create augmentations for JD Edwards unless you perform a metadata extract.

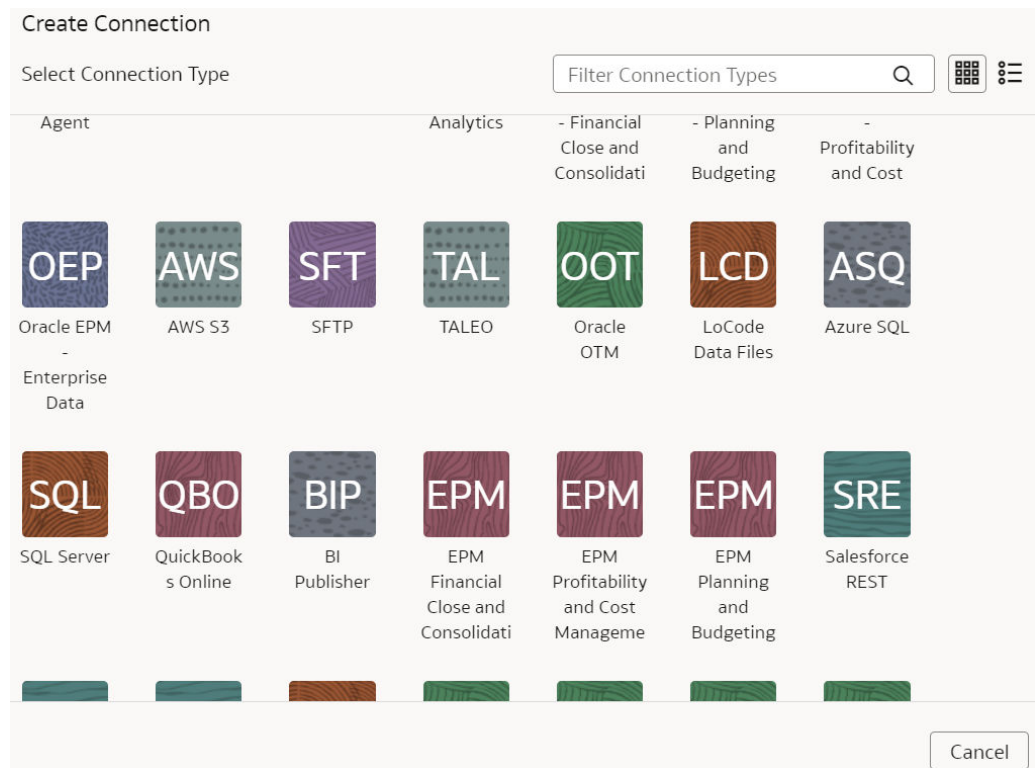
- n. Test both the connections by selecting the **Test Connection** option in **Actions**. You can check the statuses of all these requests on the Data Configuration Request History page.
3. After the connections are successfully established, navigate to the Data Augmentation tile on the Data Configuration page and create a data augmentation using the JD Edwards data. Ensure that you select **Regular** as the source dataset type and **JD Edwards** as the pillar. Select the applicable JD Edwards source tables. See Augment Your Data.

## Load Data from SQL Server into Oracle Fusion Data Intelligence (Preview)

As a service administrator, you can use the Oracle Fusion Data Intelligence extract service to acquire data from SQL Server and use it to create data augmentations.

Ensure that **SQL Server** is enabled on the Enable Features page prior to creating this connection. See [Make Preview Features Available](#).

1. Set up the remote agent to load data from your SQL Server into Oracle Fusion Data Intelligence.  
See [Set up the Remote Agent to Load Data into Fusion Data Intelligence \(Preview\)](#).
2. In Oracle Fusion Data Intelligence, create the SQL Server data connection using these instructions:
  - a. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
  - b. On the Data Configuration page, click **Manage Connections**.
  - c. On the Manage Connections page, click **Create** and then click **Connection**.
  - d. In Create Connection, select **SQL Server** as the connection type.




- e. In the dialog for the SQL Server connection, enter these details and click **Save**:
  - **Connectivity Type:** Select **Remote**.
  - **Remote Agent:** Select the remote agent that you had set up to load data from your SQL Server.
  - **Notification Email:** Enter an email address to receive notifications.




- **SQL Server Name:** Enter the SQL server name.
- **Port Number:** Enter the port number on which your SQL server is available.
- **Database Name:** Enter the database name in your SQLServer instance.
- **Schema Name:** Enter the name of the schema for the dataset you want to load to run analytics on.
- **User Name and Password:** Enter the credentials for your SQL Server instance.
- **Initial Extract Date Column Pattern:** MM/dd/yyyy is the date format in your initial extract column; sample date is 1/23/1998.
- **Last Update Date Column Pattern:** Last update date shows when the last update was done in your SQL Server database.

← Create Connection

  
SQL Server

Connection Name

\* Connectivity Type

\* Remote Agent   
 The remote agent doesn't exist. Create the remote agent prior to creating a remote connection.

Notification Email

\* SQL Server Name

\* Port Number

\* Database Name

\* Schema Name

- f. Click **Save**.
3. On the Manage Connections page, select **Actions** (⋮) for the SQL Server connection and then select **Test Connection**.
  4. On the Manage Connections page, select **Actions** for the SQL Server connection and then select **Refresh Metadata**.

 **Note:**

You can't create augmentations for SQL Server unless you perform a metadata extract.

5. After the connections are successfully established, navigate to the Data Augmentation tile on the Data Configuration page and create a data augmentation using the SQL Server data. Ensure that you select **Regular** as the source dataset type and **SQL Server** as the pillar. Select the applicable SQL Server source tables. See *Augment Your Data*.

## Connect with Cloud File Storage Sources

Connect with your file storage-based cloud sources to provide the background information for reports.

You can blend the additional data from these data sources with the prebuilt datasets to enhance business analysis.

## About OpenCSV Standards

The CSV parser in the extract service for file extractors uses Opencsv. The csv files that are processed by extractservice must be compliant with the Opencsv standards.

See [Opencsv File Standards](#). In addition to the CSV parser, the extract service supports files that are compliant with RFC4180 specification. The RFC 4180 CSV parser enables you to ingest single-line and multi-line data within your .csv files. The RFC 4180 parser supports ingesting data records with up to 99 line breaks. For more information on the RFC 4180 specification, see [Common Format and MIME Type for Comma-Separated Values \(CSV\) Files](#).

Keep in mind the following:

- While using special characters:
  - For strings without special characters, quotes are optional.
  - For strings with special characters, quotes are mandatory. For example, if a string has a comma, then you must use quotes for the string such as "Abc, 123".
  - Escapes (backslash character) are optional.
  - Backslash characters must always be escaped. For example, if there is a backslash in your data, use the following format: "Double backslash ( \\ ) abc".
  - To manage quotes inside a quoted string, use a backslash inside the quotes: "Asd \" asd".
- The Opencsv parser allows you to select one of these available characters as a delimiter:
  - Comma (,)
  - Semi-colon (;)
  - Pipe (|)
  - Tab ( )

## About Date and Timestamp Formatting for CSV File-based Extractors

Extractors such as Secure FTP (SFTP), Amazon Simple Storage Service (AWS S3), and Oracle Object Storage Service use CSV data files that have date and timestamp fields.

For the CSV file-based extractors, use the format examples to provide the values in the CSV Date Format, and CSV Timestamp Format fields while entering the source connection details.

 **Note:**

Ensure that the date and timestamp formats for the data files match the date and timestamp formats in your source; for example, if you've used MM/dd/yyyy and MM/dd/yyyy hh:mm:ss in your source, then you must specify the same formats while creating the applicable data connections.

## Examples

Example	Pattern
1/23/1998	MM/dd/yyyy
1/23/1998 12:00:20	MM/dd/yyyy hh:mm:ss
12:08 PM	h:mm a
01-Jan-1998	dd-MMM-yyyy
2001-07-04T12:08:56.235-0700	yyyy-MM-dd'T'HH:mm:ss.SSSZ

The guidelines to define the format are:

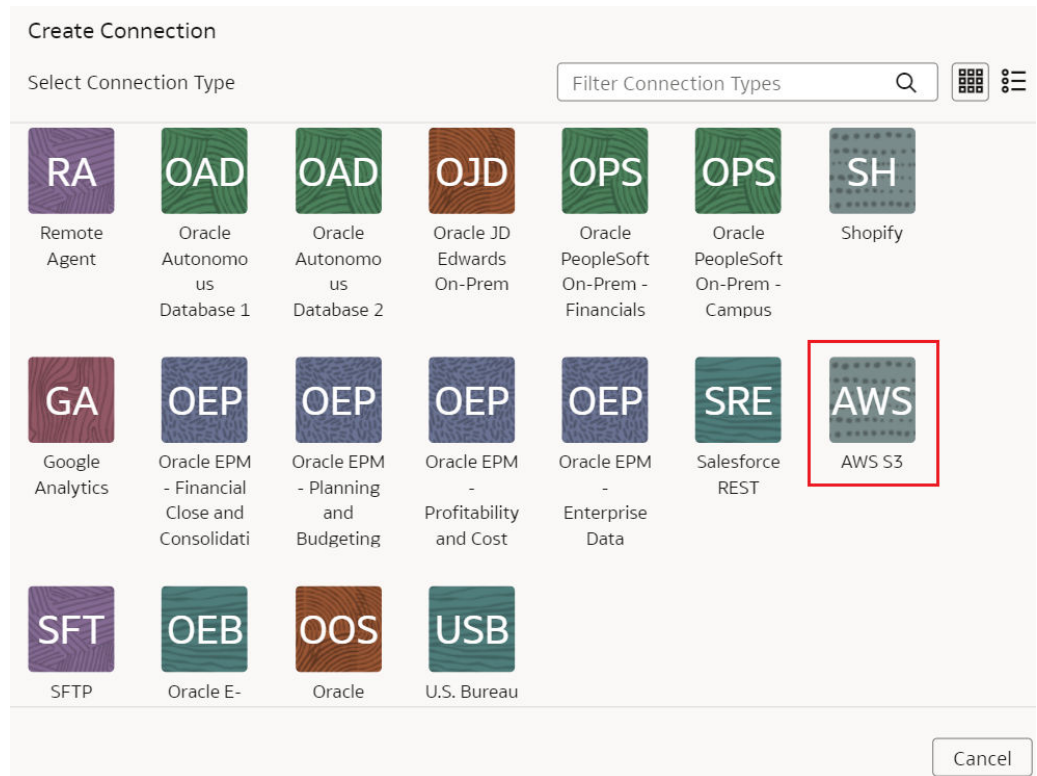
Letter	Meaning
M	Month
d	Day
y	Year
h	Hour (0-12)
H	Hour (0-23)
m	Minute
s	Second
S	Milli Second
a	AM/PM
Z	Timezone

## Load Data from Amazon Simple Storage Service into Oracle Fusion Data Intelligence (Preview)

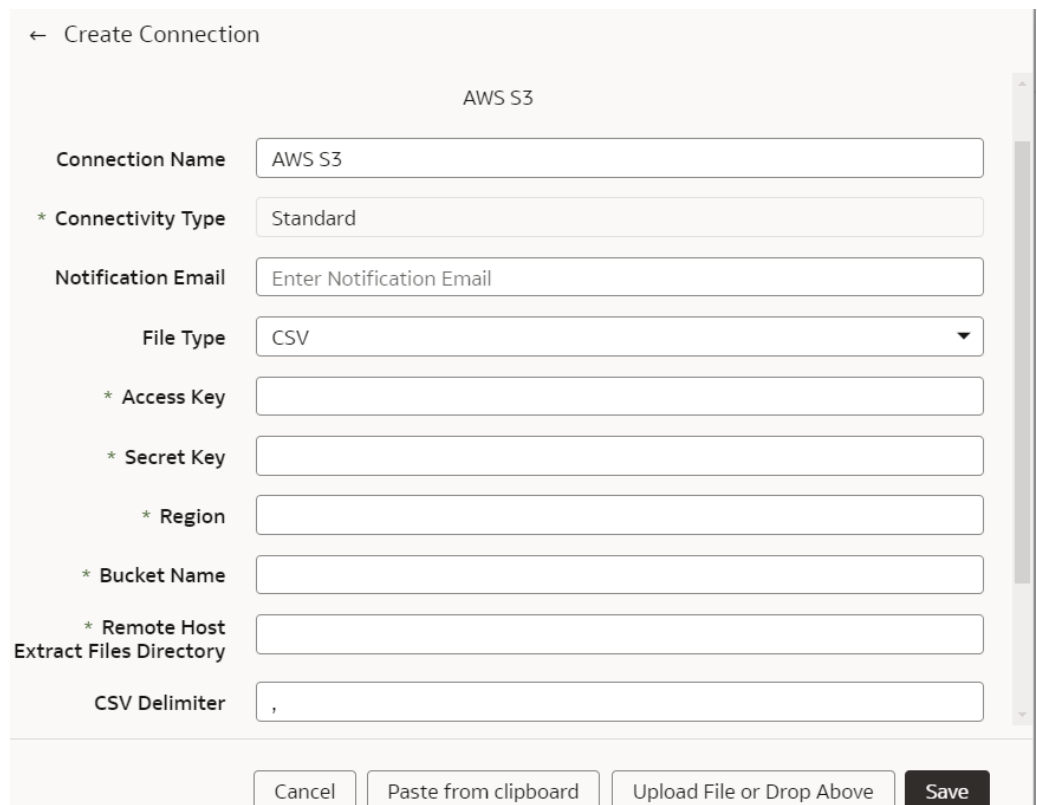
As a service administrator, you can use the Oracle Fusion Data Intelligence extract service to acquire data from Amazon Simple Storage Service (AWS S3) and use it to create data augmentations.

Ensure that **AWS S3** is enabled on the Enable Features page prior to creating this connection. See [Make Preview Features Available](#).

1. In Oracle Fusion Data Intelligence, create the AWS S3 data connection using these instructions:
  - a. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
  - b. On the Data Configuration page, click **Manage Connections**.
  - c. On the Manage Connections page, click **Create** and then click **Connection**.
  - d. In Create Connection, select **AWS S3** as the connection type.



- e. In the dialog for the AWS S3 connection, select **Standard** in **Connectivity Type**, enter an email address to receive notifications in **Notification Email**, and provide applicable details of your AWS S3.



- f. Click **Save**.
2. On the Manage Connections page, select **Actions** (⋮) for the AWS S3 connection and then select **Test Connection**.
3. On the Manage Connections page, select **Actions** for the AWS S3 connection and then select **Refresh Metadata**.



#### Note:

You can't create augmentations for AWS S3 unless you perform a metadata extract.

4. After the connections are successfully established, navigate to the Data Augmentation tile on the Data Configuration page and create a data augmentation using the AWS S3 data. Ensure that you select **Regular** as the source dataset type and **AWS S3** as the pillar. Select the applicable AWS S3 source tables. See *Augment Your Data*.

## Load Data from Oracle Object Storage into Fusion Data Intelligence

As a service administrator, you can use the Fusion Data Intelligence extract service to acquire data from Oracle Object Storage Service and use it to create data augmentations.

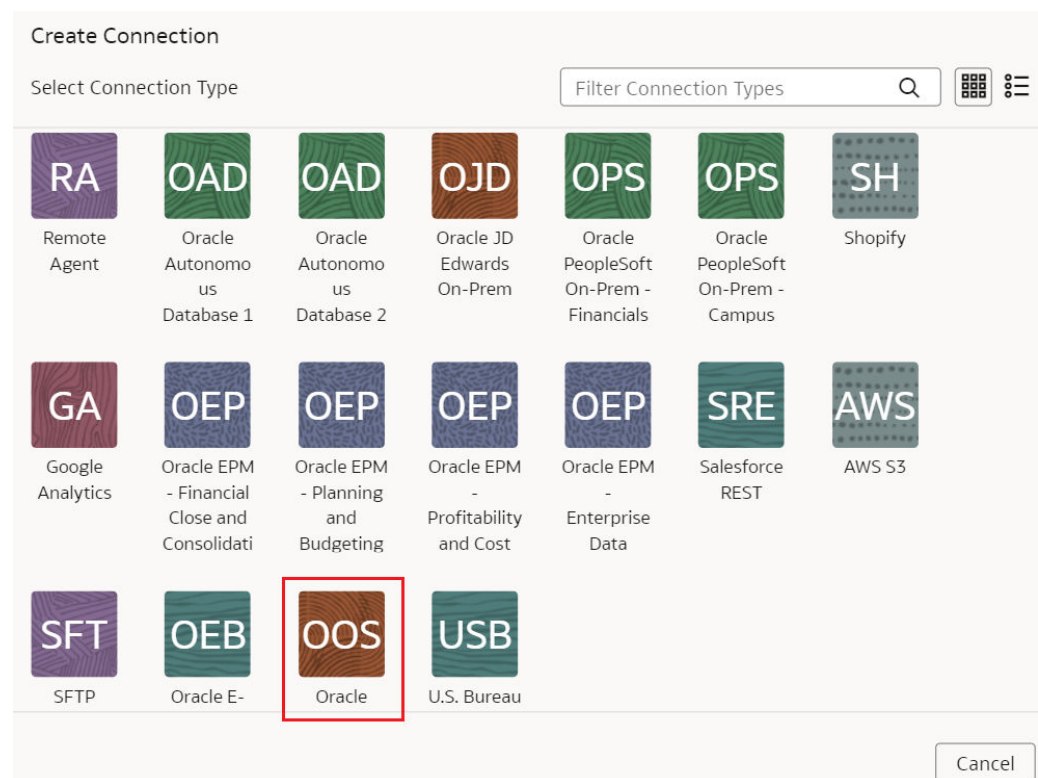
The recommended approach is to create one augmentation from one source table after acquiring data from Oracle Object Storage Service. After completion of augmentation, Fusion Data Intelligence renames the source table in this case and if you create more than one augmentation from the same source, all other augmentations may fail with a message that the source file wasn't found.

1. Store the following details in a text file to use while creating the connection to Oracle Object Storage Service in Fusion Data Intelligence:
  - a. In Oracle Object Storage Service, create the Remote Host Extract Files directory as the base folder in which you must place all your data files. Note down the name of this directory. See the "To create a folder or subfolder" section in [Using the Console](#).
  - b. Obtain the URL of the Oracle Object Storage Service by signing into the Oracle Cloud Infrastructure Console and navigating to the bucket to get the details of the region, namespace, and bucket name. For example, the URL must be in the `https://objectstorage.<region>.oraclecloud.com/n/<namespace>/b/<name of the bucket>` format. See the "To view bucket details" section in [Using the Console](#).
  - c. Obtain a user's OCID by navigating in the Oracle Cloud Infrastructure Console to **Identity & Security**, and then **Users**. On the Users page, search for a user who has access to the bucket used in the connector and copy the **OCID**. Obtain the tenancy ID by clicking your profile icon and then **Tenancy** in the Oracle Cloud Infrastructure Console. Under Tenancy information, copy the **OCID**. See [Where to Get the Tenancy's OCID and User's OCID](#).
  - d. Obtain the fingerprint for a user from the Oracle Cloud Infrastructure Console. Navigate to **API Keys** under **Resources** on the user page, and then click **Add API Keys**. In the Add API Keys dialog, ensure that **Generate API Key Pair** is selected. Download the private and public keys using the **Download Private Key** and **Download Public Key** options. You must copy the entire text of the private key along with the comments before and after the actual key. These comments could be as simple as: "-----Begin RSA Private Key -----" and "-----End of RSA

Private Key-----". Don't copy only the alphanumeric key without the header and footer comments. In the Add API Keys dialog, select **Choose Public Key File** to upload your file, or **Paste Public Key**, if you prefer to paste it into a text box and then click **Add**. Copy the fingerprint that you see after you upload the public key in the Console. It looks something like

this:12:34:56:78:90:ab:cd:ef:12:34:56:78:90:ab:cd:ef.

2. In Fusion Data Intelligence, create the Oracle Object Storage connection using these instructions:
  - a. In Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
  - b. On the Data Configuration page, click **Manage Connections**.
  - c. On the Manage Connections page, click **Create** and then click **Connection**.
  - d. In Create Connection, select **Oracle Object Storage Service** as the connection type.



- e. In the dialog for the Oracle Object Storage Service connection, select **Standard** in **Connectivity Type** and enter these details:
  - **Connection Name:** Object Storage
  - **Connection Type:** Standard
  - **Notification Email:** An email address to receive notifications
  - **Remote Host Extract Files Directory:** Name of the base folder in which you must place all your data files in Oracle Object Storage Service
  - **URL:** URL of the Oracle Object Storage Service that you noted down in a text file
  - **User ID:** OCID of a user that has access to the applicable bucket in Oracle Object Storage Service

- **Finger Print:** The fingerprint that you saw and copied after you uploaded the public key in the Console. It looks something like this:  
12:34:56:78:90:ab:cd:ef:12:34:56:78:90:ab:cd:ef
- **Tenant ID:** Tenancy in the Oracle Infrastructure Cloud Console that you noted down in the text file
- **Private Key:** Paste the private key contents that you previously downloaded
- **File Type:** csv
- **CSV Delimiter:** Delimiter for the data files
- Date format for the data files must match the date format in your Oracle Object Storage Service source; for example, if you've used MM/dd/yyyy (01/23/1998) in your source, then you must specify the same format in **CSV Date Format**. See [About Date and Timestamp Formatting for CSV File-based Extractors](#).
- Timestamp format for the data files must match the timestamp format in your Oracle Object Storage Service source; for example, if you've used MM/dd/yyyy hh:mm:ss (01/23/1998 12:00:20) in your source, then you must specify the same format in **CSV Timestamp Format**

← Create Connection

**OOS**  
Oracle Object Storage Service

Connection Name: Oracle Object Storage Service

\* Connectivity Type: Standard

Notification Email: Enter Notification Email

File Type: CSV

\* Remote Host Extract Files Directory:

\* URL:

\* User ID:

\* Finger Print:

\* Tenant ID:

Buttons: Cancel, Paste from clipboard, Upload File or Drop Above, Save

- f. Click **Save**.
3. In Oracle Object Storage Service:
  - a. Create the folder structure in the Bucket using these guidelines:

Objects

Upload More Actions

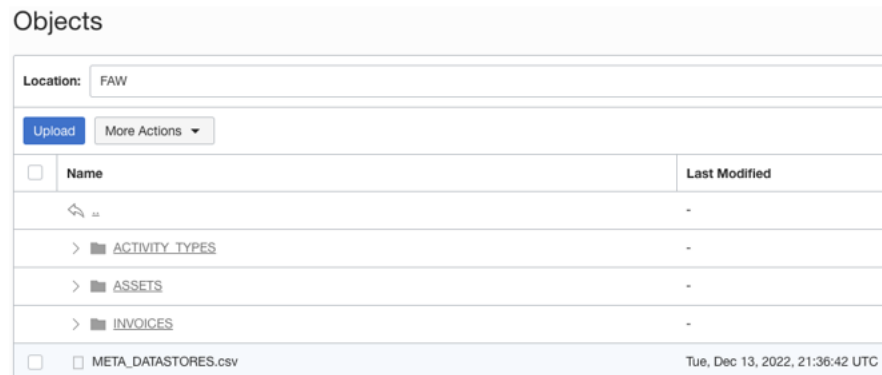
<input type="checkbox"/>	Name	Last Modified
>	FAW	-

- The base folder in the bucket must match with the details provided in the connection.

- Inside the base folder, ensure to place each file in its own folder.
- Ensure that the Prefix of Data\_Store\_Name (same as Folder name) and Files in the target folder match exactly.

See the "To create a folder or subfolder" section in [Using the Console](#).

- Inside the base folder, create the metadata file for the Data Store List. This file lists the supported data stores. Each data store is a folder that has the actual file used in data augmentation, for example, ASSETS. Ensure that the file name and folder name match and there aren't any special characters (including space) in the datastore, folder or file names.



- Create the metadata file for each data file under the data store folder using these guidelines:

The META\_DATASTORES.csv must have these columns:

- DATA\_STORE\_NAME - A mandatory column to identify the data store name.
- DATA\_STORE\_LABEL - A non-mandatory column that identifies the description of the data store.

Each folder must have:

- A data file that has the actual data that gets loaded into Fusion Data Intelligence. This file must have a prefix with the DATA STORE NAME.
- A metadata file for the list of columns contains all the column information on the data. This file must have a Prefix with META\_DATASTORES\_<DATA\_STORE\_NAME>\_COL.
  - For the columns in this metadata, ensure the following:
  - If column name is ABC, then metadata can be ABC or "ABC" - the double quotes are ignored.
  - If column name is "ABC", then metadata must be ""ABC"" – the first double quotes are ignored.

### Example

In the image, the folder name is ACTIVITY\_TYPES. Hence, the data store name is ACTIVITY\_TYPES. You can confirm this from the META\_DATASTORES.csv file. In this example, the file is named ACTIVITY\_TYPES.xlsx or ACTIVITY\_TYPES.csv. The



metadata file must be META\_DATASTORES\_ACTIVITY\_TYPES\_COL.csv.

**Objects**

Location: FAW/ACTIVITY\_TYPES

Upload More Actions ▾

<input type="checkbox"/>	Name
<input type="checkbox"/>	ACTIVITY_TYPES.xlsx
<input type="checkbox"/>	META_DATASTORES_ACTIVITY_TYPES_COL.csv

The META\_DATASTORES\_ACTIVITY\_TYPES\_COL.csv has these columns:

- DATA\_STORE\_NAME - This is a mandatory column.
  - COLUMN\_NAME - This is a mandatory column.
  - COLUMN\_LABEL - This is a non-mandatory column.
  - DATA\_TYPE – This is a mandatory column.
  - WIDTH – This column identifies the string length.
  - PRECISION - This column value must be Numeric data type.
  - SCALE - This column value must be Numeric data type.
  - KEY\_SEQUENCE - This is a mandatory column that identifies the Primary Key definition. If you're using the composite primary key, then use column order numbers as values.
4. In Fusion Data Intelligence, on the Manage Connections page, select **Actions** (⋮) for the Oracle Object Storage Service connection and then select **Test Connection**.
  5. On the Manage Connections page, select **Actions** for the Oracle Object Storage Service connection and then select **Refresh Metadata**.

 **Note:**

You can't create augmentations for the Oracle Object Storage Service unless you perform a metadata extract.

6. After the connections are successfully established, navigate to the Data Augmentation tile on the Data Configuration page and create a data augmentation using the data from the Oracle Object Storage Service. Ensure that you select **Regular** as the source dataset type and Oracle Object Storage Service as the pillar. Select the applicable source tables from the Oracle Object Storage Service data. See [Augment Your Data](#).

## Load Data from a Secure FTP Source into Fusion Data Intelligence (Preview)

As a service administrator, you can use the Fusion Data Intelligence extract service to acquire data from a secure FTP source (SFTP) and use it to create data augmentations.

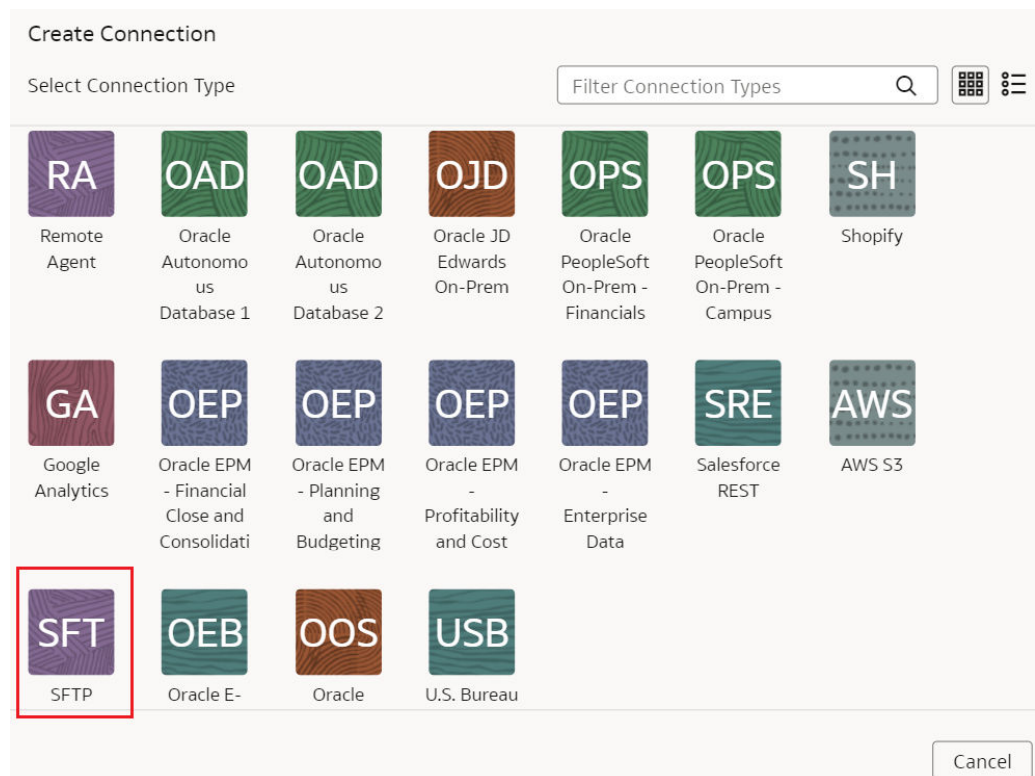
Ensure that **SFTP** is enabled on the Enable Features page prior to creating this connection. See [Make Preview Features Available](#).

1. Check the port number for your secure FTP database and create a service request to get the port opened.

 **Note:**

You must provide the IP address of the SFTP server, which should be a public IP and can't be hostname and a fully qualified domain name (FQDN) or a class A private IP.

2. In Fusion Data Intelligence, create the SFTP data connection using these instructions:
  - a. In Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
  - b. On the Data Configuration page, click **Manage Connections**.
  - c. On the Manage Connections page, click **Create** and then click **Connection**.
  - d. In Create Connection, select **SFTP** as the connection type.



- e. In the dialog for the SFTP connection, select **Standard** in **Connectivity Type**, enter an email address to receive notifications in **Notification Email**, and provide applicable values in **Remote Host**, **User Name**, **Private Key**, **Remote Host Extract Files Directory**, **File Type**, **CSV Delimiter**, **CSV Date Format**, and **CSV Timestamp Format**. In **Lock Metadata**, specify whether you want to turn off the metadata extracts after first refresh if metadata isn't going to change. This option is useful if the flag to derive metadata from data files using the metadata utility is turned on in your source.

Ensure the following:

- The table name and file name in your SFTP source needs to be the same.

- The private key you provide is in the valid OpenSSH format.
- Date format for the data files must match the date format in your SFTP source; for example, if you've used MM/dd/yyyy (01/23/1998) in your source, then you must specify the same format in **CSV Date Format**. See [About Date and Timestamp Formatting for CSV File-based Extractors](#).
- Timestamp format for the data files must match the timestamp format in your SFTP source; for example, if you've used MM/dd/yyyy hh:mm:ss (01/23/1998 12:00:20) in your source, then you must specify the same format in **CSV Timestamp Format**.

← Create Connection

**SFTP**

Connection Name: SFTP

\* Connectivity Type: Standard

Notification Email: Enter Notification Email

\* File Type: CSV

\* Remote Host:

Remote Port:

\* User Name:

Password:

Pass Phrase:

Buttons: Cancel, Paste from clipboard, Upload File or Drop Above, Save

- f. Click **Save**.
3. In your SFTP source:
  - a. Create the folder structure in the Bucket using these guidelines:

Objects

Upload More Actions

<input type="checkbox"/>	Name	Last Modified
>	FAW	-

- The base folder in the bucket must match with the details provided in the connection.
- Inside the base folder, ensure to place each file in its own folder.
- Ensure that the Prefix of Data\_Store\_Name (same as Folder name) and Files in the target folder match exactly.

See the "To create a folder or subfolder" section in [Using the Console](#).

- b. Inside the base folder, create the metadata file for the Data Store List. This file lists the supported data stores. Each data store is a folder that has the actual file used in data augmentation, for example, ASSETS. Ensure that the file name and folder name match and there aren't any special characters (including space) in the datastore, folder or file names.

Objects

Location: FAW

Upload More Actions

<input type="checkbox"/>	Name	Last Modified
	..	-
>	ACTIVITY_TYPES	-
>	ASSETS	-
>	INVOICES	-
<input type="checkbox"/>	META_DATASTORES.csv	Tue, Dec 13, 2022, 21:36:42 UTC

- c. Create the metadata file for each data file under the data store folder using these guidelines:

The META\_DATASTORES.csv must have these columns:

- DATA\_STORE\_NAME - A mandatory column to identify the data store name.
- DATA\_STORE\_LABEL - A non-mandatory column that identifies the description of the data store.

Each folder must have:

- A data file that has the actual data that gets loaded into Fusion Data Intelligence. This file must have a prefix with the DATA STORE NAME.
- A metadata file for the list of columns contains all the column information on the data. This file must have a Prefix with META\_DATASTORES\_<DATA\_STORE\_NAME>\_COL.
  - For the columns in this metadata, ensure the following:
    - If column name is ABC, then metadata can be ABC or "ABC" - the double quotes are ignored.
    - If column name is "ABC", then metadata must be ""ABC"" – the first double quotes are ignored.

### Example

In the image, the folder name is ACTIVITY\_TYPES. Hence, the data store name is ACTIVITY\_TYPES. You can confirm this from the META\_DATASTORES.csv file. In this example, the file is named ACTIVITY\_TYPES.xlsx or ACTIVITY\_TYPES.csv. The

metadata file must be META\_DATASTORES\_ACTIVITY\_TYPES\_COL.csv.

**Objects**

Location: FAW/ACTIVITY\_TYPES

Upload More Actions ▾

<input type="checkbox"/>	Name
<input type="checkbox"/>	ACTIVITY_TYPES.xlsx
<input type="checkbox"/>	META_DATASTORES_ACTIVITY_TYPES_COL.csv

The META\_DATASTORES\_ACTIVITY\_TYPES\_COL.csv has these columns:

- DATA\_STORE\_NAME - This is a mandatory column.
- COLUMN\_NAME - This is a mandatory column.
- COLUMN\_LABEL - This is a non-mandatory column.
- DATA\_TYPE – This is a mandatory column.
- WIDTH – This column identifies the string length.
- PRECISION - This column value must be Numeric data type.
- SCALE - This column value must be Numeric data type.
- KEY\_SEQUENCE - This is a mandatory column that identifies the Primary Key definition. If you're using the composite primary key, then use column order numbers as values.

4. On the Manage Connections page, select **Actions** (⚙️) for the SFTP connection and then select **Test Connection**.
5. On the Manage Connections page, select **Actions** for the SFTP connection and then select **Refresh Metadata**.

 **Note:**

You can't create augmentations for SFTP unless you perform a metadata extract.

6. After the connections are successfully established, navigate to the Data Augmentation tile on the Data Configuration page and create a data augmentation using the SFTP data. Ensure that you select **Regular** as the source dataset type and the secure FTP source as the pillar. Select the applicable secure FTP source tables. See Augment Your Data.

## Load Data from Azure Storage into Oracle Fusion Data Intelligence (Preview)

As a service administrator, you can use the Oracle Fusion Data Intelligence extract service to acquire data from Azure Storage and use it to create data augmentations.

Ensure that **Azure Storage** is enabled on the Enable Features page prior to creating this connection. See [Make Preview Features Available](#).

1. In Oracle Fusion Data Intelligence, create the Azure Storage data connection using these instructions:

- a. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
- b. On the Data Configuration page, click **Manage Connections**.
- c. On the Manage Connections page, click **Create** and then click **Connection**.
- d. In Create Connection, select **Azure Storage** as the connection type.
- e. In the dialog for the Azure Storage connection, select **Standard** in **Connectivity Type**, enter an email address to receive notifications in **Notification Email**, enter these Azure Storage instance details, and click **Save**:
  - **Connectivity Type**: Select **Standard**.
  - **Notification Email**: Enter an email address to receive notifications.
  - **File Type**: Select CSV.
  - **Azure Blob Connection String**: Enter your storage account's connection string.
  - **Container**: Specify the Azure container.
  - **Remote Host Extract Files Directory**: Name of the base folder in which you must place all your data files in Azure Storage.
  - **CSV Delimiter**: Delimiter for the data files.
  - **CSV Date Format**: Date format for the data files must match the date format in your Azure Storage source; for example, if you've used MM/dd/yyyy (01/23/1998) in your source, then you must specify the same format. See [About Date and Timestamp Formatting for CSV File-based Extractors](#)

← Create Connection

Connection Name

\* Connectivity Type

Notification Email

File Type

\* Azure Blob Connection String

\* Container

\* Remote Host Extract Files Directory

CSV Delimiter

CSV Date Format

CSV Timestamp Format

- f. Click **Save**.
2. On the Manage Connections page, select **Actions** (⚙️) for the Azure Storage connection and then select **Test Connection**.
3. On the Manage Connections page, select **Actions** for the Azure Storage connection and then select **Refresh Metadata**.

 **Note:**

You can't create augmentations for Azure Storage unless you perform a metadata extract.

4. After the connections are successfully established, navigate to the Data Augmentation tile on the Data Configuration page and create a data augmentation using the Azure Storage data. Ensure that you select **Regular** as the source dataset type and **Azure Storage** as the pillar. Select the applicable Azure Storage source tables. See [Augment Your Data](#).

## Connect With Cloud Sources

Connect with your cloud applications to provide the background information for reports.

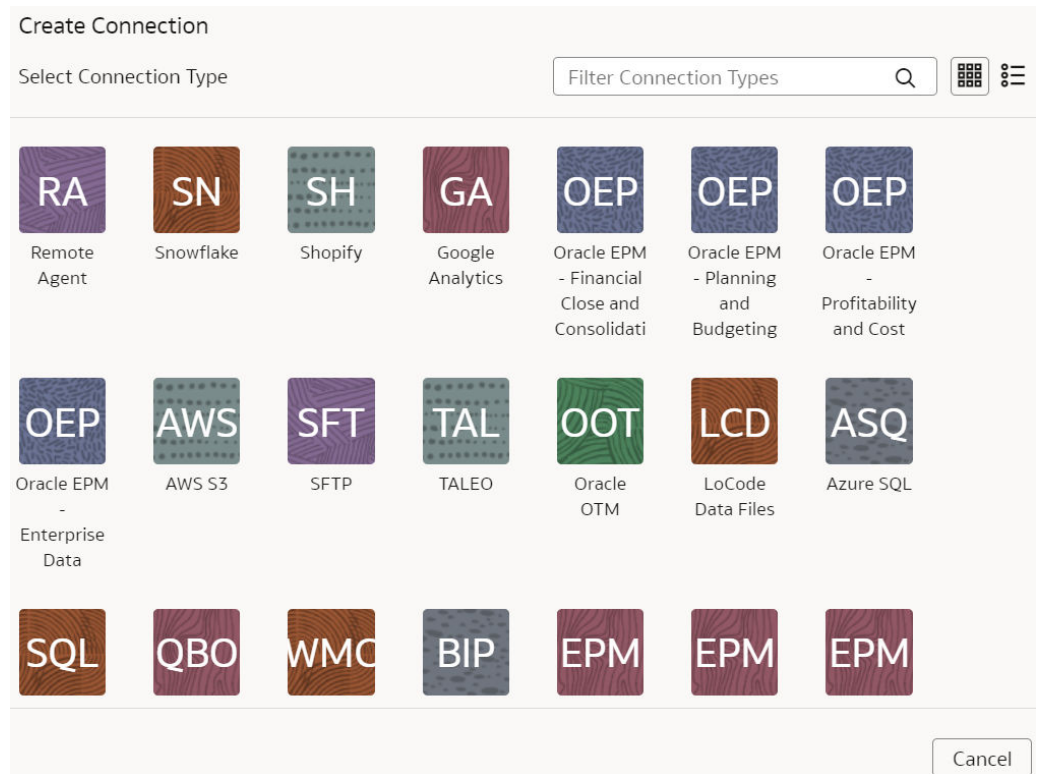
You can blend the additional data from these data sources with the prebuilt datasets to enhance business analysis. To know about the date and timestamp formatting for the CSV file-based extractors, see [About Date and Timestamp Formatting for CSV File-based Extractors](#).

## Load Data from Azure SQL into Oracle Fusion Data Intelligence (Preview)

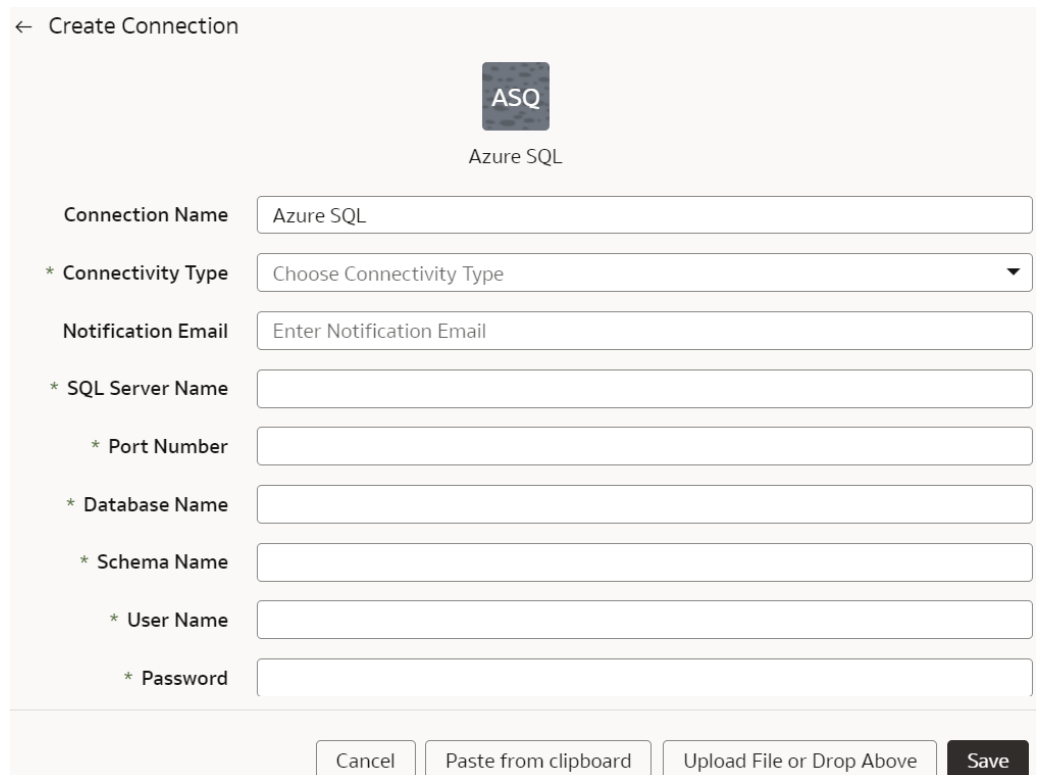
As a service administrator, you can use the Oracle Fusion Data Intelligence extract service to acquire data from Azure SQL and use it to create data augmentations.

Ensure that **Azure SQL** is enabled on the Enable Features page prior to creating this connection. See [Make Preview Features Available](#).

1. In Oracle Fusion Data Intelligence, create the Azure SQL data connection using these instructions:
  - a. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
  - b. On the Data Configuration page, click **Manage Connections**.
  - c. On the Manage Connections page, click **Create** and then click **Connection**.
  - d. In Create Connection, select **Azure SQL** as the connection type.



- e. In the dialog for the Azure SQL connection, select **Standard** in **Connectivity Type**, enter an email address to receive notifications in **Notification Email**, enter your Azure SQL instance details, and click **Save**.





- f. Click **Save**.
2. On the Manage Connections page, select **Actions** (⋮) for the Azure SQL connection and then select **Test Connection**.
3. On the Manage Connections page, select **Actions** for the Azure SQL connection and then select **Refresh Metadata**.

**Note:**

You can't create augmentations for Azure SQL unless you perform a metadata extract.

4. After the connections are successfully established, navigate to the Data Augmentation tile on the Data Configuration page and create a data augmentation using the Azure SQL data. Ensure that you select **Regular** as the source dataset type and **Azure SQL** as the pillar. Select the applicable Azure SQL source tables. See [Augment Your Data](#).

## Connect with Your Oracle Eloqua Data Source

If you've subscribed for Oracle Fusion CX Analytics and want to load data from your Oracle Eloqua source into Fusion Data Intelligence, then create a connection using the *Eloqua* connection type.

The Oracle Eloqua data that you load into Fusion Data Intelligence enables you to augment the data in your warehouse and create varied customer experience-related analytics. Ensure that **Oracle Eloqua** is enabled on the Enable Features page prior to creating this connection. See [Make Preview Features Available](#).

1. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
2. On the Data Configuration page, click **Manage Connections** under Global Configurations.
3. On the Manage Connections page, click **Create** and then click **Connection**.
4. In Create Connection, select **Eloqua** as the connection type.
5. In the dialog for the Eloqua connection, select **Standard** in **Connectivity Type**, enter an email address to receive notifications in **Notification Email**, and the credentials to connect with the Eloqua source in **User Name** and **Password**.

- In **URL**, enter the URL for your Eloqua server in this sample format: `https://<your_eloqua_server>/api/odata/1.0`.

← Create Connection



ELOQUA

Connection Name	<input type="text" value="ELOQUA"/>
* Connectivity Type	<input type="text" value="Standard"/>
Notification Email	<input type="text" value="Enter Notification Email"/>
* User Name	<input type="text" value="123sampleuser"/>
* Password	<input type="password"/>
* URL	<input type="text" value="https://r[REDACTED]h/api/odata/1.0"/>

- Click **Save**.

## Load Data from Your Oracle Eloqua Data Source

Create a data pipeline for the Marketing Campaign Analytics functional area to load data from your Oracle Eloqua source into Oracle Fusion Data Intelligence.

- Sign in to your service.
- In Oracle Fusion Data Intelligence, open the **Navigator** menu, click **Console**, and then click **Data Configuration** under **Application Administration**.
- On the Data Configuration page, click your service. For example, under Applications, click **Customer Experience**.
- On the Customer Experience page, click **Create**.
- In the wizard, select **Customer Experience Marketing Analytics** in **Offering** and **Marketing Campaign Analytics** in **Functional Area** to transfer the data to the warehouse, and then click **Next**.

6. Review the parameters and click one of the options:
  - **Cancel:** To cancel the data pipeline for the functional area.
  - **Save:** To save the data pipeline for the functional area but not activate it.
  - **Activate:** To schedule when to run the data pipeline for the functional area. See [Activate a Data Pipeline for a Functional Area](#).

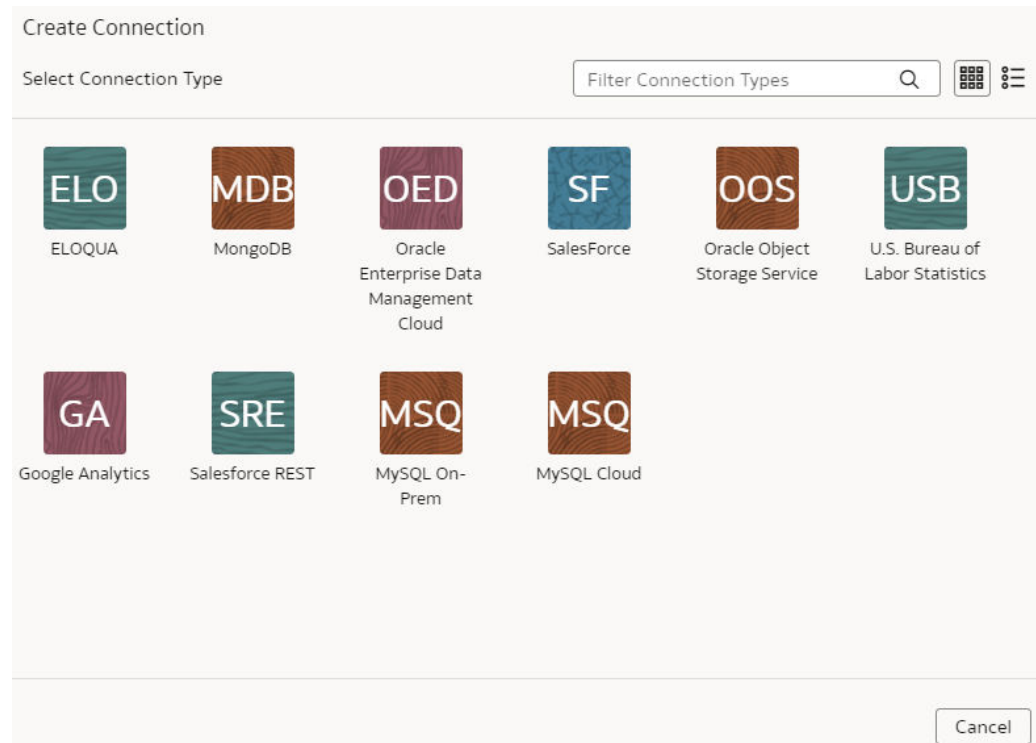
## Load Data from Enterprise Data Management Cloud into Fusion Data Intelligence (Preview)

As a service administrator, you can use the Fusion Data Intelligence extract service to acquire data from the Enterprise Data Management Cloud instance and use it to create data augmentations.

The extracts created in the Enterprise Data Management Cloud service need to be public, hence you must promote your private extracts to the public. Review the documentation and error messages for the metadata refresh failures for the private extract. This connector supports only the CSV data format.

Ensure that **Oracle Enterprise Data Management Cloud** is enabled on the Enable Features page prior to creating this connection. See [Make Preview Features Available](#).

1. In Fusion Data Intelligence, create the Enterprise Data Management Cloud data connection using these instructions:
  - a. In Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
  - b. On the Data Configuration page, click **Manage Connections**.
  - c. On the Manage Connections page, click **Create** and then click **Connection**.
  - d. In Create Connection, select **Oracle Enterprise Data Management Cloud** as the connection type.



- e. In the dialog for the Enterprise Data Management Cloud connection, select **Standard** in **Connectivity Type**, enter an email address to receive notifications in **Notification Email**, host name of the Oracle Enterprise Data Management server in **Host Name**, credentials to access the Enterprise Data Management Cloud instance in **User Name** and **Password**. In **Extract Configuration**, enter the list of extracts using only “comma” as the delimiter. The configuration extract must be a single line JSON without formatting for the quotation marks (“ instead of \”), for example:

```
[{"applicationName": "Account Reconciliation", "dimensionName": "Profiles", "extractName": "Profiles"}]
```

← Create Connection

**OED**  
Oracle Enterprise Data Management Cloud

Connection Name

\* Connectivity Type

Notification Email

\* Host Name

\* User Name

\* Password

\* Extract Configuration

- f. Click **Save**.
2. On the Manage Connections page, select **Actions** (⚙️) for the Enterprise Data Management Cloud connection and then select **Test Connection**.
3. On the Manage Connections page, select **Actions** for the Enterprise Data Management Cloud connection and then select **Refresh Metadata**.

 **Note:**

You can't create augmentations for Enterprise Data Management Cloud unless you perform a metadata extract.

4. After the connections are successfully established, navigate to the Data Augmentation tile on the Data Configuration page and create a data augmentation using the Enterprise Data Management Cloud data. Ensure that you select **Regular** as the source dataset type and **Enterprise Data Management Cloud** as the pillar. Select the applicable Enterprise Data Management Cloud source tables. See *Augment Your Data*.

## Load Data from Enterprise Performance Management into Fusion Data Intelligence (Preview)

As a service administrator, you can use the Fusion Data Intelligence extract service to acquire data from the Enterprise Performance Management (EPM) SaaS instance and use it to create data augmentations for various Enterprise Resource Planning and Supply Chain Management use cases.

You can connect to these functional modules of EPM:

- Financial Close and Consolidation (FCCS)

- Planning and Budgeting (PBCS)
- Profitability and Cost Management (PCMCS)

If you've pivot table in your source, then the metadata extract supports pivot table metadata extraction for the EPM connectors. You can only manually extract the incremental data because, for incremental extraction, you must update the results file in EPM before starting the next extraction for the updated data. Update the results file by running the integration using Data Exchange and then access the new results file from the EPM connector in Fusion Data Intelligence. Ensure that you enter all the fields in accordance with your EPM nomenclature and specifics. For example, if you have defined Period in your EPM job as {June-23}, then include exactly the same in the Create Connection for the EPM source dialog.

 **Note:**

The EPM connectors display the default datatype and size; you must edit these values as applicable while creating data augmentations.

Depending on the functional module you want to connect to, ensure that the applicable feature is enabled on the Enable Features page prior to creating this connection:

- **Oracle EPM - Financial Close and Consolidation**
- **Oracle EPM - Planning and Budgeting**
- **Oracle EPM - Profitability and Cost Management**

See [Make Preview Features Available](#).

1. In EPM, create an integration, write out the results into a file whose name you provide in **Download File Name**, and then specify that same file name in List of Data Files while creating the connection to EPM in Fusion Data Intelligence to extract the data.

Edit Integration: FAWEXPORTNEW Save ▼

General Map Dimensions Map Members Options

**Filters** Options

**General Option**

Category: Current ▼

Source Cube: Plan1 ▼

Period Mapping Type: Default ▼

Calendar: ▼

Data Extract Option: Stored Data only ▼

Data Precision:

Data Number of Decimal:

**Target Option**

Download File Name: fawdatanew

Column Delimiter: , ▼

Decimal Separator: Decimal Point ▼

File Character Set: UTF-8 ▼

End of Line Character: Linux ▼

Include Header: Yes ▼

Export Attribute Columns: No ▼

Accumulate Data: No ▼

Sort Data: No ▼

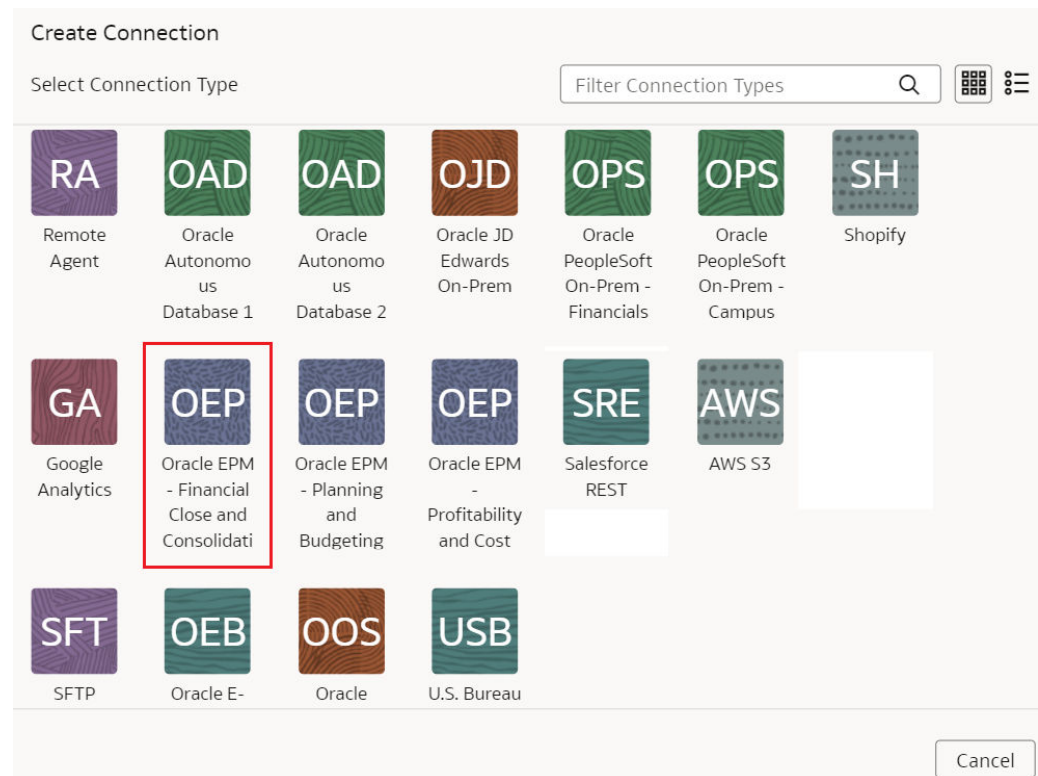
Pivot Dimension:

2. In EPM, when exporting data, use one of the following modes:
  - **Standard mode:** This built-in workflow process helps manage the data flow process in and out of EPM. For Standard mode, you specify the period when you run the integration.
  - **Quick mode:** This process by-passes most of the steps in the workflow and provides a significant improvement in the extract process. When using quick mode, you specify the period in the integration definition filter, and this may include a substitution

variable. When using the API, the same rules apply, except that when you need to specify a period, you can't use a substitution variable to pull from EssBase, but will need to include the period or year on extract.

See [Exporting Data](#).

3. In Fusion Data Intelligence, create the EPM data connection using these instructions:
  - a. In Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
  - b. On the Data Configuration page, click **Manage Connections**.
  - c. On the Manage Connections page, click **Create** and then click **Connection**.
  - d. In Create Connection, select the connection type based on the functional module that you want to connect to. For example, to connect to the "Financial Close and Consolidation (FCCS)" module, select **Oracle EPM - Financial Close and Consolidation** as the connection type.



- e. In Create Connection for the EPM source, enter these details and click **Save**:
  - **Connectivity Type**: Select **Standard**.
  - **Notification Email**: Enter an email address to receive notifications.
  - **User Name** and **Password**: Enter the credentials for your EPM source. Prefix the user name with the domain of your EPM source, such as `domain.username`.
  - **URL**: Enter the specific URL of your EPM source using the `https://<DOMAIN_NAME>region.ocs.oraclecloud.com` format. For example, `https://epm7-test-a123456.epm.us6.oraclecloud.com`. Ensure to use the `https://` protocol to avoid a timeout error.

- **List of Data Files:** Specify the file name that you had entered in **Download File Name** while creating an integration in EPM.
- **List of Job Names:** Provide the EPM integration job names. If you've multiple job names, then ensure that they are comma separated. For example, `FAWEPMTestingV2, FAWEXPORT, FAW Job Testing`.
- **List of Period Names:** Provide the period names for the corresponding job names. Ensure that multiple period names are comma separated. You may leave this blank, in which case the connector uses the global point of view. For example, `{Jan-22}-{Oct-22}`.
- **Extract Configuration:** Provide the EPM job name such as "Job 1" and period name such as "Quarter 1" corresponding to the given job name to extract data for specific periods. This enables you to run multiple EPM jobs.

← Create Connection

**OEP**

Oracle EPM - Financial Close and Consolidation

Connection Name

\* Connectivity Type

Notification Email

\* User Name

\* Password

\* URL

List of Data Files

List of Job Names

List of Period Names

4. On the Manage Connections page, select **Actions** (⚙️) for the EPM connection and then select **Refresh Metadata**.

**Note:**

You can't create augmentations for EPM unless you perform a metadata extract.

5. On the Manage Connections page, select **Actions** for the EPM connection and then select **Test Connection**.
6. After the connections are successfully established, navigate to the Data Augmentation tile on the Data Configuration page and create a data augmentation using the EPM data. Ensure that you select **Regular** as the source dataset type and **EPM** as the pillar. Select the applicable EPM source tables. See Augment Your Data.



## Load Data from EPM Export Data Instance into Fusion Data Intelligence (Preview)

As a service administrator, you can use the Fusion Data Intelligence extract service to acquire data from EPM Export Data instance and use it to create data augmentations.

You can connect to these functional modules of EPM:

- Financial Close and Consolidation (FCCS)
- Planning and Budgeting (PBCS)
- Profitability and Cost Management (PCMCS)

If you've pivot table in your source, then the metadata extract supports pivot table metadata extraction for the EPM connectors. You can only manually extract the incremental data because, for incremental extraction, you must update the results file in EPM before starting the next extraction for the updated data. Update the results file by running the integration using Data Exchange and then access the new results file from the EPM connector in Fusion Data Intelligence. Ensure that you enter all the fields in accordance with your EPM nomenclature and specifics. For example, if you have defined Period in your EPM job as {June-23}, then include exactly the same in the Create Connection for the EPM source dialog.

 **Note:**

The EPM connectors display the default datatype and size; you must edit these values as applicable while creating data augmentations.

Depending on the functional module you want to connect to, ensure that the applicable feature is enabled on the Enable Features page prior to creating this connection:

- **EPM Financial Close and Consolidation Data Export**
- **EPM Planning and Budgeting Data Export**
- **EPM Profitability and Cost Management Data Export**

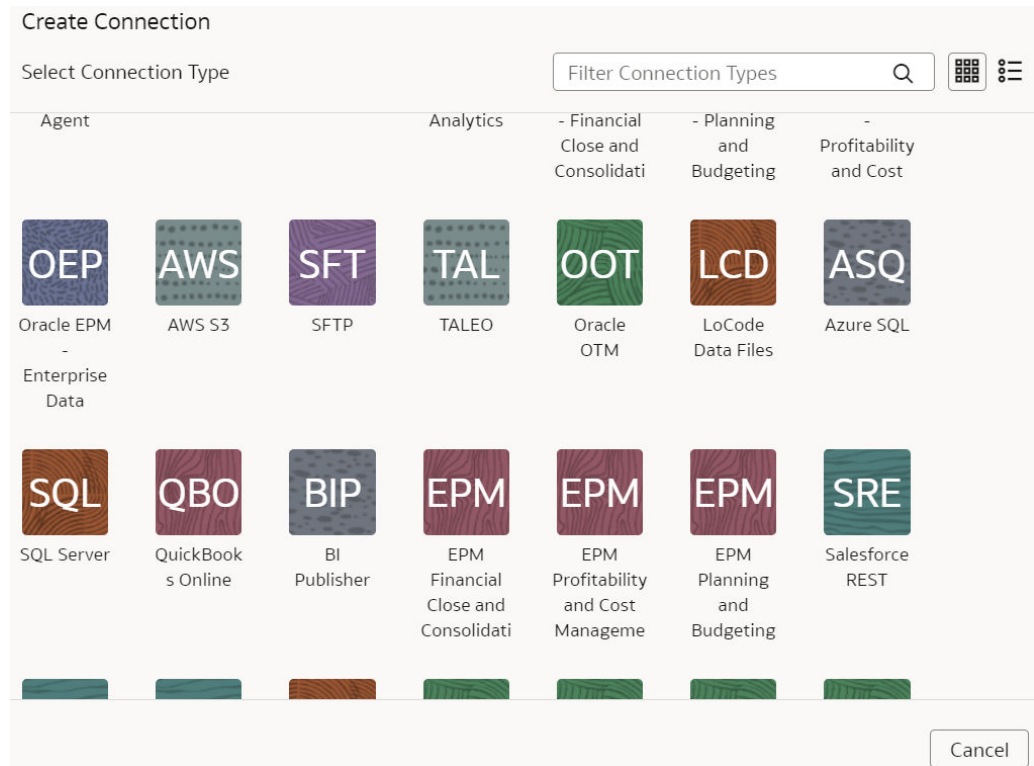
See [Make Preview Features Available](#).

1. In EPM, create a data exchange job, write out the results into a file whose name you provide in **Download File Name**, and then specify that same file name in List of Data Files while creating the connection to EPM in Fusion Data Intelligence to extract the data.
2. In EPM, when exporting data, use one of the following modes:
  - Standard mode: This built-in workflow process helps manage the data flow process in and out of EPM. For Standard mode, you specify the period when you run the integration.
  - Quick mode: This process by-passes most of the steps in the workflow and provides a significant improvement in the extract process. When using quick mode, you specify the period in the integration definition filter, and this may include a substitution variable. When using the API, the same rules apply, except that when you need to specify a period, you can't use a substitution variable to pull from EssBase, but will need to include the period or year on extract.

See [Exporting Data](#).

3. In Fusion Data Intelligence, create the data connection to the EPM Export Data instance using these instructions:

- a. In Fusion Data Intelligence **Console**, click **Data Configuration** under Application Administration.
- b. On the Data Configuration page, click **Manage Connections**.
- c. On the Manage Connections page, click **Create** and then click **Connection**.
- d. In Create Connection, select the connection type based on the functional module that you want to connect to. For example, to connect to the "Financial Close and Consolidation (FCCS)" module, select **EPM Financial Close and Consolidation Data Export** as the connection type.



- e. In Create Connection for the EPM source, enter these details and click **Save**:
  - **Connectivity Type**: Select **Standard**.
  - **Notification Email**: Enter an email address to receive notifications.
  - **URL**: Enter the specific URL of your EPM source. For example, `https://epm7-test-a123456.epm.us6.oraclecloud.com`.
  - **User Name** and **Password**: Enter the credentials for your EPM source. Prefix the user name with the domain of your EPM source, such as `domain.username`.
  - **EPM Application Name**: Specify the file name that you had entered in **Download File Name** while creating the EPM data exchange job in EPM.
  - **Comma Separated Job Names**: Provide the EPM data exchange job names. If you've multiple job names, then ensure that they are comma separated. For example, `FAWEPMTtestingV2, FAWEXPORT, FAW Job Testing`.
  - **Extract Configuration**: Provide the EPM data exchange job name in **Job Name** and select **Dimension Export** if you want to extract the hierarchy (dimensional data) from your EPM Export Data instance.

← Create Connection

**EPM**

EPM Financial Close and Consolidation Data Export

Connection Name: EPM Financial Close and Consolidation Data Export

\* Connectivity Type: Choose Connectivity Type

Notification Email: Enter Notification Email

\* URL:

\* User Name:

\* Password:

\* EPM Application Name:

\* Comma Separated Job Names:

Cancel | Paste from clipboard | Upload File or Drop Above | Save

- On the Manage Connections page, select **Actions** (⚙️) for the EPM connection and then select **Refresh Metadata**.

**Note:**

You can't create augmentations for EPM unless you perform a metadata extract.

- On the Manage Connections page, select **Actions** for the EPM connection and then select **Test Connection**.
- After the connections are successfully established, navigate to the Data Augmentation tile on the Data Configuration page and create a data augmentation using the EPM data. Ensure that you select **Regular** as the source dataset type and **EPM** as the pillar. Select the applicable EPM source tables. See *Augment Your Data*.

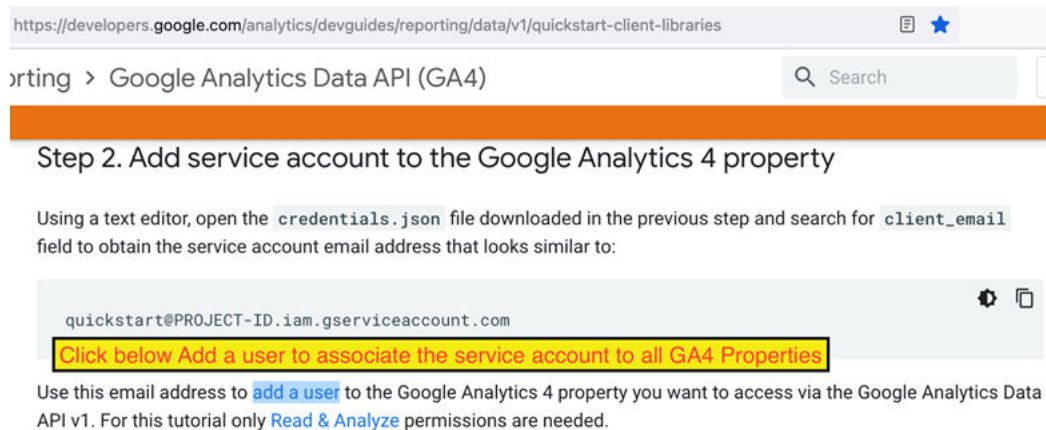
## Load Data from Google Analytics into Fusion Data Intelligence

As a service administrator, you can use the Fusion Data Intelligence extract service to acquire data from the Google Analytics SaaS instance and use it to create data augmentations for various Enterprise Resource Planning and Supply Chain Management use cases.

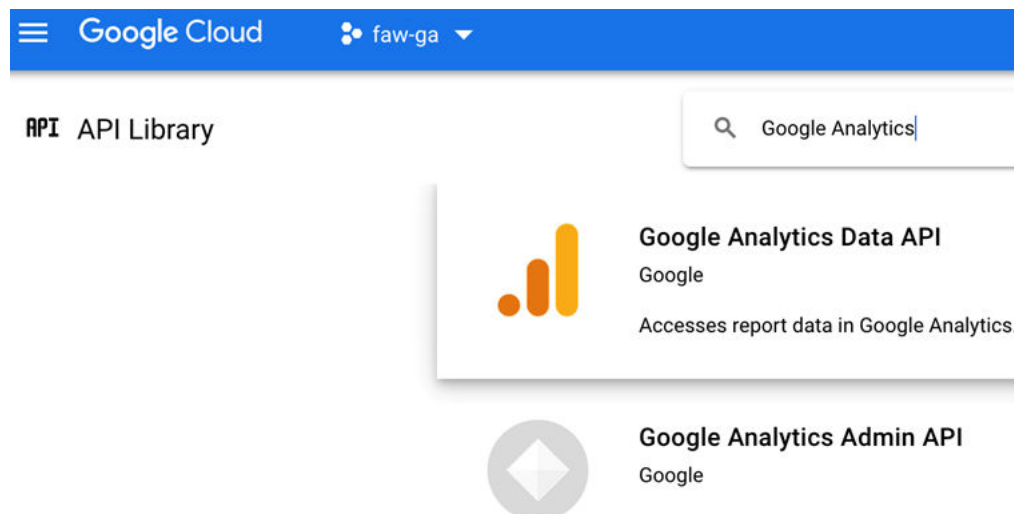
Before connecting with the Google Analytics source, note these:

- Fusion Data Intelligence supports Google Analytics extractor for GA4 properties and doesn't support the previous version – Google Universal Analytics (UA) properties.
- DataStores are the list of GA4 properties.
- DataStore columns are the list of Dimensions and Metrics for a GA4 property.

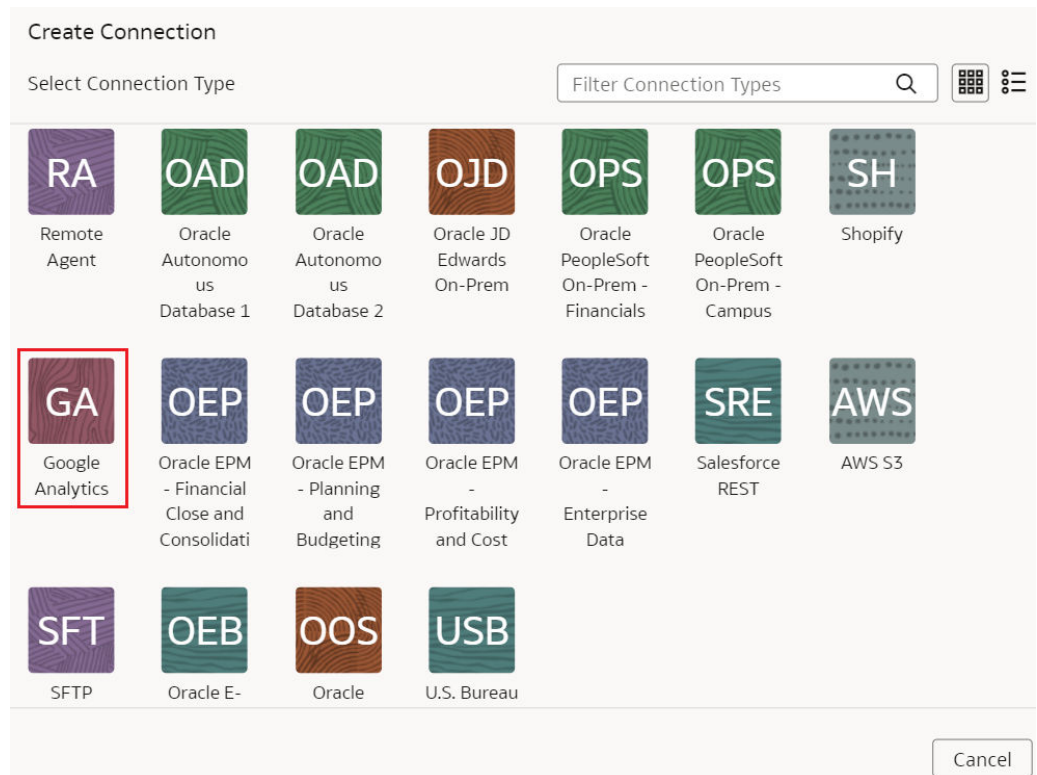
- DataExtract runs the report based on user selection for a GA4 property as DataStore and Dimensions and Metrics as DataStore columns.
  - MetaExtract fetches metadata for all the available GA4 properties (DataStores) and its Dimensions and Metrics (DataStoreColumns).
  - This connector supports limited number of Google Analytics metrics. See [Dimensions Metrics Explorer](#) to know what is available.
1. In Google Cloud (Analytics) Project, create a service account and download the `credentials.json` file.  
See <https://cloud.google.com/docs/authentication/production>.
  2. Add the service account to the Google Analytics 4 property.  
See <https://developers.google.com/analytics/devguides/reporting/data/v1/quickstart-client-libraries>.
  3. Enable Google Analytics APIs using these instructions:
    - a. Using a text editor, open the `credentials.json` file that you had downloaded and search for the `client_email` field to obtain the service account email address.
    - b. Use this email address to add a user to the Google Analytics 4 property you want to access through the Google Analytics Data API v1.



4. Ensure that the Google Analytics Admin API, Google Analytics Data API are available for your Google Analytics instance.




5. In Fusion Data Intelligence, create the Google Analytics data connection using these instructions:
  - a. In Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
  - b. On the Data Configuration page, click **Manage Connections**.
  - c. On the Manage Connections page, click **Create** and then click **Connection**.
  - d. In Create Connection, select **Google Analytics** as the connection type.



- e. In the dialog for the Google Analytics connection, select **Standard** as the connectivity type and enter these details:
  - **Notification Email:** An email address to receive notifications regarding this connection.
  - **Service Account Credentials Json File:** The Google Cloud Service Account `credentials.json` file that you had downloaded.
  - **Account ID:** Google Analytics account ID.
  - **GA4 List of Property ID:** The GA4 List of Property ID with commas to separate each ID.
  - **Lookback Mode:** Select either Full or Committed.
  - **List of Lookback N days Ago:** Comma separated list of days (integer) values such as 7,21.

← Create Connection



Google Analytics

Connection Name

\* Connectivity Type

Notification Email

\* Service Account Credentials Json File 

**Drag and Drop**  
 Select a file or drop one here.

Account Id

GA4 List of Property Id

Lookback Mode

List of Lookback N days Ago

Note these:

- For the Lookback mode, if you don't provide a value, then the Lookback mode isn't supported. The Full option requires one day value, if you provide multiple values, then the process uses the first value. You can provide multiple values for the Committed option.
- For List Data Stores, the REST API returns a list of GA4 Property IDs either using the Account ID (if provided) or just the source configured or provided list of property.
- For List columns, the REST API returns a list of column metadata for the given GA4 Property ID.

f. Click **Save**.

6. On the Manage Connections page, select **Actions** (⚙️) for the Google Analytics connection and then select **Test Connection**.

 **Note:**

REST API signature is same across sources. Test connection invokes GA Common Metadata API. This returns the default version values and no calls are made to the source.

7. On the Manage Connections page, select **Actions** for the Google Analytics connection and then select **Refresh Metadata**.

 **Note:**

You can't create augmentations for Google Analytics unless you perform a metadata extract.

Metadata extract:

- Retrieves metadata columns for each GA4 Property ID provided in the source configuration.
- Prefixes the GA property columns with `Dimension_` or `Metric_` that Fusion Data Intelligence later uses while extracting data to differentiate Dimension and Metric column type.
- Leaves the payload `dataStores` array empty.

8. After the connections are successfully established, navigate to the Data Augmentation tile on the Data Configuration page and create a data augmentation using the Google Analytics data. Ensure that you select **Regular** as the source dataset type and **Google Analytics** as the pillar. Select the applicable Google Analytics source tables. Ensure that you specify "Dimension\_transactionId" in the source tables as the primary key and use it to join each of the data augmentation tables. You can select a maximum number of nine dimensions for each data augmentation. See [Augment Your Data](#).

When you enable data extraction, you can schedule to run when you choose to do so. For data extraction, note these:

- a. Provide date ranges to run the report and fetch data.
- b. Regular data extract uses the initial or last ExtractDate as *StartDate* and job RunDate as *EndDate*.
- c. Lookback mode includes additional date ranges along with the regular extract date range which fetches additional data set but in a single runReport call.
  - The Full option has a single date range;  $StartDate=ExtractDate - NdaysAgo$ ,  $EndDate=RunDate$ .
  - The Committed option can have multiple date ranges. For each configured `GA_LIST_OF_N_DAYS_AGO`,  $StartDate=ExtractDate - NdaysAgo$ ,  $EndDate=RunDate - NdaysAgo$ .

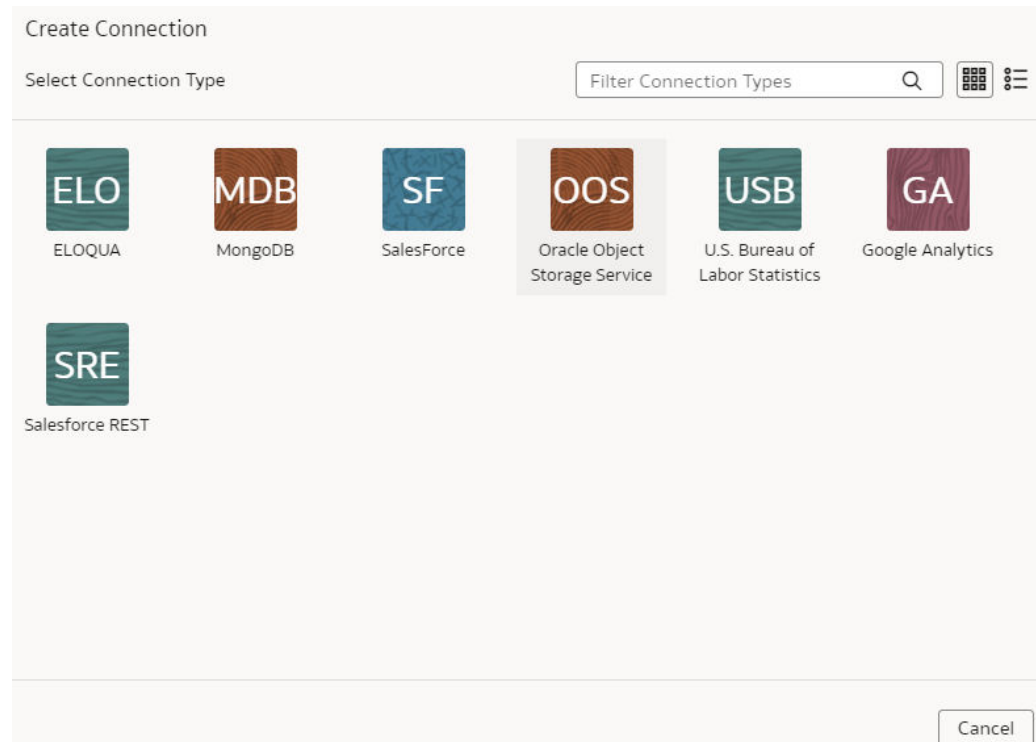
## Load Data from Mongo Database into Fusion Data Intelligence (Preview)

As a service administrator, you can use the Fusion Data Intelligence extract service to acquire data from the Mongo database and use it to create data augmentations.

Ensure that **MongoDB** is enabled on the Enable Features page prior to creating this connection. See [Make Preview Features Available](#).

1. Check the port number for your Mongo database and create a service request with server host and port details to enable network connectivity to the Mongo database server.
2. In Fusion Data Intelligence, create the Mongo database connection using these instructions:
  - a. In Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
  - b. On the Data Configuration page, click **Manage Connections**.
  - c. On the Manage Connections page, click **Create** and then click **Connection**.

- d. In Create Connection, select **MongoDB** as the connection type.



- e. In the dialog for the Mongo database connection, select **Standard in Connectivity Type**, enter an email address to receive notifications in **Notification Email**, and provide these details:

- **Connection Protocol:** Enter the connection protocol such as `mongodb+srv` or `mongodb`
- Credentials to access the database in **User Name** and **Password**
- **Host Name:** Enter the host name of the Mongo database such as `cluster0.example4.mongodb.net`
- **Host Port:** Enter the port number where Mongo database is listening such as `27017`
- **Database Name:** Enter a name such as `Analytics`
- **Last Update Date Column Pattern:** Enter pattern such as `"%mo%fie%te%"`

 **Note:**

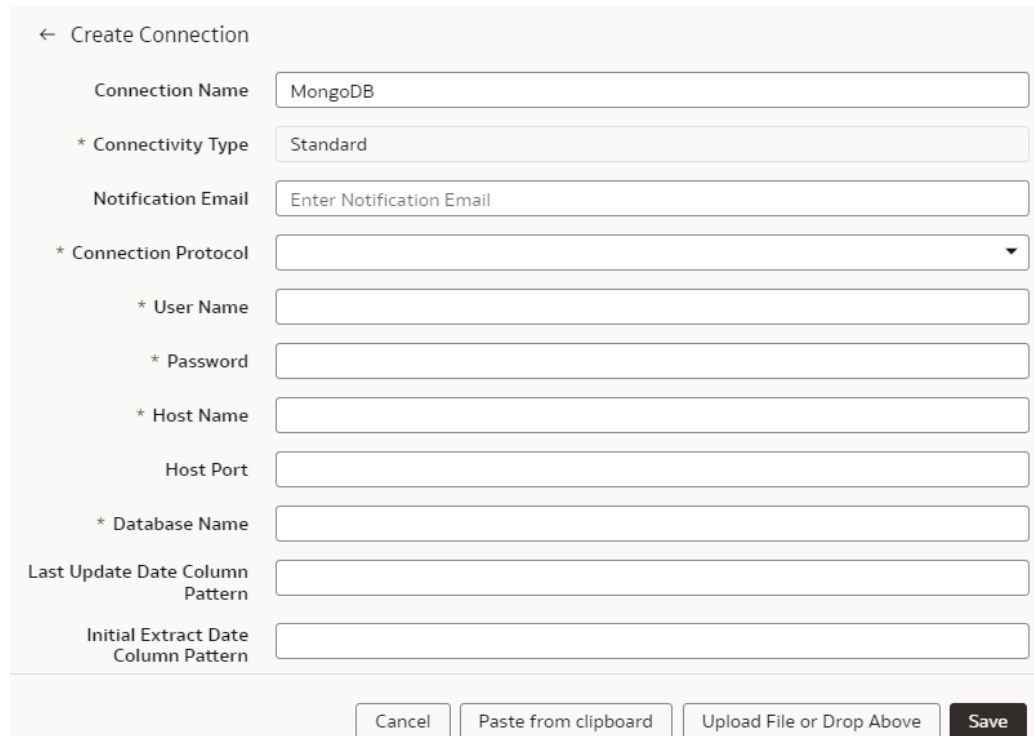
If column name matches with pattern provided, then Fusion Data Intelligence marks the column name with `isLastUpdateDate = true` and uses it for the incremental extract. For example, if pattern provided is `"%mo%fie%te%"`, then the column name `modifiedDate` is marked as `isLastUpdateDate = true`.

- **Initial Extract Date Column Pattern:** Enter pattern such as `"%cr%ted%te%"`



 **Note:**

If column name matches with pattern provided, then Fusion Data Intelligence marks the column name with `isCreationDate = true` and uses it for the initial extract date extraction. For example, if pattern provided is: `"%cr%ted%te%"`, then the column name `createdDate` is marked as `isCreationDate = true`.



← Create Connection

Connection Name

\* Connectivity Type

Notification Email

\* Connection Protocol

\* User Name

\* Password

\* Host Name

Host Port

\* Database Name

Last Update Date Column Pattern

Initial Extract Date Column Pattern

f. Click **Save**.

3. On the Manage Connections page, select **Actions** (⚙️) for the Mongo database connection and then select **Test Connection**.
4. On the Manage Connections page, select **Actions** for the Mongo database connection and then select **Refresh Metadata**.

 **Note:**

You can't create augmentations for Mongo database unless you perform a metadata extract.

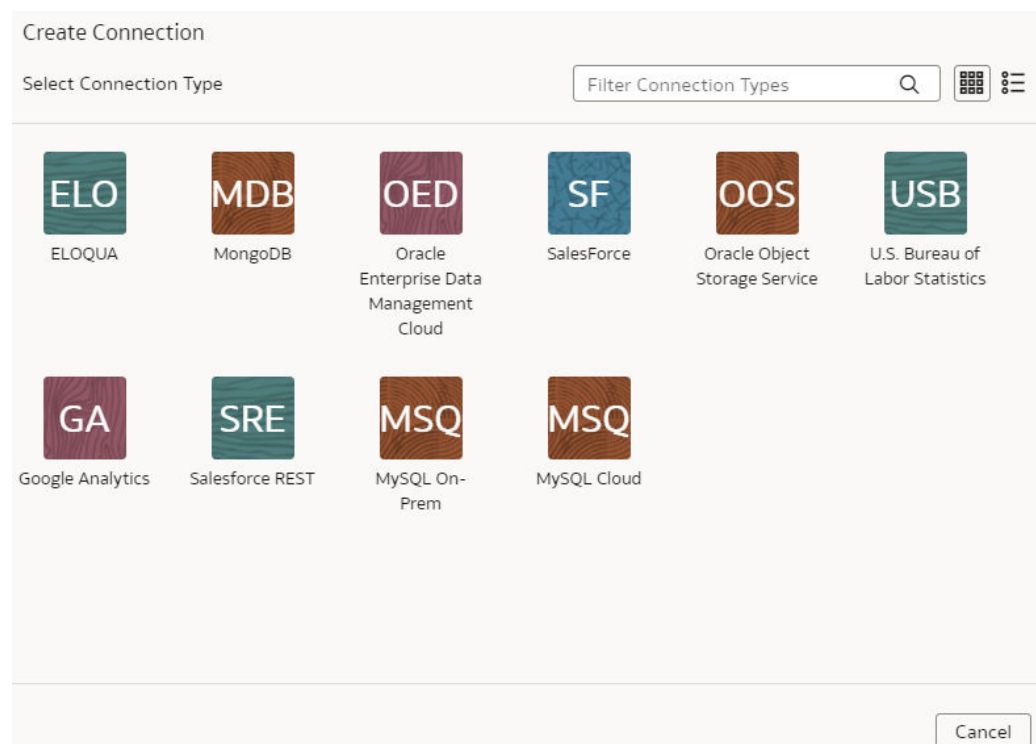
5. After the connections are successfully established, navigate to the Data Augmentation tile on the Data Configuration page and create a data augmentation using the Mongo database data. Ensure that you select **Regular** as the source dataset type and **Mongo database** as the pillar. Select the applicable Mongo database source tables. See Augment Your Data.

## Load Data from MySQL Cloud Database into Fusion Data Intelligence (Preview)

As a service administrator, you can use the Fusion Data Intelligence extract service to acquire data from the MySQL Cloud database and use it to create data augmentations.

Ensure that **MySQL Cloud** is enabled on the Enable Features page prior to creating this connection. See [Make Preview Features Available](#).

1. Check the port number for your MySQL Cloud database and create a service request with server host and port details to enable network connectivity to the MySQL server.
2. In Fusion Data Intelligence, create the MySQL Cloud database connection using these instructions:
  - a. In Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
  - b. On the Data Configuration page, click **Manage Connections**.
  - c. On the Manage Connections page, click **Create** and then click **Connection**.
  - d. In Create Connection, select **MySQL Cloud** as the connection type.



- e. In the dialog for the MySQL Cloud database connection, select **Standard** in **Connectivity Type**, enter an email address to receive notifications in **Notification Email**, and provide these details:
  - **Host Name:** Enter the host name of MySQL server such as 100.111.252.64
  - **Port Number:** Enter the port number where the server is listening such as 3306
  - **Database:** Enter the database name you need to connect to such as airportdb
  - Credentials to access the database in **User Name** and **Password**

- **Last Update Date Column Pattern:** Enter format such as "%mo%fie%te%"

 **Note:**

If column name matches with pattern provided, then Fusion Data Intelligence marks the column name with `isLastUpdateDate = true` and uses it for the incremental extract. For example, if pattern provided is "%mo%fie%te%", then the column name `modifiedDate` is marked as `isLastUpdateDate = true`.

- **Initial Extract Date Column Pattern:** Enter format such as "%cr%ted%te%"

 **Note:**

If column name matches with pattern provided, then Fusion Data Intelligence marks the column name with `isCreationDate = true` and uses it for the initial extract date extraction. For example, if pattern provided is: "%cr%ted%te%", then the column name `createdDate` is marked as `isCreationDate = true`.

← Create Connection

MySQL Cloud

Connection Name

\* Connectivity Type

Notification Email

\* Host Name

Port Number

\* Database

\* User Name

\* Password

Last Update Date Column Pattern

Initial Extract Date Column Pattern

- f. Click **Save**.
3. On the Manage Connections page, select **Actions** (⚙️) for the MySQL Cloud database connection and then select **Test Connection**.
4. On the Manage Connections page, select **Actions** for the MySQL Cloud database connection and then select **Refresh Metadata**.

 **Note:**

You can't create augmentations for MySQL Cloud database unless you perform a metadata extract.

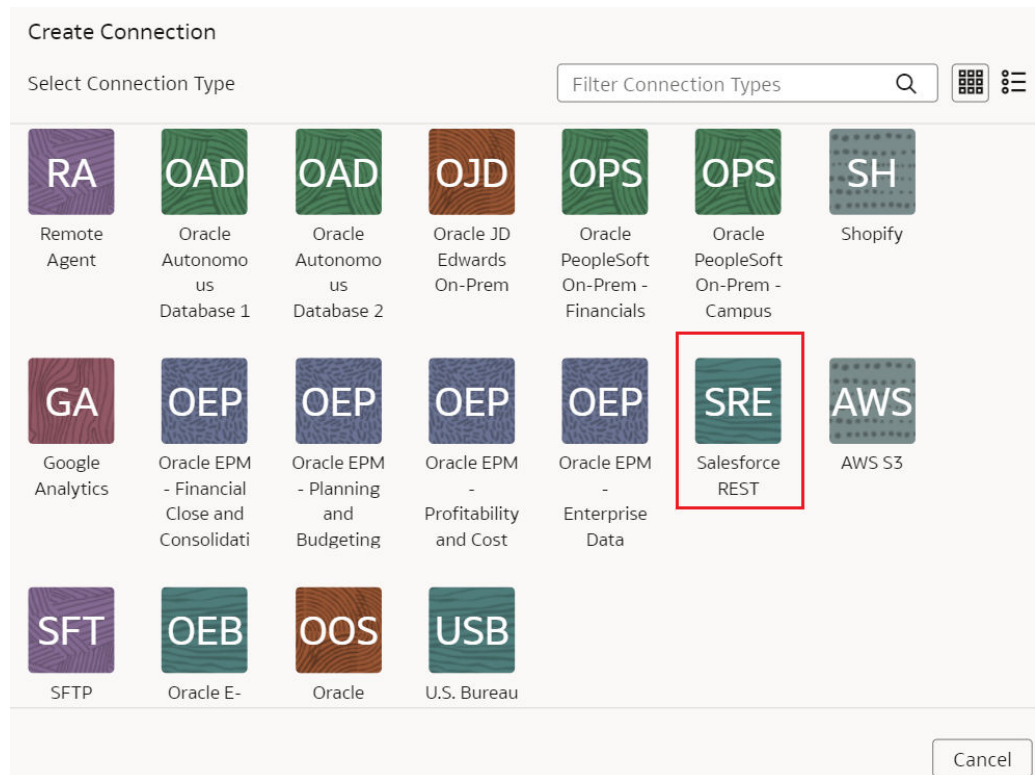
5. After the connections are successfully established, navigate to the Data Augmentation tile on the Data Configuration page and create a data augmentation using the MySQL Cloud database data. Ensure that you select **Regular** as the source dataset type and **MySQL Cloud database** as the pillar. Select the applicable MySQL Cloud database source tables. See *Augment Your Data*.

## Load Data from Salesforce into Fusion Data Intelligence

As a service administrator, you can use the Fusion Data Intelligence extract service to acquire data from the Salesforce SaaS instance and use it to create data augmentations for various Enterprise Resource Planning and Supply Chain Management use cases.

This version of the Salesforce Connector supports version 57.0 of the API from Salesforce.

1. In Fusion Data Intelligence, create the Salesforce data connection using these instructions:
  - a. In Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
  - b. On the Data Configuration page, click **Manage Connections**.
  - c. On the Manage Connections page, click **Create** and then click **Connection**.
  - d. In Create Connection, select **Salesforce REST** as the connection type.



- e. In the dialog box for the Salesforce connection, select **Standard** in **Connectivity Type** and enter an email address to receive notifications in **Notification Email**.

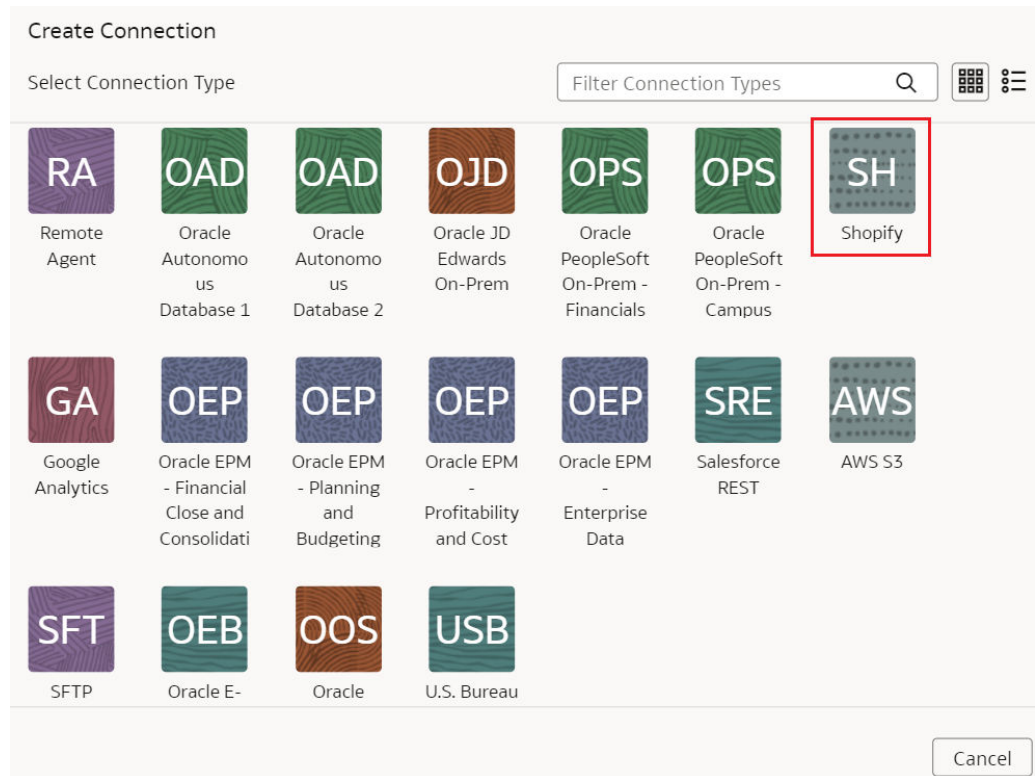
The screenshot shows a configuration dialog for a Salesforce REST connection. The title is 'Salesforce REST' with an 'SRE' icon. The fields are as follows:

- Connection Name: Salesforce REST
- \* Connectivity Type: Choose Connectivity Type (dropdown)
- Notification Email: Enter Notification Email
- \* URL: (empty)
- Token URL: (empty)
- \* Authorization Type: (empty)
- User Name: (empty)
- Password: (empty)
- Client ID: (empty)
- Client Secret: (empty)
- Security Token: (empty)
- Private Key: (empty)

Buttons at the bottom: Cancel, Paste from clipboard, Upload File or Drop Above, Save.

- f. Enter the URL of your Salesforce source such as <your Salesforce instance name>.my.salesforce.com in **URL**.
- g. Copy and paste the token url from your Salesforce instance in **Token URL**.
- h. Select the type of authorization in **Authorization Type**.  
 Authorization Type can be one of the following: BASICAUTH or OAUTH. Ensure that you enter these authorization types in uppercase letters without any characters in them. You must provide the corresponding fields for those authorization types. For example, if you select BASICAUTH, then you must provide a valid username, password, security token, url, client ID, and client secret. If you select OAUTH, then you must provide a valid username, token url, client ID, and private key. Remember to update all the authorization fields, because Salesforce may reset or require you to reset them regularly.
- i. Enter the credentials for your Salesforce source in **User Name** and **Password**.
- j. Copy and paste the client ID that's usually a long alpha-numeric code from your Salesforce account in **Client ID**.
- k. Copy and paste the client secret from your Salesforce account in **Client Secret**.  
 This is an alpha-numeric code and may contain special characters, however, it isn't visible. It is encrypted and shown as ....





- e. In the dialog for the Shopify connection, select **Standard** in **Connectivity Type**, enter an email address to receive notifications in **Notification Email**, applicable token value in **Access Token**, **Store Name** such as `myfawteststore.myshopify.com`, and `True` in **Bulk Extract**.

The screenshot shows the 'Create Connection' dialog for the Shopify connection type. The 'SH' icon and 'Shopify' label are at the top. The configuration fields are:

- Connection Name:** Shopify
- \* Connectivity Type:** Choose Connectivity Type (dropdown menu)
- Notification Email:** Enter Notification Email
- \* Access Token:** (empty text field)
- \* Store Name:** (empty text field)
- \* Bulk Extract:** (empty text field)

At the bottom, there are buttons for 'Cancel', 'Paste from clipboard', 'Upload File or Drop Above', and 'Save'.

- f. Click **Save**.
2. On the Manage Connections page, select **Actions** (⋮) for the Shopify connection and then select **Test Connection**.
3. On the Manage Connections page, select **Actions** for the Shopify connection and then select **Refresh Metadata**.

 **Note:**

You can't create augmentations for Shopify unless you perform a metadata extract.

4. After the connections are successfully established, navigate to the Data Augmentation tile on the Data Configuration page and create a data augmentation using the Shopify data. Ensure that you select **Regular** as the source dataset type and **Shopify** as the pillar. Select the applicable Shopify source tables. See *Augment Your Data*.

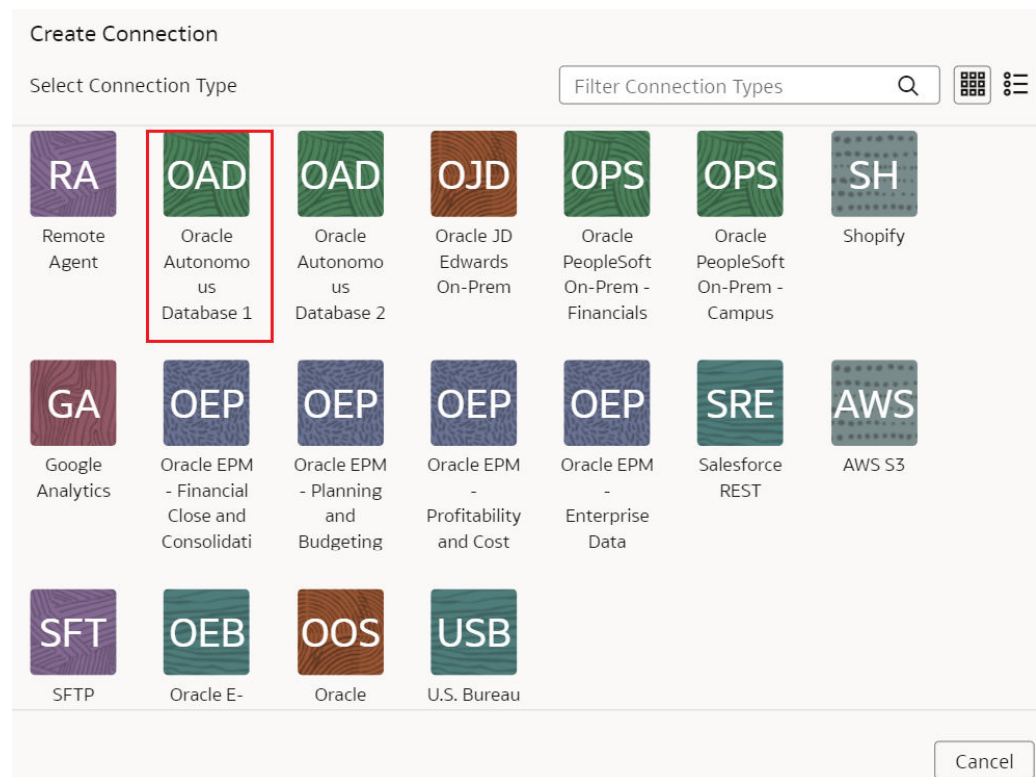
## Load Data from Oracle Autonomous Database into Oracle Fusion Data Intelligence (Preview)

As a service administrator, you can use the Oracle Fusion Data Intelligence extract service to acquire data from Oracle Autonomous Database and use it to create data augmentations.

You can create connections to five autonomous databases. Depending on the number of connections, ensure that options such as **Oracle Autonomous Database 1**, **Oracle Autonomous Database2** are enabled on the Enable Features page prior to creating this connection. See [Make Preview Features Available](#).

1. In Oracle Fusion Data Intelligence, create the autonomous database connection using these instructions:
  - a. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
  - b. On the Data Configuration page, click **Manage Connections**.
  - c. On the Manage Connections page, click **Create** and then click **Connection**.
  - d. In Create Connection, depending on the number of connections, select options such as **Oracle Autonomous Database 1**, or **Oracle Autonomous Database2** as the connection type.





- e. In the dialog for the Oracle Autonomous Database connection, provide these details:
- Select **Standard** in **Connectivity Type**.
  - Enter an email address to receive notifications in **Notification Email**.
  - Enter the credentials to access the database in **User Name** and **Password**.
  - Enter the database service details in **Service**.
  - In **Wallet**, drag and drop the database wallet details.
  - In **Initial Extract Date Column Pattern**, provide the initial extract date pattern that matches the pattern in your source.
  - In **Last Update Date Column Pattern**, provide the last update date pattern that matches the pattern in your source.
  - If your source has flashback support, then select **Yes** in **Enable flashback incremental**.
  - In **List of Flashback Incremental Exempt datastores**, provide a comma separated list of datastores that you want to exempt from the flashback incremental queries.
  - If your source has ROWSCN support, then select **Yes** in **Enable ROWSCN incremental**.
  - In **List of ROWSCN Incremental Exempt datastores**, specify a comma-separated list of datastores that you want to exclude from the automatic tracking of row changes based on system change numbers.
  - In **Schema Name**, enter the schema name to extract data from.
  - In **Data Store Name Pattern**, specify the name pattern of the data stores that you want extracted. If you provide this value, then the connector extracts only data stores matching the pattern.

← Create Connection

**OAD**  
Oracle Autonomous Database 1

Connection Name: Oracle Autonomous Database 1

\* Connectivity Type: Choose Connectivity Type

Notification Email: Enter Notification Email

\* User Name:

\* Password:

\* Service:

\* Wallet: 

**Drag and Drop**  
Select a file or drop one here.

Cancel   Paste from clipboard   Upload File or Drop Above   **Save**

- f. Click **Save**.
2. On the Manage Connections page, select **Actions** (⚙️) for the autonomous database connection and then select **Test Connection**.
3. On the Manage Connections page, select **Actions** for the autonomous database connection and then select **Refresh Metadata**.

 **Note:**

You can't create augmentations for autonomous database unless you perform a metadata extract.

4. After the connections are successfully established, navigate to the Data Augmentation tile on the Data Configuration page and create a data augmentation using the autonomous database data. Ensure that you select **Regular** as the source dataset type and autonomous database as the pillar. Select the applicable autonomous database source tables. See [Augment Your Data](#).

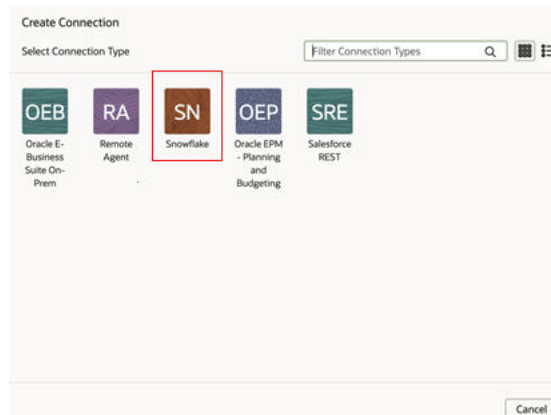
## Load Data from Snowflake into Oracle Fusion Data Intelligence (Preview)

As a service administrator, you can use the Oracle Fusion Data Intelligence extract service to acquire data from a Snowflake instance.

You can later use this data to create data augmentations for various Enterprise Resource Planning and Supply Chain Management use cases. Establish the connection from Fusion Data Intelligence to your Snowflake instance to start data acquisition followed by augmentation.

Ensure that **Snowflake** is enabled on the Enable Features page prior to creating this connection. See [Make Preview Features Available](#).

1. In Fusion Data Intelligence, create the Snowflake data connection:
  - a. In Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
  - b. On the Data Configuration page, click **Manage Connections**.
  - c. On the Manage Connections page, click **Create** and then click **Connection**.
  - d. In Create Connection, select **Snowflake** as the connection type.



- e. In **Create Connection**, enter these details and then click **Save**:
  - **Connectivity Type**: Standard.
  - **Notification Email**: An email address to receive notifications.
  - **Auth Schema**: Enter “BASICAUTH” if you’re using username and password to establish the connection. Enter “PRIVATE\_KEY” if you’re using token-based authentication.
  - **User Name**: Enter username only if you’re using the basic authentication.
  - **Password**: Enter password for the username only if you’re using the basic authentication.
  - **Host Name**: Complete host name of your Snowflake instance.
  - **Table Schema**: Your Snowflake table schema such as TPC\_H\_SF1.
  - **Database**: Mentioned in your Snowflake account under **Data**.
  - **Warehouse**: The compute resources in your Snowflake instance that you can find by running SHOW WAREHOUSES [ LIKE '<pattern>' ]. See [SHOW WAREHOUSES](#).
  - **Private Key**: Generate the Private Key in Snowflake, if you don’t have one already, and paste it here. See [Generate the Private Key](#).

← Create Connection

**SN**  
Snowflake

Connection Name

\* Connectivity Type

Notification Email

Auth Scheme

\* User Name

Password

\* Host Name

\* Table Schema

\* Database

\* Warehouse

Private Key

2. On the Manage Connections page, select **Actions** (⋮) for the Snowflake connection, and then select **Refresh Metadata**.

**Note:**

You can't create augmentations for Snowflake unless you perform a metadata extract.

3. On the Manage Connections page, select **Actions** for the Snowflake connection and then select **Test Connection**.
4. After the connections are successfully established, navigate to the Data Augmentation tile on the Data Configuration page and create a data augmentation using the Snowflake data. Ensure that you select **Regular** as the source dataset type and **Snowflake** as the pillar. Select the applicable Snowflake source tables. See Augment Your Data.

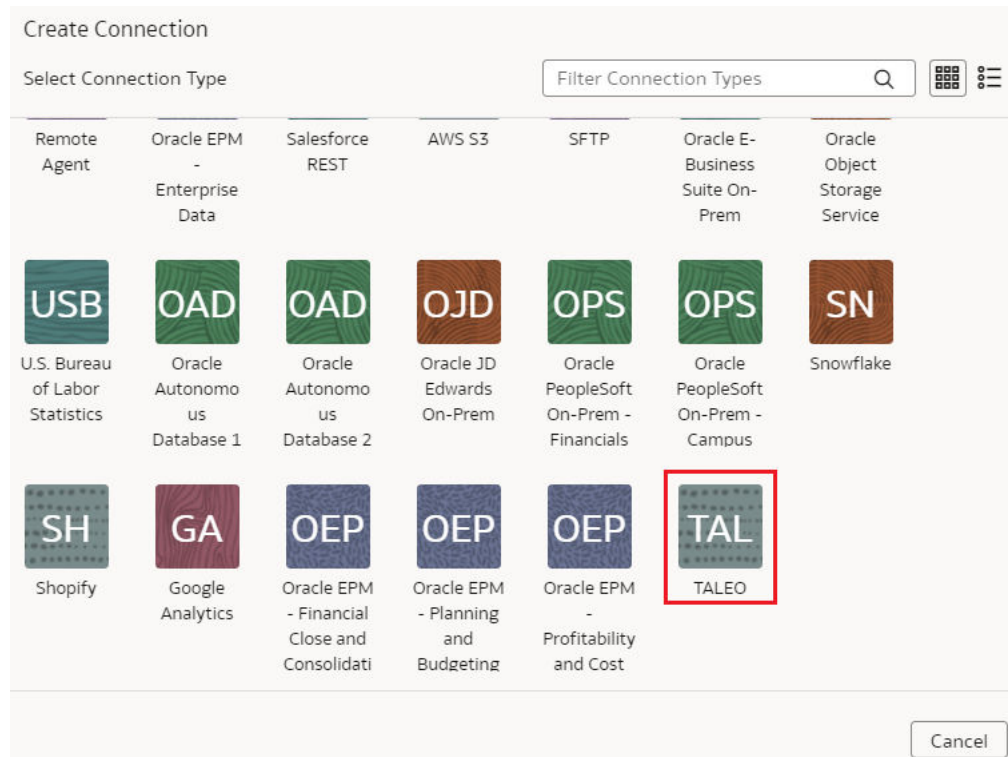
## Load Data from Taleo into Fusion Data Intelligence (Preview)

As a service administrator, you can use the Fusion Data Intelligence extract service to acquire data from the Taleo instance and use it to create data augmentations for various Enterprise Resource Planning and Supply Chain Management use cases.

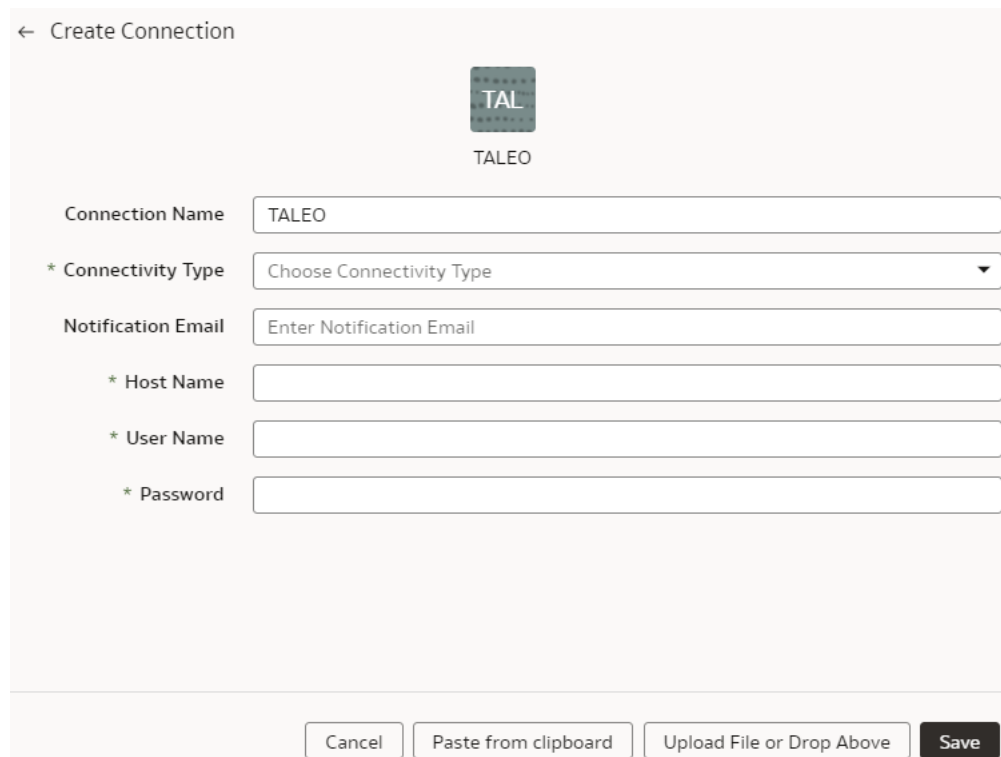
Ensure that **Taleo** is enabled on the Enable Features page prior to creating this connection. See [Make Preview Features Available](#).

1. In Fusion Data Intelligence, create the Taleo data connection using these instructions:
  - a. In Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
  - b. On the Data Configuration page, click **Manage Connections**.
  - c. On the Manage Connections page, click **Create** and then click **Connection**.

- d. In **Create Connection**, select **Taleo** as the connection type.



- e. In **Connectivity Type**, select **Standard**, enter an email address to receive notifications in **Notification Email**, host name of your Taleo instance in **Host Name**, and credentials for your Taleo source in **User Name** and **Password**.



- f. Click **Save**.
2. On the Manage Connections page, select **Actions** (⚙️) for the Taleo connection and then select **Refresh Metadata**.



**Note:**

You can't create augmentations for Taleo unless you perform a metadata extract.

3. On the Manage Connections page, select **Actions** for the Taleo connection and then select **Test Connection**.
4. After the connections are successfully established, navigate to the Data Augmentation tile on the Data Configuration page and create a data augmentation using the Taleo data. Ensure that you select **Regular** as the source dataset type and **Taleo** as the pillar. Select the applicable Taleo source tables. See [Augment Your Data](#).

## Load Data from Oracle Analytics Publisher into Fusion Data Intelligence (Preview)

As a service administrator, you can use the Fusion Data Intelligence extract service to acquire data from the Analytics Publisher reports and use it to create data augmentations for various use cases.

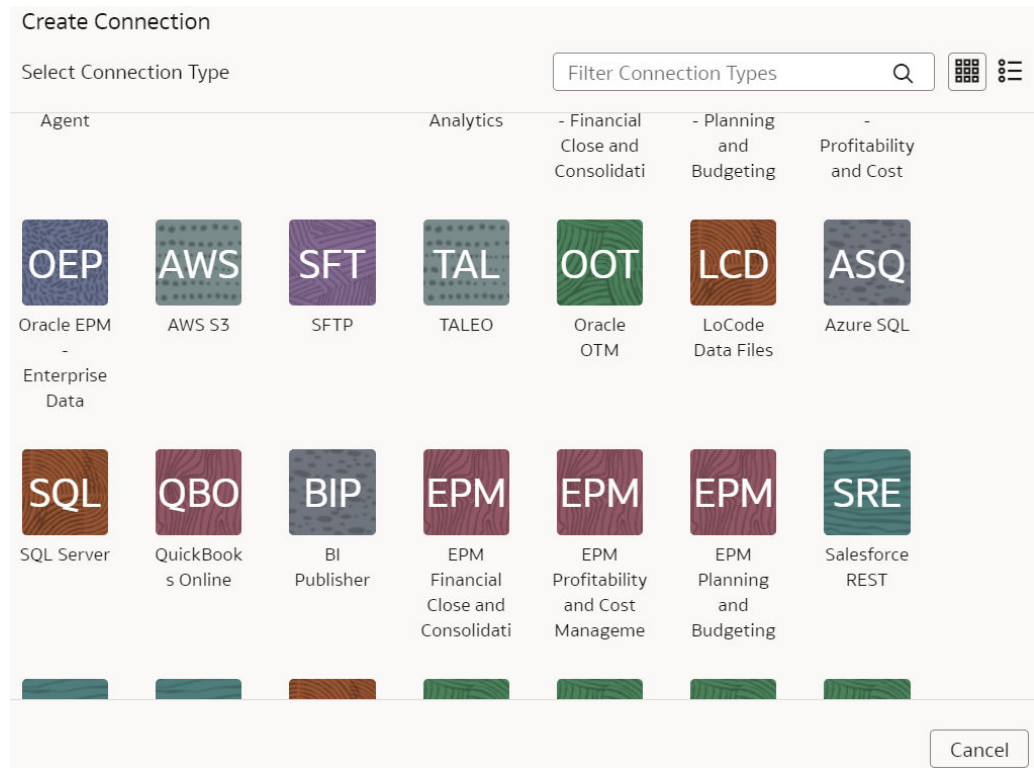
Currently, the BI Publisher Reports connector only supports:

- The Analytics Publisher in Oracle Fusion Cloud Applications for data augmentation.
- Only those reports that complete within the Analytics Publisher report execution timeout limit that's typically 300 seconds.

The BI Publisher Reports connector workflow must observe the security rules of Oracle Fusion Cloud Applications. You must ensure that the password rotation and update are done on time before executing the BI Publisher Reports connector pipeline. Otherwise, those pipeline jobs will hang and eventually those jobs will get deleted, and the data source will be disabled until you update the password and resubmit the job.

Ensure that **BI Publisher Reports** is enabled on the Enable Features page prior to creating this connection. See [Make Preview Features Available](#).

1. In BI Publisher, build a comma separated values (CSV) report for the targeted tables. See [Create Reports](#) and [Generate CSV Output](#).
2. In Fusion Data Intelligence, create the data connection to the BI Publisher reports using these instructions:
  - a. In Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
  - b. On the Data Configuration page, click **Manage Connections**.
  - c. On the Manage Connections page, click **Create** and then click **Connection**.
  - d. In Create Connection, select **BI Publisher Reports** as the connection type.



e. In the dialog for the BI Publisher reports connection, provide these details:

- Select **Standard** in **Connectivity Type**.
- Enter an email address to receive notifications in **Notification Email**.
- Host name of the BI Publisher in **Host Name**.
- Credentials to access your BI Publisher in **User Name** and **Password**
- Enter comma separated reports in **List of Reports** in the `<reports directory>/<report names>` format.

 **Note:**

Ensure that the reports directory and report names don't have spaces.


- In **Reports Configuration**, provide the path of the report in Oracle Analytics Publisher, select **Run Asynchronously** if the report isn't huge, else select **Run Synchronously In Chunk** if the report has a large volume of data (more than 7 MB in size) because this enables you to download the report in chunks of data.

 **Note:**

- If the report execution is completed before the timeout limit and generates large volume of data then set `runInChunkMode: true`. The recommendation is to set `runInChunkMode` to true if the report output file is over 7MB.
- If the report has parameters defined, then provide the values in the "params" section of the report configuration array. If the value in the params array is set with placeholder `__lastUpdateDate__`, then the connector applies the initial extract date or last successful extract date to the param.

- In **CSV Date Format**, enter the expected date format from report; for example, "yyyy-MM-dd".
- In **CSV Timestamp Format**, enter `yyyy-MM-dd'T'hh:mm:ss`.

← Create Connection

  
 BI Publisher

Connection Name	<input type="text" value="BI Publisher"/>
* Connectivity Type	<input type="text" value="Choose Connectivity Type"/>
Notification Email	<input type="text" value="Enter Notification Email"/>
* Host Name	<input type="text"/>
* User Name	<input type="text"/>
* Password	<input type="password"/>
* List of reports	<input type="text"/>
Reports Configuration	<input type="text"/>
CSV Date Format	<input type="text"/>

- f. Click **Save**.
3. On the Manage Connections page, select **Actions** (⚙️) for the BI Publisher reports connection and then select **Test Connection**.
4. On the Manage Connections page, select **Actions** for the BI Publisher reports connection and then select **Refresh Metadata**.



 **Note:**

You can't create augmentations for the BI Publisher reports unless you perform a metadata extract.

5. After the connections are successfully established, navigate to the Data Augmentation tile on the Data Configuration page and create a data augmentation using the BI Publisher reports data. Ensure that you select **Regular** as the source dataset type and **BI Publisher reports** as the pillar. Select the applicable BI Publisher source tables. See [Augment Your Data](#).

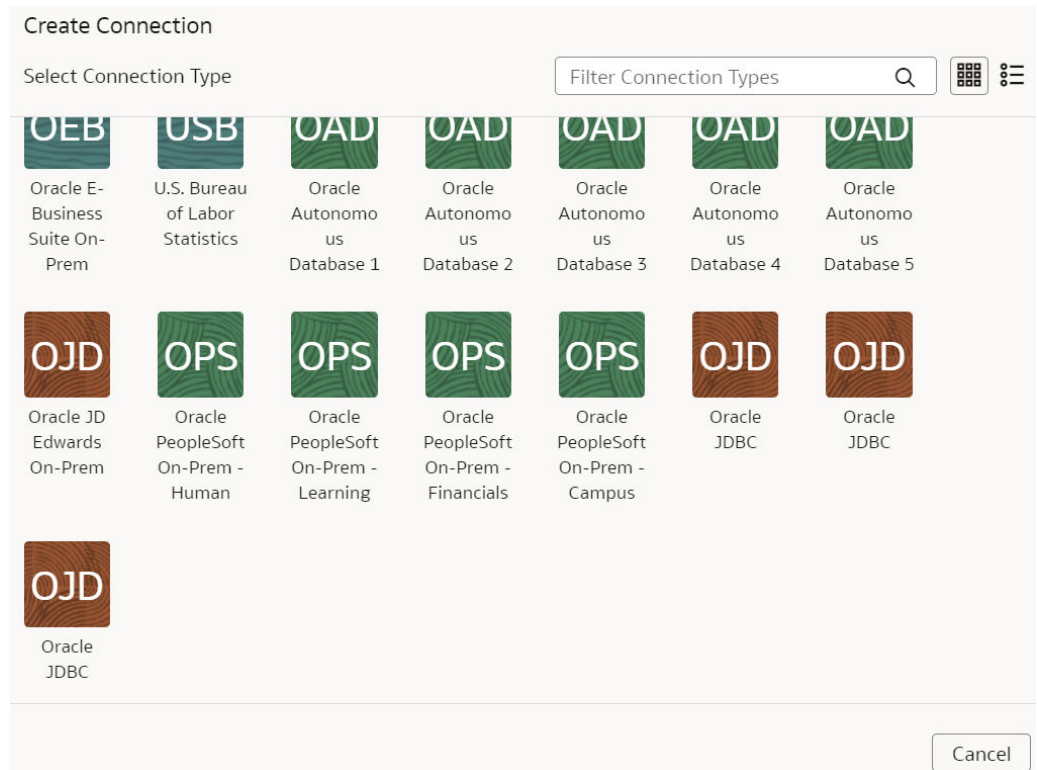
## Load Data from Oracle Database Using JDBC into Fusion Data Intelligence (Preview)

As a service administrator, you can use an extract service remote agent to connect to an Oracle database using JDBC and use the data to create data augmentations.

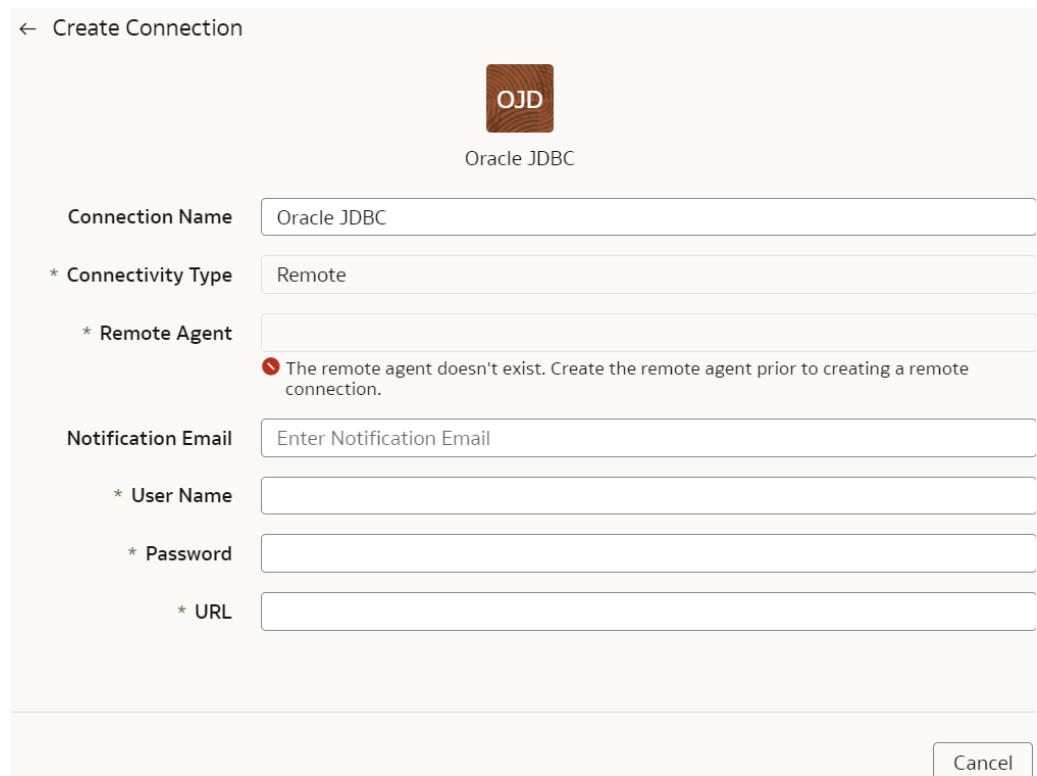
After connecting to an Oracle database using JDBC, the remote agent extracts the data and loads it into the autonomous data warehouse associated with your Oracle Fusion Data Intelligence instance. The remote agent pulls the metadata through the public extract service REST API and pushes data into object storage using the object storage REST API. You can extract and load the data from an Oracle database into Oracle Fusion Data Intelligence only once every 24 hours.

Ensure that **Remote Agent** and **Oracle JDBC** are enabled on the Enable Features page prior to creating this connection. See [Make Preview Features Available](#).

1. Set up the remote agent to load data from your SQL Server into Oracle Fusion Data Intelligence.  
See [Set up the Remote Agent to Load Data into Fusion Data Intelligence \(Preview\)](#).
2. Configure the remote agent and Oracle database data source on the Data Configuration page in Oracle Fusion Data Intelligence using these instructions:
  - a. On the **Console**, click **Data Configuration** under **Application Administration**.
  - b. On the Data Configuration page, click **Manage Connections**.
  - c. On the Manage Connections page, click **Create** and then click **Connection**.
  - d. In Create Connection, select **Remote Agent** as the connection type.
  - e. In the Create Connection Remote Agent dialog, in **Connection Name**, you can modify the default name and verify that **Remote** is displayed in **Connectivity Type**.
  - f. Enter an email address to receive notifications in **Notification Email**, provide the **Identifier** and **Host**, in **Public Key**, click **Upload File or Drop Above** to fill in the details of the remote agent, and then click **Save**. You can add the configuration details file that you had downloaded or use the configuration details that you had copied after configuring the remote agent.
  - g. Navigate to the Manage Connections page, click **Create** and then click **Connection**.
  - h. In Create Connection, select **Oracle JDBC** as the connection type.



- i. In Create Connection for Oracle JDBC, in **Connectivity Type**, verify that **Remote** is selected automatically.



- j. In **Remote Agent**, select the remote agent connection that you created earlier, for example, **Remote Agent**.
- k. Enter an email address to receive notifications in **Notification Email**, provide credentials for the Oracle database source in **User Name** and **Password**, and the URL of the Oracle database source in **URL**.
- l. In **Initial Extract Date Column Pattern**, provide the initial extract date pattern that matches the pattern in your source.
- m. In **Last Update Date Column Pattern**, provide the last update date pattern that matches the pattern in your source.
- n. If your source has flashback support, then select **Yes** in **Enable flashback incremental**.
- o. In **List of Flashback Incremental Exempt datastores**, provide a comma separated list of datastores that you want to exempt from the flashback incremental queries.
- p. If your source has ROWSCN support, then select **Yes** in **Enable ROWSCN incremental**.
- q. In **List of ROWSCN Incremental Exempt datastores**, specify a comma-separated list of datastores that you want to exclude from the automatic tracking of row changes based on system change numbers.
- r. In **Case Sensitive Data Stores**, select Yes or No to specify whether the datastores have case sensitive data.
- s. In **Schema Name**, enter the schema name to extract data from.
- t. In **Data Store Name Pattern**, specify the name pattern of the datastores that you want extracted. If you provide this value, then the connector extracts only datastores matching the pattern.
- u. Confirm that you see the Remote Agent and Oracle database connections on the Manage Connections page.
- v. On the Manage Connections page, select **Actions** (⋮) for the Oracle database connection and then select **Refresh Metadata**.

 **Note:**

You can't create augmentations for Oracle database unless you perform a metadata extract.

3. After the connections are successfully established, navigate to the Data Augmentation tile on the Data Configuration page and create a data augmentation using the Oracle database data. Ensure that you select **Regular** as the source dataset type and **Oracle JDBC** as the pillar. Select the applicable Oracle database source tables. See [Augment Your Data](#).

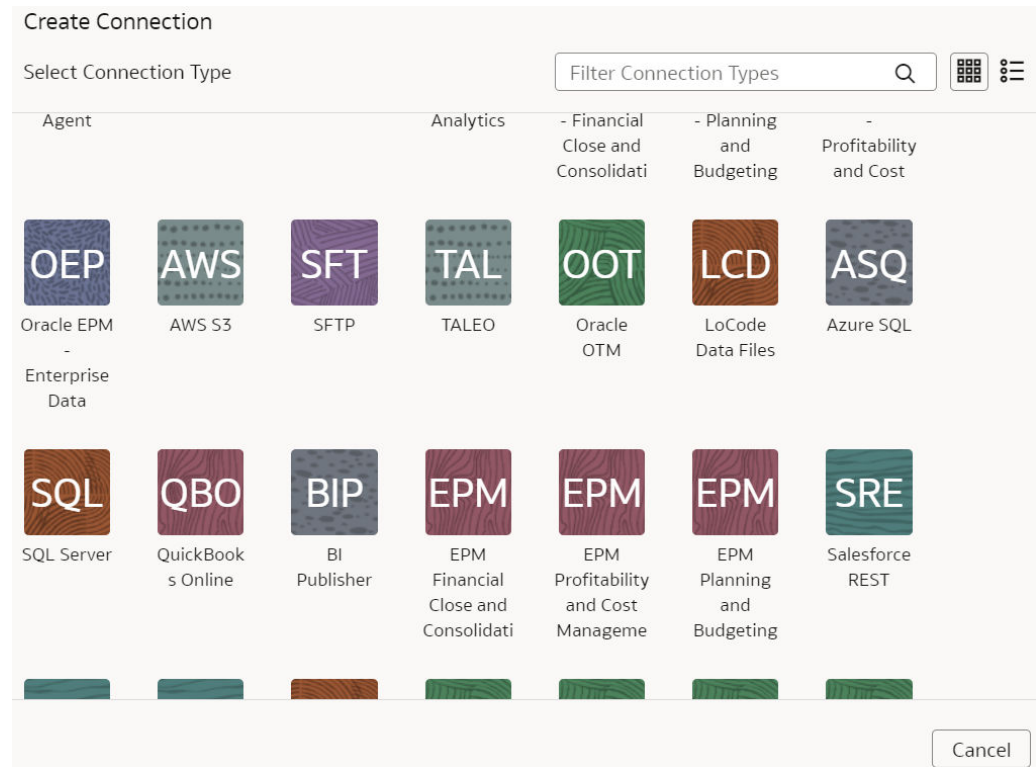
## Load Data from QuickBooks Online into Oracle Fusion Data Intelligence (Preview)

As a service administrator, you can use the Oracle Fusion Data Intelligence extract service to acquire data from QuickBooks Online and use it to create data augmentations.

Ensure that **QuickBooks Online** is enabled on the Enable Features page prior to creating this connection. See [Make Preview Features Available](#).


1. In Oracle Fusion Data Intelligence, create the QuickBooks Online data connection using these instructions:

- a. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
- b. On the Data Configuration page, click **Manage Connections**.
- c. On the Manage Connections page, click **Create** and then click **Connection**.
- d. In Create Connection, select **QuickBooks Online** as the connection type.



- e. In the dialog for the QuickBooks Online connection, enter these details and click **Save**:
  - **Connectivity Type**: Select **Standard**.
  - **Notification Email**: Enter an email address to receive notifications.
  - **URL**: Enter the complete URL of your Quickbooks Online instance.
  - **Client ID**: This is the unique ID on your Quickbooks Online instance.
  - **Client Secret**: Copy and paste the entire "client secret" from your authentication.
  - **Refresh Token**: This token is changed by Quickbooks everyday; enter your refresh token for the day you want to execute this pipeline.
  - **Company ID**: This is your company ID for the Quickbooks Online instance.

← Create Connection



QuickBooks Online

Connection Name

\* Connectivity Type

Notification Email

\* URL

\* Client ID

\* Client Secret

\* Refresh Token

\* Company ID

- f. Click **Save**.
2. On the Manage Connections page, select **Actions** (⚙️) for the QuickBooks Online connection and then select **Test Connection**.
3. On the Manage Connections page, select **Actions** for the QuickBooks Online connection and then select **Refresh Metadata**.

 **Note:**

You can't create augmentations for QuickBooks Online unless you perform a metadata extract.

4. After the connections are successfully established, navigate to the Data Augmentation tile on the Data Configuration page and create a data augmentation using the QuickBooks Online data. Ensure that you select **Regular** as the source dataset type and **QuickBooks Online** as the pillar. Select the applicable QuickBooks Online source tables. See [Augment Your Data](#).

## Disable Data Pipeline

As the cloud account administrator with the functional administrator or system administrator application role, you can disable the data pipeline and enable it again.

 [LiveLabs Sprint](#)

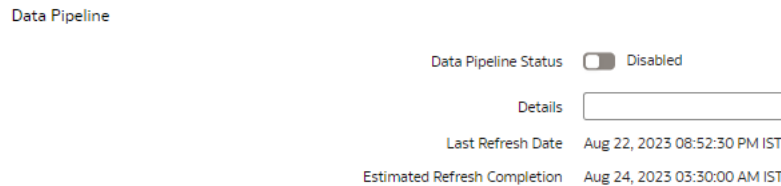
You may want to disable the data pipeline in the following scenarios:

- While updating the Oracle Fusion Cloud Applications password or the JWT credentials.

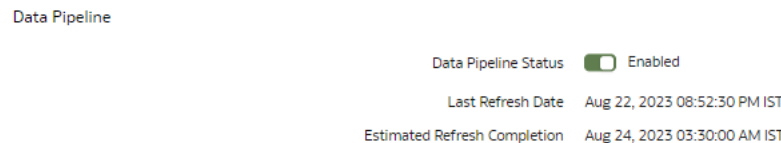
- While upgrading to a new Oracle Fusion Cloud Applications version.
- If you don't want to run pipeline jobs for a particular source.
- If you don't want to run pipeline jobs for a particular duration such as a quiet time in your business activities.

In cases where the pipeline jobs are failing due to issues, Oracle disables the data pipeline from the backend to investigate and resolve. On the Pipeline Parameters page, Oracle provides a reason and action for you, if the resolution needs to be done from your side. You can resolve the issue and as an administrator you can enable the data pipeline yourself using the **Data Pipeline Disabled** toggle.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
3. On the Data Configuration page, under **Configurations**, click **Pipeline Settings**.
4. On the Pipeline Settings page, under Data Pipeline, select the **Data Pipeline Status** toggle to **Disabled** and enter a reason in **Details**.



5. Select the **Data Pipeline Status** toggle again to enable the data pipeline after you've completed the reason for disabling the data pipeline.

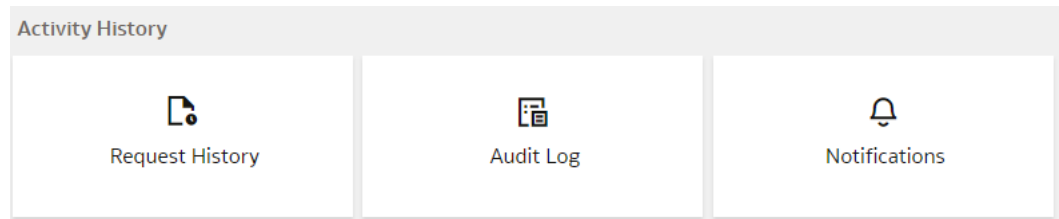


## View Notifications and Emails

You can view the notifications sent by Oracle regarding various operations and the emails sent by Oracle regarding various actions taken by Oracle and actions that you must complete.

This enables you to know and take the necessary actions even if you haven't received the actual email sent to the email ID provided during instance creation.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
3. On the Data Configuration page, click **Notifications** under **Activity History**.



4. On the Notifications page, under the Notifications tab, view the notifications sent by Oracle regarding various operations such as “application upgrade” and “connection to source systems”.

Notifications		Emails
Message	Date	
The application version has been successfully upgraded to 24.R2.	May 7, 2024 04:41:52 PM IST	
Mandatory application upgrade to 24.R2 is scheduled to be completed by June 8, 2024.	May 7, 2024 09:51:19 AM IST	
The application version has been successfully upgraded to 24.R1.P3.	Apr 18, 2024 01:45:18 PM IST	
Optional application upgrade to 24.R1.P3 is available.	Apr 10, 2024 01:30:51 AM IST	
The application version has been successfully upgraded to 24.R1.P2.	Apr 4, 2024 05:47:40 AM IST	
The application version has been successfully upgraded to 24.R1.P2.	Apr 4, 2024 12:57:07 AM IST	
Optional application upgrade to 24.R1.P2 is available.	Mar 15, 2024 07:55:20 AM IST	
The application version has been successfully upgraded to 24.R1.Integ.	Feb 8, 2024 08:11:51 PM IST	

5. On the Notifications page, under the Emails tab, view the emails sent by Oracle regarding various actions taken by Oracle and actions that you must complete.

## Enable Event Notifications (Preview)

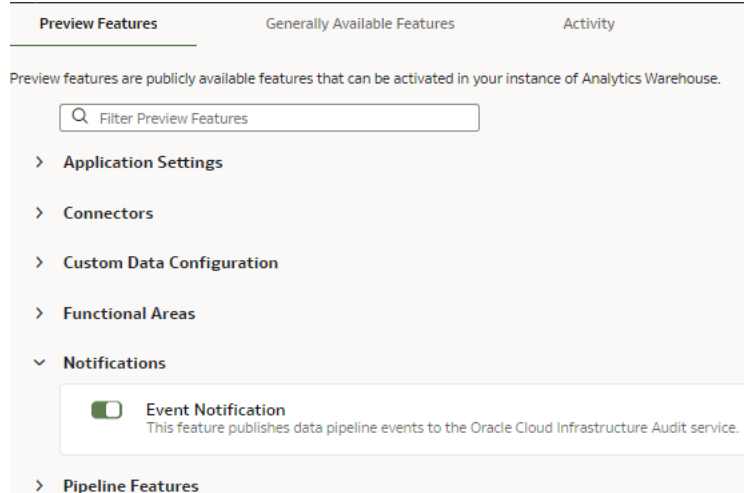
You can track and control customized events and notifications to streamline your business operations using the Fusion Data Intelligence Event Producer service. This service provides an effective automated solution for creating consolidated events and notification workflows.

The Fusion Data Intelligence Event Producer service and its integration with the Oracle Cloud Infrastructure-managed Events services provide a more efficient way to receive notifications about your data pipeline events. This integration publishes data pipeline events to the Oracle Cloud Infrastructure Audit service. By using the Oracle Cloud Infrastructure-managed notification services, you can customize your alerts and choose how you want to receive them, whether it's through email, slack, or other trigger downstream workflows using custom-defined functions. This not only improves your experience but also reduces the workload on your support team by decreasing the number of ad-hoc requests for job completion requests through the service request tickets. With the integration of Oracle Cloud Infrastructure-managed Events services, you receive notifications in real-time when the daily pipeline jobs complete, ensuring you never miss an important update.

Enable the **Event Notification** feature from the Preview tab on the Enable Features page and create custom automation that sends an email using the Fusion Data Intelligence Event Producer service for the preregistered events that cover several business cases. See [Preregistered Events](#).

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Enable Features** under **Application Administration**.

3. On the Enable Features page, under the Preview Features tab, under Notifications, select **Event Notification**.



4. Sign in to the Oracle Cloud Infrastructure Console and create a topic for the applicable preregistered event such as "FDI Data Load Complete." See [Creating a Topic](#).
5. Subscribe to the topic that you created with your email address. See [Creating a Subscription](#).
6. Create a rule to notify the topic when the data load completes. See [Creating an Events Rule](#).

## Schedule Frequent Refreshes of Data

You can schedule frequent refreshes of the applicable functional areas, prioritized datasets, and warehouse tables to ensure that the incremental data in these is the latest.

You can refresh a limited set of tables currently with plans to support more functional areas and datasets in future releases. While opting to refresh certain functional areas, prioritized datasets, and warehouse tables, ensure to understanding which tables you can refresh or not because the selective refresh of some tables could lead to functional inconsistencies when combining data from multiple subject areas. This frequent data refresh capability is designed for refresh of base tables that capture the transactional data; it isn't meant for derived datasets that require aggregations, snapshots, or complex transformation logic. Such processing creates data latency that doesn't support high volume of frequent data refresh.

If you've enabled the "Prioritized Data Refresh" preview feature and selected datasets for a prioritized incremental refresh, then those specific datasets are available for a frequent data refresh. See [Prioritize Datasets for Incremental Refresh \(Preview\)](#). If you've enabled the "Frequent Refresh Tables" preview feature and saved your selection of the warehouse tables, then the selected tables are available as "Warehouse Tables" for a frequent data refresh. See [Schedule Frequent Refreshes of Warehouse Tables](#). If you want to select the warehouse tables created by the custom data configurations that were generated prior to release Platform 23.R4, then you must regenerate the applicable custom data configurations for these tables to be visible for selection. From release Platform 23.R4, the warehouse tables created by the custom data configurations are available for a frequent data refresh under the Frequent Refresh tab.

For Oracle Fusion Data Intelligence, you can schedule frequent refreshes for functional areas that are visible in the Frequent Data Refresh Schedule tab on the Pipeline Settings page.



When you select the functional areas for a frequent refresh, you won't be able to refresh the data pipeline for the applicable functional area using the Refresh Data option on the Data Configuration page. The frequent data refresh process doesn't refresh data from external sources through the data augmentation connectors. Oracle Fusion Data Intelligence processes the data augmentations as part of the incremental loads. For frequent data refreshes, the semantic model won't be updated. The update jobs for semantic model won't run as part of data augmentations, they run for data augmentations only during incremental loads.

You may want to frequently refresh the data in these sample scenarios:

- During the last five days of the month or every quarter, general ledger data changes quickly with updated entries more than once a day. In this scenario, a financial analyst wants to ensure taking more recent and accurate data into the analysis and report generation. Because some of the data pipelines can take several hours to execute from end to end, the frequency of refresh needs to be every 4 hours or 6 times in a 24-hour period.
- In this scenario, a retailer that has strict guidelines for returns or refunds on any purchase orders, and needs to bring in the most recent order data for computation and report generation, especially in the beginning of a given fiscal quarter. To cover for time differences between Europe, East Coast, and West Coast of the U.S., a financial analyst needs to refresh data every 8 hours in 24 hours, or 3 times a day.

Ensure that **Frequent Refresh** is enabled in **Pipeline Features** under the Generally Available Features tab on the Enable Features page prior to scheduling frequent data refreshes. See [Enable Generally Available Features](#).

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
3. On the Data Configuration page, under **Configurations**, click **Pipeline Settings**.
4. On the Pipeline Settings page, click **Frequent Data Refresh Schedule**.

## Frequent Data Refresh Schedule

Cancel Save

Specify the schedule and data that requires frequent refreshes in a day.

- Note that Ad Hoc reload or refresh will not be available for frequently refreshed content.
- For functional areas that aren't activated currently, the schedule is applicable when you activate them.
- Some frequent refresh requests may be skipped. Ensure that you maintain a start time difference of at least 180 minutes between data refresh schedules.

Refresh frequency (in hours) Start time

12 06:00 AM

Last refresh date GMT time zone  
Feb 17, 2024 11:58:04 AM IST

Perform frequent refresh for selected warehouse tables

<input type="checkbox"/> Functional Area ↑	Application ↓↑	Offering ↓↑
<input type="checkbox"/> General Ledger	Enterprise Resource Planning	Financial Analytics
<input type="checkbox"/> Accounts Payable	Enterprise Resource Planning	Financial Analytics
<input type="checkbox"/> Accounts Receivable	Enterprise Resource Planning	Financial Analytics
<input checked="" type="checkbox"/> AR Unaccounted Transactions	Enterprise Resource Planning	Financial Analytics
<input type="checkbox"/> Sales Pipeline	Customer Experience	Customer Experience Sales Analytics

5. In the Frequent Data Refresh Schedule tab, in **Refresh Frequency (in hours)**, select the number of hours after which you want the data refresh to happen.
6. Enter a start time in **Start time**.
7. In **Last refresh date**, view the date when the data was last refreshed.
8. If you've enabled the "Frequent Refresh Tables" preview feature and saved your selection of the warehouse tables, then select the **Perform frequent refresh for selected warehouse tables** toggle. Click the "warehouse tables" hyperlink to view or update your selection of the warehouse tables in the Frequent Refresh Tables tab.
9. Select the check boxes for the functional areas with the data you want refreshed at the specified interval.
10. Click **Save**.

## Schedule Periodic Full Reload of Functional Area Data

You can schedule a periodic full reload of the applicable functional areas to ensure that all the data in these functional areas is completely reloaded.

For Oracle Fusion Data Intelligence, you can schedule a periodic full reload for functional areas such as General Ledger and Order Management. You can schedule a full reload of maximum three functional areas. When you select the functional areas for full reload, ensure that you select the dependent functional areas as well.

**WARNING:**

When you schedule a full reload, the incremental loads take a longer time and depending on the initial extract date, the incremental data load may take days to complete the extraction.

You may want to fully reload the data for a functional area in these sample scenarios:

- The Finance department wants to do full reload of the general ledger (GL) data at the beginning of the month to make sure all data is fresh and clean for the monthly GL entries and the analytics and report generation.
- At the beginning of every quarter, all data related to Purchase Orders is updated with returns, refunds, and any adjustments. In this scenario, revenue recognition needs to take all the latest Purchase Order data to compute all numbers and create accurate reports. Hence, a full reload of the order data is required on the 1st of every fiscal quarter that can be different from the calendar quarter.

You can check the refresh summary in two ways:

- View details of the requests on the Request History page.
- View the DW\_WH\_REFRESH\_SUMMARY data warehouse table.

Ensure that **Scheduled Full Data Reload** is enabled in **Pipeline Features** under the Generally Available Features tab on the Enable Features page prior to scheduling periodic full reload. See [Enable Generally Available Features](#).

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
3. On the Data Configuration page, under **Configurations**, click **Pipeline Settings**.
4. On the Pipeline Settings page, click **Warehouse Full Reload Schedule**.

The screenshot shows the 'Pipeline Settings' page with the 'Warehouse Full Reload Schedule' tab selected. The page title is 'Pipeline Settings' and it has a breadcrumb trail: 'Pipeline Parameters > Frequent Data Refresh Schedule > Warehouse Full Reload Schedule'. There are 'Cancel' and 'Save' buttons at the top right. Below the buttons is the section 'Scheduled Warehouse Full Reload' with a warning icon and text: 'Specify the schedule and data to perform a full reload on the warehouse data. Note that this action completely reloads the warehouse data for the selected data and increases the data load times on the specified schedule. Warning: For functional areas that aren't activated currently, the schedule is applicable when you activate them.' Below this is a 'Full Reload Frequency' dropdown menu set to 'Daily' and a 'Timezone' dropdown menu set to 'GMT'. At the bottom, there is a table with columns for 'Functional Area', 'Application', and 'Offering'. The table contains two rows of data:

Functional Area	Application	Offering
<input type="checkbox"/> AR Unaccounted Transactions	Enterprise Resource Planning	Finance
<input type="checkbox"/> Accounts Receivable	Enterprise Resource Planning	Finance

5. In the Warehouse Full Reload Schedule tab, in **Full Reload Frequency**, select the frequency type such as weekly, monthly, or quarterly.

6. Based on the selected frequency type, select the specific day of the week, month, or the first month of the quarter.
7. Select the check boxes for the functional areas whose data you want reloaded fully at the specified period.
8. Click **Save**.

## Schedule Frequent Refreshes of Warehouse Tables

You can select warehouse data tables that are part of functional areas, descriptive flexfields custom configurations, and data augmentations for frequent data refresh ahead of other data in the regularly scheduled batch.

For a table to be eligible for a frequent data refresh, ensure that its supporting functional areas, data augmentations, and descriptive flexfields custom configurations are activated. The custom data configurations activated prior to release 23.R4 won't be available automatically. You must regenerate and redeploy them to schedule for frequent refresh. After you select the warehouse tables for frequent data refresh and save your selection, the selected tables are available as "Warehouse Tables" under the Frequent Refresh tab. You can set the frequent refresh schedule for these tables in the Frequent Refresh tab. See [Schedule Frequent Refreshes of Data](#).

Ensure that **Frequent Refresh Tables** is enabled in **Pipeline Features** under the Preview Features tab on the Enable Features page prior to scheduling frequent refreshes of the tables. See [Make Preview Features Available](#).

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
3. On the Data Configuration page, under **Configurations**, click **Pipeline Settings**.
4. On the Pipeline Settings page, click **Frequent Refresh Tables**.

Pipeline Parameters   Frequent Data Refresh Schedule   **Frequent Refresh Tables**   Warehouse Full Reload Schedule   Functional Area Schedule Override   Prioritized Refresh

Warehouse tables for frequent data refresh Preview Cancel Save

Select warehouse data tables for frequent data refresh ahead of other data in the regularly schedule batch.

- Selected tables will be refreshed on [Frequent Data Refresh Schedule](#)
- For a table to be eligible for frequent data refresh, its supporting functional areas must be activated.

Search warehouse tables   Select functional areas    Show selected tables    Show all functional areas

Warehouse Table Name	Type	Entity	Updated On	Updated By
<input checked="" type="checkbox"/> DW_ACC_TYPE_LKP_TL	Data Augmentation	15 Functional Areas	Aug 22, 2023 03:38:18 PM IST	venkata.anil.kumar.motamarry@oracle.cc
<input checked="" type="checkbox"/> DW_ACTION_D	Functional Area	1 Functional Areas	Aug 22, 2023 03:38:18 PM IST	venkata.anil.kumar.motamarry@oracle.cc
<input checked="" type="checkbox"/> DW_ACTION_D_TL	Functional Area	1 Functional Areas	Aug 22, 2023 03:38:18 PM IST	venkata.anil.kumar.motamarry@oracle.cc
<input checked="" type="checkbox"/> DW_ACTION_REASON_D	Functional Area	1 Functional Areas	Aug 22, 2023 03:38:18 PM IST	venkata.anil.kumar.motamarry@oracle.cc

5. In the Frequent Refresh Tables tab, select the check boxes for the applicable warehouse tables and click **Save**.

# Extend Data with Custom Data Configurations

As a functional administrator, you can use the available custom data configurations to extend your data for detailed and varied analytics.

## Topics:

- [About Extending Data with Custom Data Configurations](#)
- [Select Descriptive Flex Fields and Map Attributes](#)
- [Activate the Descriptive Flex Fields](#)
- [Deactivate the Descriptive Flex Fields](#)

## About Extending Data with Custom Data Configurations

Custom data configurations are prebuilt templates that enable you to create custom functional areas with the data that you bring into the Autonomous Data Warehouse. You later use these custom functional areas to augment the data from the source or enrich the data available in the Autonomous Data Warehouse.

When you start using a custom data configuration for the first time and deploy it, Oracle Fusion Data Intelligence assigns the custom data configuration a version number. You can then edit the deployed version, make changes, and save it. This saved version then gets a new version number. While you're changing the definition, the deployed version continues to fetch new data. An example of the currently available custom data configuration is the Descriptive Flex Fields (DFF) Attribute Mapper.

## About Extending Data with the Descriptive Flex Fields Attribute Mapper

You can use the Descriptive Flex Fields (DFF) Attribute Mapper custom configuration to select the prebuilt DFFs with their attributes, generate, and deploy the selected DFFs in the warehouse. The deployed DFFs create a custom functional area that you can use like the prebuilt functional areas.

The DFF Attribute Mapper supports the following:

- For attribute name, it supports "alphanumeric", "\_", and "\$". This is according to the Oracle SQL database restrictions. Avoid using any other characters because they aren't supported.
- For display name or label, proceed with caution using any special characters because they can create an issue in report generation. Comma isn't allowed by default.

The DFF Attribute Mapper custom configuration is available with the 22.R3 application update. For tenant instances that you create after upgrading to this application update, as a service or functional administrator, you must navigate to this custom configuration, search for and select the DFFs that you want to move to the warehouse, map the attributes as needed, and deploy the selected DFFs. You can filter based on functional areas such as General Ledger, Accounts Payables, and Accounts Receivables or applications from the source system such as Payables and Receivables to list DFFs that you need to move to the warehouse. If you require a new DFF later, then complete this process again.

For tenant instances already operational before the 22.R3 application update, to ensure backward compatibility, Oracle Fusion Data Intelligence automatically copies the DFFs based on the functional areas that are activated. For existing tenant instances, Oracle Fusion Data Intelligence also copies the DFFs when you activate a new functional area. Oracle

recommends that you start using the DFF Attribute Mapper to select DFFs and map the required attributes yourself.

## Select Descriptive Flex Fields and Map Attributes

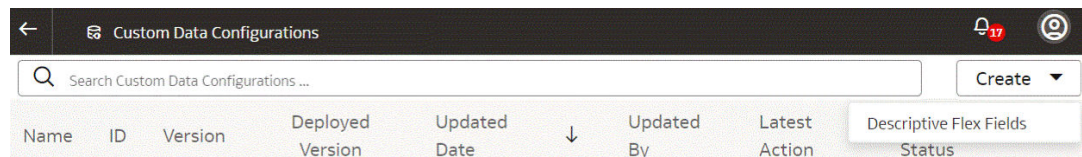
As a functional administrator, select and add theprebuilt descriptive flex fields (DFFs) and their attributes to your Autonomous Data Warehouse using the DFF Attribute Mapper.

While selecting and adding the prebuilt DFFs and their attributes, you must ensure that they are BI-enabled. The BI-enabled DFFs are registered in the database as enabled for Oracle Business Intelligence (BI) and include a BI-enabled setting for each of its segments. When a global, context, or context-sensitive segment is BI-enabled, it's available for use in Oracle Business Intelligence. If you select any attribute that isn't BI-enabled, then your extraction and downstream data augmentation may fail.

After adding the DFFs such as Invoice and Payment Information along with their attributes, you can use the data from the added DFFs to augment the data from the source or enrich the data available in the Autonomous Data Warehouse. The ability to select the attributes that you need enables you to avoid pipeline failures and slow performance.

While searching for the prebuilt DFFs, filter the DFFs by functional areas or applications from the source system to view a smaller set. View the details of the flex field using the Details tab. You can add selected attributes or add all available attributes using the **Add all attributes** option.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
3. On the Data Configuration page, under **Configurations**, click **Custom Data Configurations**.
4. On the Custom Data Configurations page, click **Create**, and then select **Descriptive Flex Fields**.



5. On the Descriptive Flex Fields page, click **Actions** (⚙️) for a descriptive flex field that you want to add attributes.

Flex Field Name	Flex Field Code	Application	Attributes
Invoice	AP_INVOICES	Payables	0 / 25
Payment Information	AP_CHECKS	Payables	
Invoice Lines	AP_INVOICE_LINES	Payables	
Payables Invoice Regional I...	JG_AP_INVOICES	Financials for Regional Loc...	0 / 271
Invoice Distributions	AP_INVOICE_DISTRIBUTIONS	Payables	0 / 20
Payables Checks Regional I...	JG_AP_CHECKS	Financials for Regional Loc...	0 / 31
Supplier Profile DFF	POZ_SUPPLIERS	Supplier Model	0 / 34

6. In **Actions**, click **Edit** to select attributes
7. In the descriptive flex field dialog, select the check box for the attributes that you want to add and then click **Done**.

**Invoice**
✕

Attributes 25
Details

Show Selected Attributes only (0/25)

<input type="checkbox"/> Display name ↑↓	Attribute name ↑↓
<input type="checkbox"/> IBY	TESTER_
<input type="checkbox"/> RK_LOV_c	RK_LOV_c
<input type="checkbox"/> KEY_FLEX_CONTEXT_0	KEY_FLEX_CONTEXT_0
<input type="checkbox"/> cnao field1	CNAO_FIELD1_
<input type="checkbox"/> LastUpdatedBy	LastUpdatedBy
<input type="checkbox"/> GoodwillDiscount (Description)	DESC_RK_LOV_NUM_
<input type="checkbox"/> TESTER_c	TESTER_c
<input type="checkbox"/> RK_DATE_c	RK_DATE_c

- After adding attributes to the descriptive flex fields that you want, click **Save** on the Descriptive Flex Fields page.

## Activate the Descriptive Flex Fields

After selecting the attributes for the descriptive flex fields (DFFs) that you want, you must activate them to enable data load.

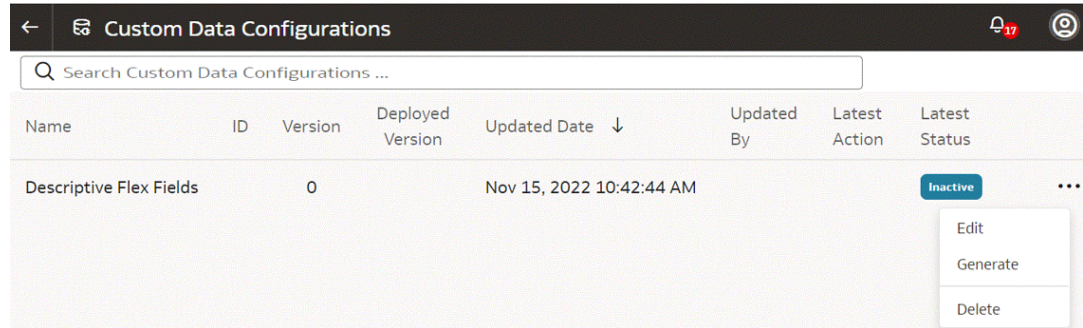
Activation involves these two steps:

- The Generate step initializes the custom application for activation. Generate evaluates the selections for the DFFs and prepares the application for deployment. It changes the status to scheduled and after processing, sets the custom application as active.
- After the Generate step is complete, you can deploy the custom application. In the Deploy step, Oracle Fusion Data Intelligence connects to the source system and extracts the data for the selected flex fields and their attributes. Once the data is copied to the warehouse, the data is visible for analysis in the subject areas. The subsequent incremental data loads copy the data for the DFFs to the warehouse automatically.

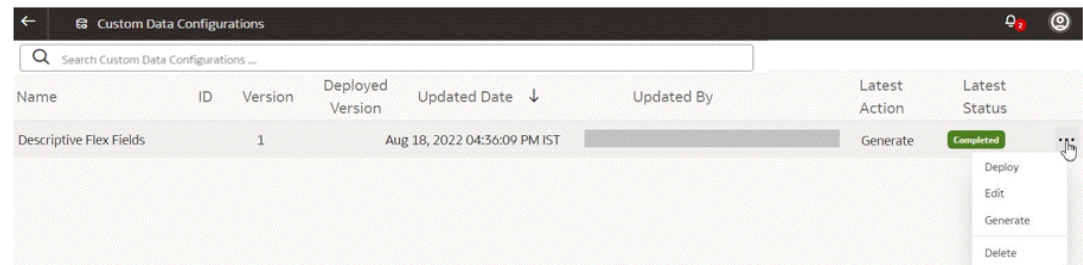
- Sign in to your service.



2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
3. On the Data Configuration page, under **Configurations**, click **Custom Data Configurations**.
4. On the Custom Data Configurations page, click **Actions** (⋮) for a descriptive flex field that you want to activate.
5. In **Actions**, click **Generate**.



6. On the Custom Data Configurations page, when the status changes to **Completed**, click **Actions** for the applicable descriptive flex field and in **Actions**, select **Deploy**.



## Deactivate the Descriptive Flex Fields

You can deactivate the descriptive flex fields (DFFs) if you no longer want to include the data from the DFFs in the incremental data loads.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Data Configuration** under **Application Administration**.
3. On the Data Configuration page, under **Configurations**, click **Custom Data Configurations**.
4. On the Custom Data Configurations page, click **Actions** (⋮) for a descriptive flex field that you want to deactivate.
5. In the pop up, click **Deactivate**.

# 5

## Validate Oracle Fusion Data Intelligence Data

As the cloud account administrator with the Functional Administrator or System Administrator application role, you validate the data after loading the source data from Oracle Fusion Cloud Applications into your data warehouse.

### Topics:

- [About Validating Your Data](#)
- [Create a User to Validate the Extracted Data](#)
- [Create a Custom BI Abstract Role](#)
- [Validate Your Data](#)

### About Validating Your Data

As a functional administrator, you can validate a library of metrics between your Oracle Fusion Data Intelligence instance and the Oracle Transactional Business Intelligence instance. The library of metrics is part of Oracle Fusion Data Intelligence.

To validate data between the source and warehouse, the Oracle Fusion Data Intelligence functional administrator and Oracle Fusion Cloud Applications user must have the same privileges. For example, if you're an administrator in Oracle Fusion Data Intelligence and Oracle Fusion Cloud Applications, then you can use those user IDs to perform data validation.

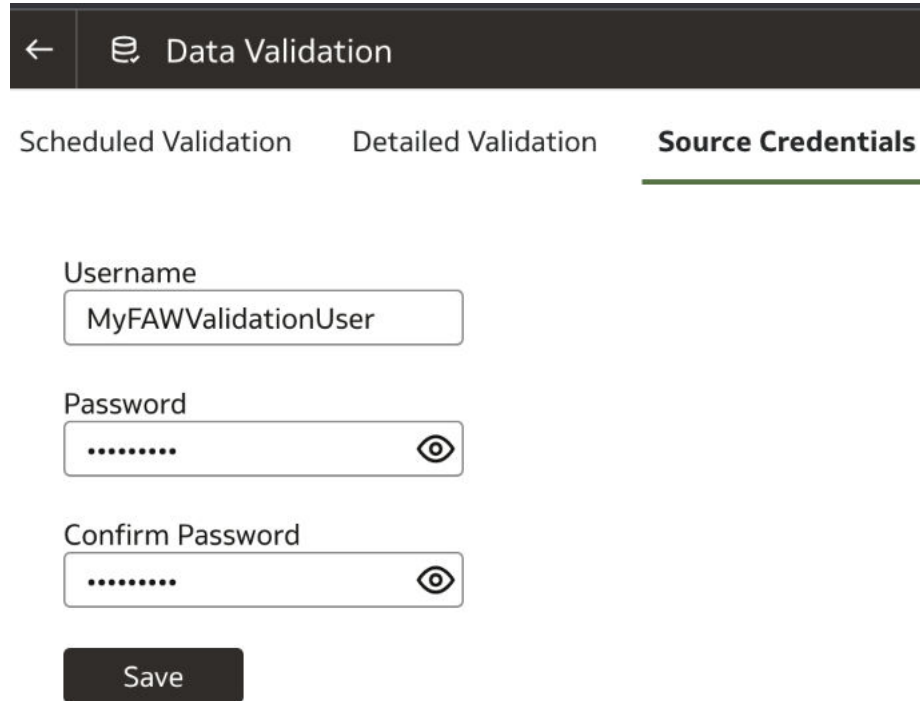
### Prerequisites for Data Validation

Here's a list of prerequisites for validating your data as an administrator:

- Ensure that you can access the Oracle Transactional Business Intelligence instance and run queries.
- Ensure that you have the same data security privileges in Oracle Fusion Data Intelligence instance and the Oracle Transactional Business Intelligence instance.
- Ensure that you're assigned the Integration Specialist Group in Oracle Fusion Data Intelligence to access the Common folder in Oracle Analytics Cloud and to view the output of the data validation project.
- Create a user, such as `MyFAWValidationUser`, to validate the extracted data. See [Create a User to Validate the Extracted Data](#).
- Create a custom BI Abstract role and associate it with an applicable user, such as `MyFAWValidationUser`, whose credentials you want to provide for data validation.
- In Oracle Fusion Data Intelligence, on the Source Credentials tab of the Data Validation page, provide the credentials of the applicable user, such as `MyFAWValidationUser`.

 **Note:**

If the password has expired, then set the new password using the Source Credentials tab. Ensure that the password for this user doesn't contain any special characters or space. To navigate to the Source Credentials tab, open the **Navigator** menu, click **Console**, and then click **Data Validation** under **Application Administration**. You see the Scheduled Validation, Detailed Validation, and Source Credentials tabs.



← Data Validation

Scheduled Validation   Detailed Validation   **Source Credentials**

Username

Password

Confirm Password

Save

## Create a User to Validate the Extracted Data

Data validation in Oracle Fusion Data Intelligence uses basic authentication and you must provide credentials of a user who has the appropriate privileges to validate the extracted data.

After you create this user in Oracle Fusion Cloud Applications, you must provide this user's credentials in Oracle Fusion Data Intelligence for data validation. See [Prerequisites for Data Validation](#).

Ensure that the password for this user doesn't contain any special characters or space.

1. Sign in to Oracle Fusion Cloud Applications and in the Navigator, click **Tools**, and then click **Security Console**.
2. In the Console, click the Users tab and create a user that you want to use to validate the extracted data; for example, MyFAWValidationUser.
3. Click the Roles tab and search for the custom data BI - Abstract Role that was created for data validation; for example, FAW\_CUSTOM\_DATA\_VALIDATION\_ROLE. See [Create a Custom BI Abstract Role](#).
4. On the Users page, click **Add User**.

5. In the Add User dialog, search for and select the user to whom you want to assign this role; for example, `MyFAWValidationUser`. Click **Add Selected Users**, close the Add User dialog, and click **Next**.
6. Review the summary and click **Save and Close**.

## Create a Custom BI Abstract Role

You create a BI Abstract role and associate it with an applicable user, such as `MyFAWValidationUser`, to validate the extracted data.

Use the Security Console of Oracle Fusion Cloud Applications.

1. Sign in to Oracle Fusion Cloud Applications with your administrator credentials.
2. Navigate to **Tools** and then to **Security Console**.
3. In the Security Console, select the Roles tab, and then click **Create Role**.
4. In the Create Roles wizard, on the Basic Information page, enter a role name such as FAW Custom Data Validation Role and a role code such as `FAW_CUSTOM_DATA_VALIDATION_ROLE`, and select **BI - Abstract Roles** as role category.
5. In the Create Roles wizard, on the Role Hierarchy page, add the BI Impersonator role as a member of the newly created BI Abstract role.
6. In the Create Roles wizard, on the Users page, add the applicable user, such as `MyFAWValidationUser`, to the newly created BI Abstract role.
7. In the Create Roles wizard, on the Summary page, verify the details, save, and then close the wizard.

## Validate Your Data

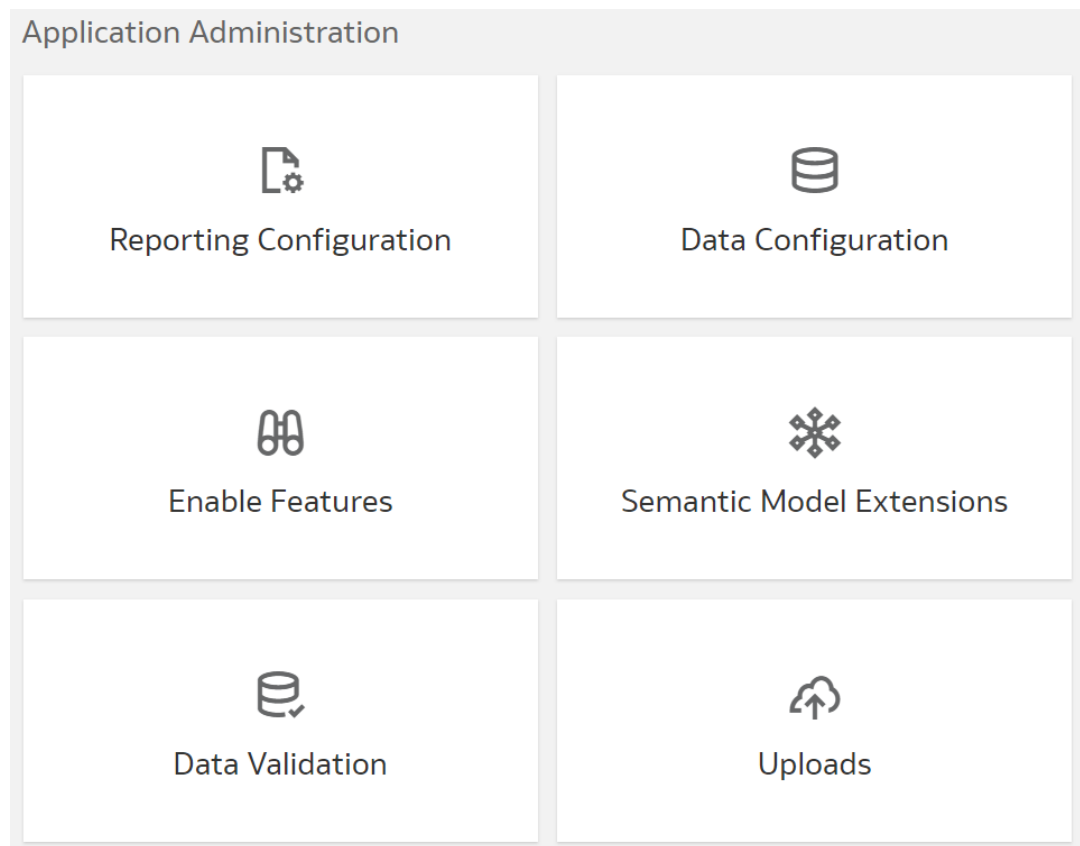
As a functional administrator, validate the data after loading the source data in to your data warehouse.

You can schedule the validation of your data using the prebuilt validation sets or custom validation sets that you create. You can create a validation set and define the subject area, metrics, and columns that you want to validate and schedule the validation frequency and date. You see the validation sets that you create under Custom Validation Sets in the Scheduled Validation tab.

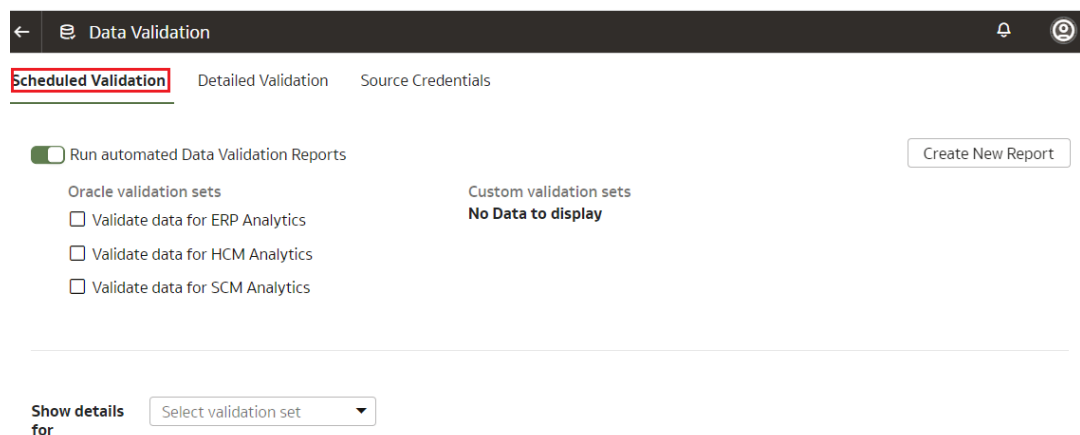
Ensure that you validate data from the initial extract date set up in the pipeline settings and avoid using any data before the initial extract date. For example, if the Initial Extract Date in the pipeline settings is January 1, 2014, even if there is data in your Oracle Fusion Cloud Applications source from January 1, 2010 to December 31, 2013, because there is nothing to validate it against in the warehouse, the data validation process won't produce correct results.

Based on the schedule and the validation set, Oracle Fusion Data Intelligence validates the data and stores the details in the Data Validation workbook available in the Common folder in Oracle Analytics Cloud. Use the report tabs such as **Validate data for ERP Analytics** and **Validate data for HCM Analytics** available in this workbook to view the data validation details.

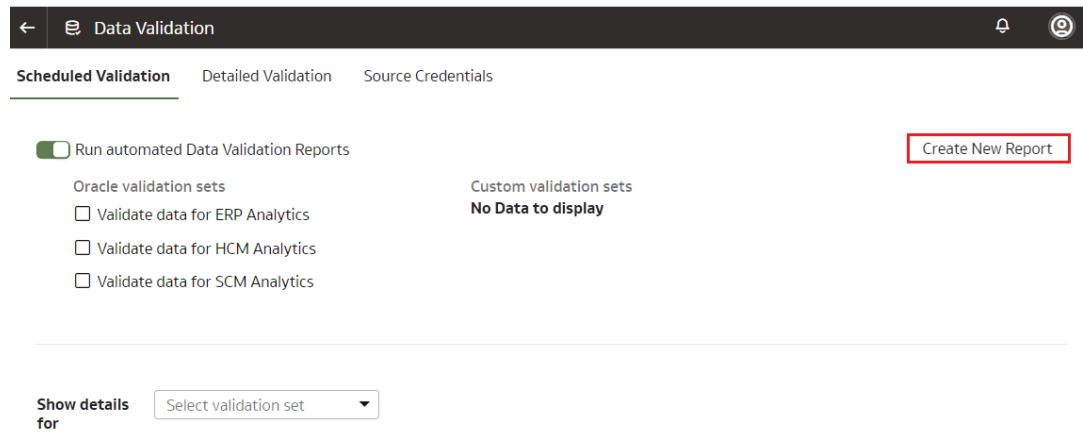
1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Data Validation** under **Application Administration**.



3. On the Data Validation page, in the Scheduled Validation tab, ensure that the **Run automated Data Validation Reports** toggle is “on” if you want to validate your data using theprebuilt validation sets or your custom validation sets. Select the check box for the specific validation sets.



4. To create a custom validation set, click **Create New Report**.



5. In Create Validation Set:
  - a. Enter a name for your custom validated set.
  - b. Select the source pillar.

You see the subject areas for the selected pillars.
  - c. Select the validation frequency and the corresponding day, month, and date as required.
  - d. For each subject area, select the check box for the measures that you want, and then click the edit icon next to the measure.
  - e. In Select Values, select the values that are displayed, or search for values, or click **Show More Values**, and then move them to the **Selected Values** box using the arrows.
  - f. Click **Select** to retain the selection.
  - g. Click **Save**.

### Create Validation Set ✕

**Report Name**

**Source pillar**

**Validation frequency**

ⓘ After successful pipeline runs

**Day**

**Select Subject Areas and Measures to validate for ERP**

- ▶ Financials - AP Aging
- ▶ Financials - AP Invoices
- ▼ Financials - AP Payments
  - Payment Distribution Amount ▲
  - Payments Amount ▲
- ▶ Financials - AR Adjustments
- ▼ Financials - AR Credit Memo Applications
  - Credit Memo Applications Amount ▲
- ▶ Financials - AR Receipts and Applications

6. In Show details for, select the validation set to view the subject area and its measures that would be validated as part of this validation set.
7. On the Data Validation page, in the Detailed Validation tab, select the subject area such as Financials - GL Balance Sheet, a metric related to the selected subject area, and the column set that you want to validate.

You see the columns listed from the selected Column Set.

← ☰ Data Validation 🔔 👤

Scheduled Validation
**Detailed Validation**
Source Credentials

Select a measure and context to compare the data results in warehouse to source

Subject Area

Metric

Column Set

Warehouse Value <input style="width: 95%;" type="text"/>	Source Value <input style="width: 95%;" type="text"/>
---	--

8. For each column, click the + icon to open the Select Values dialog.

9. In Select Values, select the values that are displayed, or search for values, or click **Show More Values**, and then move them to the **Selected Values** box using the arrows.
10. Click **Select** to retain the selection.
11. In the Detailed Validation tab, click **Run** to show the metric values in the Oracle Fusion Data Intelligence instance and the Oracle Transactional Business Intelligence instance.
12. On the Data Validation page, click **Show Summary** to display the detail drill down of the metric values for Oracle Fusion Data Intelligence instance and the Oracle Transactional Business Intelligence instance.
13. Select the attribute columns that you would like to pivot the details on in the display.  
You see the Summary table with values for these categories:
  - Total Records in Analytics Warehouse
  - Total Records in Oracle Transactional Business Intelligence
  - Records Only in Analytics Warehouse
  - Records Only in Oracle Transactional Business Intelligence
  - Matched Records
  - Mismatched Records
14. On the Data Validation page, click **Show Details** to show the detail drill down of the metric values for the Oracle Fusion Data Intelligence instance and the Oracle Transactional Business Intelligence instance. The detail table gives the actual data for the differences between these instances using the pivot columns that you had selected previously.
15. Optional: Use the **Download Details** option to download the detail data into a csv file.
16. Optional: Use the **Change Columns** option to change the columns that you would like to pivot the detail data on.

This regenerates the summary and the detail analysis.



# 6

## Manage Users, Groups, Application Roles, and Data Access

As the service administrator or security administrator, you manage users and their access to subject areas and data.

### Topics:

- [About Managing Users, Groups, Application Roles, and Data Access](#)
- [Typical Workflow to Manage Users, Groups, Application Roles, and Data Access](#)
- [Manage Users](#)
- [Manage Groups](#)
- [Manage Application Roles](#)
- [Manage Data Access through Security Assignments](#)
- [Configure Permissions for Metadata and Front-End Objects](#)
- [View Activity History](#)
- [Manage Uploads and Downloads](#)
- [Set Up Custom Security](#)

## About Managing Users, Groups, Application Roles, and Data Access

As the service administrator or security administrator, one of your initial tasks is to ensure that users have appropriate access to use Oracle Fusion Data Intelligence.

Users need access to objects and data. Access to objects include subject areas or elements of subject areas such as folders and attributes, key metrics, workbooks, and the legacy Oracle BI Enterprise Edition dashboards and answers. You grant access to the users by assigning groups to them. The groups inherit the permissions from the data, duty, and licensed roles (from release Platform 23.R4) mapped to them. You can merge your security setup only with the main semantic model.

### Enhanced Security Capabilities

The enhanced security capabilities available from release Platform 23.R4 enable you to:

- Create and manage users and groups only in the Oracle Identity Cloud Service associated with your Oracle Fusion Data Intelligence instance. As a security administrator, you can perform user-group management if you've the User Administrator role in Oracle Identity Cloud Service. See [Managing Oracle Identity Cloud Service Users and Groups in the Oracle Cloud Infrastructure Console](#). In Oracle Fusion Data Intelligence, you can view the users and groups on the Security page but you can't create, modify, or delete them.
- Use the licensed application roles corresponding to the existing licensed groups made available in this release onwards. You can assign the licensed application roles to your

custom groups. These licensed application roles are mapped by default to the existing prebuilt licensed groups and are associated with the system roles. When you assign these prebuilt licensed groups and custom groups to users, then the applicable users get the system privileges such as consumer, author, and administrator.

If your Oracle Fusion Data Intelligence is on a release prior to release Platform 23.R4 or you haven't yet up taken this security update, then you can continue to use the existing security capabilities until Oracle Fusion Data Intelligence automatically applies them as part of the release Platform 24.R2. Consult the information in [Manage Users, Groups, Application Roles, and Data Access](#) from a release prior to release Platform 23.R4.

These changes are mandatory and you can schedule the update sooner to enhance the security of your application using the Schedule Update option in the banner announcing these enhancements on the Security page. Ensure that you don't schedule the security update beyond May 2024. All current setups will be retained and available in Oracle Identity Cloud Service; you don't need to take any action other than scheduling.

## About Users

Users accessing Oracle Fusion Data Intelligence must exist in Oracle Identity Cloud Service.

You can create the users or synchronize them with the Oracle Identity Cloud Service instance associated with your Oracle Fusion Data Intelligence instance from different sources:

- You can synchronize the Oracle Fusion Cloud Applications users with the Oracle Identity Cloud Service instance.
- You can manually create users in the Oracle Identity Cloud Service instance directly or create users in the Oracle Identity Cloud Service instance using the Oracle Fusion Data Intelligence user interface.
- You can synchronize the users from other 3rd-party systems with the Oracle Identity Cloud Service instance.

Users gain their access to Oracle Fusion Data Intelligence based on the Oracle Fusion Data Intelligence-specific system groups assigned to them. They gain access to different functionality, objects, and data in Oracle Fusion Data Intelligence based on the job-specific groups assigned to them.

You can assign the predefined system groups, groups available in the Oracle Identity Cloud Service instance associated with your Oracle Fusion Data Intelligence instance, and custom groups that you create in Oracle Fusion Data Intelligence.

## About Groups

Oracle Fusion Data Intelligence uses groups to provide users access to subject areas, objects, and data.

Oracle Fusion Data Intelligence uses the following three types of groups:

- System groups created in Oracle Identity Cloud Service specifically for Oracle Fusion Data Intelligence. These system groups are associated with system roles that provide a set of privileges to the users to perform system tasks after signing into Oracle Fusion Data Intelligence, such as administering system settings, performing functional setup, managing security, and modeling data.
- Job-specific groups such as Vice President of Sales, Human Resources Analyst, and Procurement Buyer. The job-specific groups are job roles from Oracle Fusion Cloud Applications mapped as groups in Oracle Identity Cloud Service. See Job-Specific Groups.

- Other groups that are generic groups created in Oracle Identity Cloud Service not specifically for Oracle Fusion Data Intelligence, such as IDCS\_A administrators and All\_Tenant\_Users.

## System Groups

Oracle Fusion Data Intelligence creates the system groups also known as licensed groups in Oracle Identity Cloud Service while provisioning your Oracle Fusion Data Intelligence instance.

System groups are associated with system roles that provide a set of privileges to users. The enhanced security capabilities available from release Platform 23.R4 provide licensed application roles corresponding to the existing licensed groups and are mapped by default to the existing prebuilt system or licensed groups. The system roles or the licenses application roles (from release Platform 23.R4) serve two purposes:

- Authenticate a user for Oracle Fusion Data Intelligence.
- License a user to use Oracle Fusion Data Intelligence based on the system group they are assigned.

See [System Roles](#) and [Licensed Roles](#).

As a security administrator, you can perform user-group management if you've the User Administrator role in Oracle Identity Cloud Service. You must add the users to the corresponding system groups based on the tasks they perform in Oracle Fusion Data Intelligence. See [Managing Oracle Identity Cloud Service Users and Groups in the Oracle Cloud Infrastructure Console](#). In Oracle Fusion Data Intelligence, you can view the users and groups on the Security page but you can't create, modify, or delete them. In Oracle Identity Cloud Service add users to these system groups:

System Group Code	System Group Name	Description	Associated System Role*	Associated Licensed Application Role from release Platform 23.R4 Onwards
FAW_FUNCTIONAL_ADMINISTRATORS	FAW Functional Administrator	Fusion Data Intelligence Functional Administrators	FunctionalAdmin	FAW Functional Administrator Role
FAW_SECURITY_ADMINISTRATORS	FAW Security Administrator	Fusion Data Intelligence Security Administrators	SecurityAdmin	FAW Security Administrator Role
FAW_MODELERS	FAW Modeler	Fusion Data Intelligence Modelers	Modeler	FAW Modeler Role
FAW_MODELER_ADMINISTRATORS	FAW Modeler Administrator	Fusion Data Intelligence Modeler Administrators	ModelerAdmin	FAW Modeler Administrator Role
FAW_SERVICE_ADMINISTRATORS	FAW Service Administrator	Fusion Data Intelligence Service Administrators	ServiceAdmin	FAW Service Administrator Role
FAW_LICENSED_ERP_AUTHORS	FAW Licensed ERP Authors	Fusion Data Intelligence ERP Licensed Authors	Author	FAW Licensed ERP Authors Role

System Group Code	System Group Name	Description	Associated System Role*	Associated Licensed Application Role from release Platform 23.R4 Onwards
FAW_LICENSED_ERP_CONSUMERS	FAW Licensed ERP Consumers	Fusion Data Intelligence ERP Licensed Consumers	Consumer	FAW Licensed ERP Consumers Role
FAW_LICENSED_HCM_AUTHORS	FAW Licensed HCM Authors	Fusion Data Intelligence HCM Licensed Authors	Author	FAW Licensed HCM Authors Role
FAW_LICENSED_HCM_CONSUMERS	FAW Licensed HCM Consumers	Fusion Data Intelligence HCM Licensed Consumers	Consumer	FAW Licensed HCM Consumers Role
FAW_LICENSED_SCM_CONSUMERS	FAW Licensed SCM Consumers	Fusion Data Intelligence SCM Licensed Consumers	Consumer	FAW Licensed SCM Consumers Role
FAW_LICENSED_CX_CONSUMERS	FAW Licensed CX Consumers	Fusion Data Intelligence CX Licensed Consumers	Consumer	FAW Licensed CX Consumers Role
FAW_LICENSED_SCM_AUTHORS	FAW Licensed SCM Authors	Fusion Data Intelligence SCM Licensed Authors	Author	FAW Licensed SCM Authors Role
FAW_LICENSED_CX_AUTHORS	FAW Licensed CX Authors	Fusion Data Intelligence CX Licensed Authors	Author	FAW Licensed CX Authors Role

\*See [System Roles](#) and [Licensed Roles](#).

## Job-Specific Groups

Job-specific groups are job roles synchronized from Oracle Fusion Cloud Applications into Oracle Identity Cloud Service.

Oracle Fusion Data Intelligence uses the following job-specific groups:

- [Common Job-Specific Groups](#)
- Fusion HCM Analytics Job-Specific Groups
- Fusion ERP Analytics Job-Specific Groups
- Fusion SCM Analytics Job-Specific Groups
- Fusion CX Analytics Job-Specific Groups

## Common Job-Specific Groups

The common job-specific groups are applicable across the analytics applications that are part of Oracle Fusion Data Intelligence such as Oracle Fusion HCM Analytics and Oracle Fusion ERP Analytics.

Job-Specific Group Code	Job-Specific Group Name	Description	Associated Application Roles	Associated Application Role Names	Functional Area
ORA_FND_INT EGRATION_SP ECIALIST_JOB	Integration Specialist	Individual responsible for planning, coordinating, and supervising all activities related to the integration of enterprise information systems. Has author privileges.	Author OA4F_COMMO N_DATA_ADMI N_ANALYSIS_ DUTY	Not applicable	Common

## Other Groups

The Other Groups category refers to groups created in Oracle Identity Cloud Service for purposes such as administrating Oracle Cloud Infrastructure and Oracle Identity Cloud Service.

These groups aren't necessarily Oracle Fusion Data Intelligence-specific but you can use them in Oracle Fusion Data Intelligence. Examples of this category are the "IDCS\_Administrators" and "All\_Tenant\_Users" groups.

## About Application Roles

Application roles consist of duty and data roles.

Duty roles define the duties of a job as an entitlement to perform a particular action; for example, access to an AP Transactions subject area. Data roles provide access to the row-level data in the warehouse tables. Data roles group the users based on the functional access they have through a particular job role and a particular dimension of data. For example, a group of users based on invoices relevant only to their business unit.

## Duty Roles

The predefined duty roles to secure the predefined subject areas and the predefined front-end objects are:

- [Common Duty Roles](#)
- Fusion HCM Analytics Duty Roles
- Fusion ERP Analytics Duty Roles
- Fusion SCM Analytics Duty Roles
- Fusion CX Analytics Duty Roles

## Common Duty Roles

The common duty roles are applicable across the analytics applications that are part of the application such as Oracle Fusion CX Analytics, Oracle Fusion HCM Analytics, and Oracle Fusion ERP Analytics.

Duty Role Code	Duty Role Name	Details	Functional Area	Gets access to Subject Area Display Name OR Associated Role
OA4F_COMMON_DATA_ADMIN_ANALYSIS_DUTY	Data Warehouse Refresh Analysis Duty	Object security role to control presentation catalog access to Common - Warehouse Refresh Statistics subject area.	Common	Common - Warehouse Refresh Statistics
OA4F_COMMON_USAGE_TRACKING_ANALYSIS_DUTY	Usage Tracking Analysis Duty	Object security role to control presentation catalog access to Common - Usage Tracking subject area.	Common	Common - Usage Tracking
OA4F_SECURITY_REPORTING_DUTY	Security Reporting Duty	Object security role to control presentation catalog access to Security Assignment and Security Audit History subject areas.	Common	Common - Security Assignment Common - Security Audit History

## Data Roles

The predefined data roles used to secure the predefined objects, custom facts, and custom dimensions are:

- Fusion HCM Analytics Data Roles
- Fusion ERP Analytics Data Roles
- Fusion SCM Analytics Data Roles
- Fusion CX Analytics Data Roles

## Licensed Roles

The licensed application roles corresponding to the existing licensed groups made available in release Platform 23.R4 onwards are as follows.

The licensed application roles are by default associated with the applicable system roles described in [System Roles](#).

Licensed Role	Associated System Role	Mapped to Licensed Group
FAW Service Administrator Role	Service Administrator	FAW Service Administrator
FAW Functional Administrator Role	Functional Administrator	FAW Functional Administrator
FAW Security Administrator Role	Security Administrator	FAW Security Administrator
FAW Modeler Administrator Role	Model Administrator	FAW Modeler Administrator

<b>Licensed Role</b>	<b>Associated System Role</b>	<b>Mapped to Licensed Group</b>
FAW Modeler Role	Modeler	FAW Modeler
FAW Licensed CX Authors Role	Author	FAW Licensed CX Authors FAW Licensed ERP Authors FAW Licensed HCM Authors
FAW Licensed ERP Authors Role	Author	FAW Licensed ERP Authors FAW Licensed HCM Authors
FAW Licensed HCM Authors Role	Author	FAW Licensed HCM Authors
FAW Licensed SCM Authors Role	Author	FAW Licensed ERP Authors FAW Licensed SCM Authors
FAW Licensed CX Consumer Role	Consumer	FAW Licensed CX Consumers FAW Licensed ERP Authors FAW Licensed HCM Authors
FAW Licensed ERP Consumer Role	Consumer	FAW Licensed ERP Authors FAW Licensed ERP Consumers
FAW Licensed HCM Consumer Role	Consumer	FAW Licensed HCM Consumers
FAW Licensed SCM Consumer Role	Consumer	FAW Licensed ERP Authors FAW Licensed SCM Consumers

## System Roles

The system roles for Oracle Fusion Data Intelligence available in Oracle Identity Cloud Service through provisioning of Oracle Fusion Data Intelligence are:

Role Name	Role Description	Purpose	Permissions
Administrator	Tenant administrator for service instances	Creates and manages Oracle Fusion Data Intelligence instances and administers Oracle Identity Cloud Service users and roles.	<ul style="list-style-type: none"> <li>• Creates and manages Oracle Fusion Data Intelligence instances</li> <li>• Administers Oracle Identity Cloud Service users and roles</li> <li>• Has no access to the Data Pipeline user interface</li> <li>• Has no access to the Data Security user interface</li> <li>• Has no access to the Job Monitoring Console user interface</li> <li>• Has no access to the Console menu</li> <li>• Has no access to user and group administration</li> <li>• Has no access to workbooks, visualizations, key metrics, visualizations, projects, and content</li> </ul>



Role Name	Role Description	Purpose	Permissions
Service Administrator	Oracle Fusion Data Intelligence service administrator	Customer facing (Snapshots, Connections, System Settings) administrator access to Oracle Fusion Data Intelligence.	<ul style="list-style-type: none"> <li>• Can't create snapshots or modify the data model file (RPD)</li> <li>• Can access the Data Pipeline user interface</li> <li>• Can access the Data Security user interface</li> <li>• Has no access to the Job Monitoring console</li> <li>• Can access the Console menu</li> <li>• Can access the user and group administration pages</li> <li>• Can access the Semantic Model Extensions user interface</li> <li>• Has read-only access to the ready-to-use Oracle Analytics Cloud objects (visualization projects, dashboards, and analyses)</li> <li>• Requests from Oracle Fusion Data Intelligence to Oracle Analytics Cloud are routed through the Service Administrator user</li> <li>• Can create, update, and delete the Oracle Analytics Cloud content</li> <li>• Has read-only access to the ready-to-use key metrics</li> <li>• Can create, update, and delete key metrics</li> <li>• Can create, update, and delete workbooks and visualizations</li> <li>• Can share workbooks and visualizations</li> </ul>

Role Name	Role Description	Purpose	Permissions
			<ul style="list-style-type: none"><li>• Can create Oracle Analytics Publisher reports</li><li>• Has no access to data modeling</li><li>• Has access to create Oracle Analytics Cloud connections to other non-Oracle Applications sources, such as Excel files and Google drive</li><li>• Has access to create Oracle Analytics Cloud datasets</li></ul>

Role Name	Role Description	Purpose	Permissions
Functional Administrator	Oracle Fusion Data Intelligence functional administrator	Performs functional configuration (pipeline, reporting) in Oracle Fusion Data Intelligence.	<ul style="list-style-type: none"> <li>• Can access the Data Pipeline and Custom Data Configuration user interfaces</li> <li>• Has no access to the Data Security user interface</li> <li>• Has no access to the Job Monitoring console</li> <li>• Can access the Console menu</li> <li>• Has no access to user and role administration</li> <li>• Has no access to the Semantic Model Extensions user interface</li> <li>• Has no access to the prebuilt Oracle Analytics Cloud objects (visualization projects, dashboards, and analyses)</li> <li>• Has no access to the prebuilt key metrics</li> <li>• Has no access to workbooks, key metrics, and Oracle Analytics Cloud projects</li> <li>• Can't create any Oracle Analytics Cloud content and key metrics</li> <li>• Can't create, update, and delete workbooks and visualizations</li> <li>• Can't share workbooks and visualizations</li> <li>• Has no access to Oracle Analytics Publisher</li> <li>• Has no access to data modeling</li> <li>• Has no access to create Oracle Analytics Cloud connections</li> <li>• Has no access to create Oracle</li> </ul>

Role Name	Role Description	Purpose	Permissions
			Analytics Cloud datasets

Role Name	Role Description	Purpose	Permissions
Security Administrator	Oracle Fusion Data Intelligence security administrator	Administers system roles and data security.	<ul style="list-style-type: none"> <li>• Has no access the Data Pipeline user interface</li> <li>• Has access to the Data Security user interface</li> <li>• Has no access to the Job Monitoring console</li> <li>• Can access the Console menu</li> <li>• Has access to user and group administration</li> <li>• Has no access to the Semantic Model Extensions user interface</li> <li>• Has no access to the prebuilt Oracle Analytics Cloud objects (visualization projects, dashboards, and analyses)</li> <li>• Has no access to the prebuilt key metrics</li> <li>• Has no access to workbooks, key metrics, and Oracle Analytics Cloud projects</li> <li>• Can't create any Oracle Analytics Cloud content and key metrics</li> <li>• Can't create, update, and delete workbooks and visualizations</li> <li>• Can't share workbooks and visualizations</li> <li>• Has no access to Oracle Analytics Publisher and data modeling</li> <li>• Has no access to create Oracle Analytics Cloud connections</li> <li>• Has no access to create Oracle Analytics Cloud datasets</li> </ul>

Role Name	Role Description	Purpose	Permissions
Modeler Administrator	Oracle Fusion Data Intelligence data model administrator	Promote data model (RPD) customization to the Oracle Analytics Cloud instance.	<ul style="list-style-type: none"> <li>• Has no access to the Data Pipeline user interface</li> <li>• Has no access to the Data Security user interface</li> <li>• Has no access to the Job Monitoring console</li> <li>• Can access the Console menu</li> <li>• Has no access to user and role administration</li> <li>• Can access the Semantic Model Extensions user interface</li> <li>• Can access the prebuilt Oracle Analytics Cloud objects (visualization projects, dashboards, and analyses)</li> <li>• Can access the prebuilt key metrics</li> <li>• Can create key metrics</li> <li>• Can create Oracle Analytics Cloud content</li> <li>• Can't create, update, and delete workbooks and visualizations</li> <li>• Can't share workbooks and visualizations</li> <li>• Can't create Oracle Analytics Publisher reports</li> <li>• Has access to data modeling</li> <li>• Can apply the data model file (repository file) to the Test environment</li> <li>• Can create Oracle Analytics Cloud connections</li> <li>• Can create Oracle Analytics Cloud datasets</li> </ul>

Role Name	Role Description	Purpose	Permissions
Modeler	Oracle Fusion Data Intelligence modeler	Modify the semantic model to bring in custom dimensions and attributes.	<ul style="list-style-type: none"> <li>• Has no access to the Data Pipeline user interface</li> <li>• Has no access to the Data Security user interface</li> <li>• Has no access to the Job Monitoring console</li> <li>• Can access the Console menu</li> <li>• Has no access to user and role administration</li> <li>• Can access the Semantic Model Extensions user interface</li> <li>• Can access the prebuilt Oracle Analytics Cloud objects (visualization projects, dashboards, and analyses)</li> <li>• Can access the prebuilt key metrics</li> <li>• Can create Oracle Analytics Cloud content</li> <li>• Can create key metrics</li> <li>• Can't create, update, and delete workbooks and visualizations</li> <li>• Can't share workbooks and visualizations</li> <li>• Can't create Oracle Analytics Publisher reports</li> <li>• Has access to data modeling</li> <li>• Can create Oracle Analytics Cloud connections</li> <li>• Can create Oracle Analytics Cloud datasets</li> </ul>

Role Name	Role Description	Purpose	Permissions
Author	Oracle Fusion Data Intelligence author	Create and edit key metrics, visualizations, workbooks, visualization projects, reports, and dashboards.	<ul style="list-style-type: none"> <li>• Has no access to the Data Pipeline user interface</li> <li>• Has no access to the Data Security user interface</li> <li>• Has no access to the Job Monitoring console</li> <li>• Has no access to the Console menu</li> <li>• Has no access to user and role administration</li> <li>• Has no access to the Semantic Model Extensions user interface</li> <li>• Has read-only access to the ready-to-use Oracle Analytics Cloud objects (visualization projects, dashboards, and analyses); if you need a change, then create a copy using "Save As"</li> <li>• Has read-only access to the ready-to-use key metrics</li> <li>• Can edit the custom Oracle Analytics Cloud objects (visualization projects, dashboards, and analyses)</li> <li>• Can edit the custom key metrics</li> <li>• Can change the filter values for existing visualization projects</li> <li>• Can add filters for existing visualization projects</li> <li>• Can create and edit Oracle Analytics Cloud content, key metrics, workbooks, and visualizations</li> <li>• Can delete custom key metrics,</li> </ul>



Role Name	Role Description	Purpose	Permissions
			<p>workbooks, and visualizations</p> <ul style="list-style-type: none"><li>• Can consume key metrics, workbooks, and visualizations created by other users on which they have access permissions</li><li>• Can share workbooks and visualizations</li><li>• Can create Oracle Analytics Publisher reports</li><li>• Has no access to data modeling</li><li>• Has no access to create Oracle Analytics Cloud connections</li><li>• Has access to create Oracle Analytics Cloud datasets</li></ul>

Role Name	Role Description	Purpose	Permissions
Consumer	Oracle Fusion Data Intelligence consumer	Read access to Oracle Analytics Cloud content and can create visualizations and workbooks.	<ul style="list-style-type: none"> <li>• Has no access to the Data Pipeline user interface</li> <li>• Has no access to the Data Security user interface</li> <li>• Has no access to the Job Monitoring console</li> <li>• Has no access to the Console menu</li> <li>• Has no access to user and role administration</li> <li>• Has no access to the Semantic Model Extensions user interface</li> <li>• Has read-only access to the ready-to-use Oracle Analytics Cloud objects (visualization projects, dashboards, and analyses)</li> <li>• Has read-only access to the ready-to-use key metrics</li> <li>• Has read-only access to the custom Oracle Analytics Cloud objects (visualization projects, dashboards, and analyses)</li> <li>• Has read-only access to the custom key metrics</li> <li>• Can change the filter values for the existing visualization projects</li> <li>• Can't add filters for the existing visualization projects</li> <li>• Can't create any Oracle Analytics Cloud content</li> <li>• Can't create any key metrics</li> <li>• Can create, update, and delete</li> </ul>

Role Name	Role Description	Purpose	Permissions
			workbooks and visualizations <ul style="list-style-type: none"> <li>• Can share workbooks and visualizations</li> <li>• Has read-only access to Oracle Analytics Publisher</li> <li>• Has no access to data modeling</li> <li>• Has no access to create Oracle Analytics Cloud connections</li> <li>• Has access to create Oracle Analytics Cloud datasets</li> </ul>

Refer to the full list of privileges in [Mapping of System Roles to Permissions in Fusion Data Intelligence](#). This document is updated typically for each release of Oracle Fusion Data Intelligence. Ensure that you're signed into Cloud Customer Connect prior to viewing this document.

## About Data Access through Security Assignments

You grant the data security assignments at the user-level.

Data security assignments apply data filters to display only the data corresponding to the security assignment values assigned to the users. For example, John Smith and Marie Pierce are both Accounts Payable Manager in an organization, but John Smith needs to see only the US business unit-specific data and Marie needs to see only the UK business unit-specific data. Even though both have the same functional role, their data security assignments differ. John is assigned all the US business units and Marie is assigned all the UK business units only.

You ensure data-level security with a combination of data roles, security context, and security assignments assigned to the user. Oracle Fusion Data Intelligence maps a security context 1:1 onto a data role. You grant the data security assignments within a security context. The user must have the data role through the group assigned to them in order to have access to the security context and its corresponding list of values to pick from. You assign a user one or more job-specific groups. The groups have data roles mapped to them, and when querying data, the semantic layer applies the data filters.

For Enterprise Resource Planning, the ledger, payables business unit, and receivables business unit values are restricted by the ledgers that you selected while setting up the report parameters. To establish the security permissions, you'd need to map users to security assignments. If a user doesn't have security assignment values mapped, then the user doesn't get to see any datasets corresponding to the job role (and implicitly data role) assigned to them. When you add data security assignments to a user, you ensure that the user can access specific data within a security context, such as ledger, payables business unit, or receivables business unit.

For Human Capital Management, the data security is based on the line manager hierarchy defined in Oracle Fusion Cloud Applications for the user having the Line Manager role. For Human Capital Management, the data security is based on the talent acquisition hierarchy

defined in Oracle Fusion Cloud Applications for the user having the Job Application or Job Requisition roles. All users can see their own records using the HCM Show context. A user with the HR Analyst role has access to all Human Capital Management data and no security restrictions are applied to the Human Capital Management data set. A user with the Hiring Manager role has access to non-restricted job applications, while users with the Recruiter and Recruiting Manager role can view all job applications. The business unit, legal employer, department, country security context, and related data roles are restricted by contexts and assigned predicate values. To establish the security permissions, you'd need to map users to security assignments

## Typical Workflow to Manage Users, Groups, Application Roles, and Data Access

Follow these tasks as a guide to manage users, groups, application roles, and data access.

Task	Description	More Information
Create users for Oracle Fusion Data Intelligence in Oracle Identity Cloud Service	Users for Oracle Fusion Data Intelligence must exist in the Oracle Identity Cloud Service instance associated with your Oracle Fusion Data Intelligence instance. You create users in the Oracle Identity Cloud Service instance in several ways.	See <a href="#">Create Users</a>
License the users to access Oracle Fusion Data Intelligence	An Oracle Fusion Data Intelligence user is an Oracle Fusion Data Intelligence licensed user. You license a user in Oracle Fusion Data Intelligence when you assign one of the Oracle Fusion Data Intelligence system groups to them. You must assign at least one system group to a user to enable them to perform relevant tasks in Oracle Fusion Data Intelligence.	See <a href="#">License the Users to Access Oracle Fusion Data Intelligence</a>
Create groups	As a security administrator, you can perform user-group management if you've the User Administrator role in Oracle Identity Cloud Service. You can create custom groups to meet your business requirements.	See <a href="#">Managing Oracle Identity Cloud Service Users and Groups in the Oracle Cloud Infrastructure Console</a>
Create application roles	Application roles consist of data and duty roles. As a security administrator, you can create custom duty and data roles using the Security pages to secure subject areas and data respectively. However, as a modeler, you configure these custom application roles using the Security Configuration section of the Semantic Model Extensions pages.	See <a href="#">Create an Application Role</a>

Task	Description	More Information
Associate groups and application roles	You must map the predefined and custom job-specific groups to the application roles (duty and data roles) to inherit the privileges and permissions to access the objects and data in Oracle Fusion Data Intelligence.	See <a href="#">Add Application Roles to a Group</a> and <a href="#">Assign Groups to Application Roles</a>
Associate users and groups	You must associate users and groups as the groups assigned to the users provide them the access to Oracle Fusion Data Intelligence. As a security administrator, you can perform user-group management if you've the User Administrator role in Oracle Identity Cloud Service.	See <a href="#">Managing Oracle Identity Cloud Service Users and Groups in the Oracle Cloud Infrastructure Console</a> .
Add security assignments to a user	Access to data is granted at user level. Within a security context, users get assigned security assignments to filter their data access level. You can grant security assignments to the users for the predefined security contexts currently. For custom data access, the data filters are implicit through the custom data security framework. See <a href="#">Custom Security in Fusion Data Intelligence</a> .	See <a href="#">Add Security Assignments to a User</a> and <a href="#">Manage Users for a Data Security Assignment</a>

## Manage Users

As a service or security administrator, you must ensure that you add users with applicable permissions to work with Oracle Fusion Data Intelligence.

### Topics:

- [Create Users](#)
- [License the Users to Access Oracle Fusion Data Intelligence](#)
- [Assign Licensed Groups to Users](#)
- [Add Security Assignments to a User](#)
- [Remove Security Assignments Granted to a User](#)
- [Copy Data Security Assignments](#)
- [View the Excluded Data Security Assignments](#)

## Create Users

Users for Oracle Fusion Data Intelligence must exist in the Oracle Identity Cloud Service instance associated with your Oracle Fusion Data Intelligence instance.

You create users in the Oracle Identity Cloud Service instance in the following ways:

- Synchronize users from your Oracle Fusion Cloud Applications instance to the Oracle Identity Cloud Service instance.
- Manually create users in the Oracle Identity Cloud Service instance.

## Synchronize Users from Your Oracle Fusion Cloud Applications Instance

Synchronize users from your Oracle Fusion Cloud Applications instance to the Oracle Identity Cloud Service instance associated with your Oracle Fusion Data Intelligence instance.

See [Set Up Provisioning with Single Sign-On](#).

## Create Users in Oracle Identity Cloud Service

Create users in the Oracle Identity Cloud Service instance associated with your Oracle Fusion Data Intelligence instance.

See *Create User Accounts in Administering Oracle Identity Cloud Service*.

## License the Users to Access Oracle Fusion Data Intelligence

You must assign at least one system group to a user to enable them to perform relevant tasks in Oracle Fusion Data Intelligence. System groups provide a set of privileges to perform tasks in Oracle Fusion Data Intelligence.

Currently, new licensed users with predefined job-specific groups get the Author role by default.

Based on the entitlements and the number of licenses that you purchased, you need to assign the users to either the HCM or ERP Licensed Author and HCM or ERP Licensed Consumer system groups. Additionally, if the users need to perform administrative tasks, you must assign those respective users to the administration-related groups.

See [System Groups](#).

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Security** under **Service Administration**.
3. On the Security page, click the Users tab, and then click **Add User**.
4. In Add User, search for a user and select the user or select a user from the displayed list of users.
5. Click **Next**.
6. Select the check box for each of the licensed groups that you want to assign to the user and click **Finish**.

## Assign Licensed Groups to Users

You can assign the Oracle Fusion Data Intelligence licensed groups (also known as system groups) to the Oracle Fusion Cloud Applications users when they're synchronized from your Oracle Fusion Cloud Applications instance to the Oracle Identity Cloud Service instance to provide these users immediate access to Oracle Fusion Data Intelligence.

When you enable the synchronization of Oracle Fusion Cloud Applications with the Oracle Identity Cloud Service instance associated with your Oracle Fusion Data Intelligence instance, all the Oracle Fusion Cloud Applications groups are visible on the Security page in Oracle

Fusion Data Intelligence. You must map the Oracle Fusion Cloud Applications custom groups to the Oracle Fusion Data Intelligence licensed groups. Later when you synchronize the users from Oracle Fusion Cloud Applications to Oracle Identity Cloud Service, Oracle Fusion Data Intelligence selects those users, checks if the mapped Oracle Fusion Cloud Applications custom groups are assigned to those users, and then assigns the corresponding licensed groups to those users. From release Platform 23.R4 onwards, the licensed groups are mapped by default to the licensed application roles which provide the applicable privileges to the users that have been assigned these groups. See [Licensed Roles](#).

You must ensure that the custom roles are available in Oracle Fusion Cloud Applications and that you've assigned these roles to the users in Oracle Fusion Cloud Applications.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Security** under **Service Administration**.
3. On the Security page, click the Groups tab, and then search for the *FAW Licensed* groups.
4. Select a licensed group, for example FAW Licensed HCM Authors.  
You see the Users and Groups tabs for the selected licensed group in the right pane.
5. Click the Groups tab under the licensed group.
6. Click **Add Mapping**.
7. In Add Source System Role Mapping, search for and select the Oracle Fusion Cloud Applications custom groups that you want to map to the licensed group, for example the *FAW Licensed HCM Authors* licensed group.
8. Click **Save**.
9. After mapping the Oracle Fusion Cloud Applications custom groups to the Oracle Fusion Data Intelligence author and consumer licensed groups, under the Groups tab, select the frequency of the synchronization of the Oracle Fusion Data Intelligence licensed groups with the new Oracle Fusion Cloud Applications users.
10. Optional: Under the Groups tab, click **Apply Changes Now**.

Oracle Fusion Data Intelligence adds the Oracle Fusion Data Intelligence licensed groups to the new Oracle Fusion Cloud Applications users.

## Add Security Assignments to a User

Data security assignments apply data filters to display only the data corresponding to the security assignment values assigned to the users. You can assign a single user multiple security assignment values.

Before you add a security assignment to a user, you must ensure that:

- The user has the appropriate group assigned to them.
- The group has the appropriate data role to assign security values.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Security** under **Service Administration**.
3. On the Security page, search for a user or select from the list of users displayed under the Users tab.

You see the security assignments granted to the user under the Security Assignments tab in the user details region.

4. Click **Grant Assignment**.
5. In Assign Security Assignments, select the security context for which you want to add data security assignments to the user. For example, ledgers or specific business units like AP business unit.
6. From the list of security assignments that you see based on the security context that you selected, select the values that you want to add to the selected user.

 **Note:**

The Grant Assignment process appends the values that you selected to the existing assignments.

## Remove Security Assignments Granted to a User

As a security administrator, you can remove security assignments that you had previously assigned.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Security** under **Service Administration**.
3. On the Security page, search for a user or select from the list of users displayed under the Users tab.  
  
You see the security assignments granted to the user under the Security Assignments tab in the user details region.
4. Select the check box for one or more security assignments that you'd like to remove from the selected users and click **Remove Assignment**.
5. In Remove Assignment, click **Remove Assignment**.

## Copy Data Security Assignments

As a service or security administrator, you can copy data security assignments from one user to another user.

Copying bulk assignments could take some time to process. Monitor the Activity tab on the Security page.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Security** under **Service Administration**.
3. On the Security page, select a user from the users listed under the Users tab or search and select a user.
4. Click **Copy Assignments**.
5. In Copy Security Assignments From Another User:
  - a. Under Copy From, search for and select a user to copy access from.
  - b. Under Copy Security Access, you see the context-specific security assignments that would be copied.
6. Click **Copy**.



## View the Excluded Data Security Assignments

View the data security assignments that are excluded for a user to know which data the specific user can't access.

When a user is excluded from certain data security assignments, the excluded assignments are visible in the user details section on the Security page. As a service or security administrator, you can set up exclusion rules to exclude certain data security assignments from a user. You can modify the exclusion rules to remove the excluded assignments for a user. See [Set Exclusion Rules for Security Assignments](#).

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Security** under **Service Administration**.
3. On the Security page, select a user from the users listed under the Users tab or search and select a user.
4. Click **Excluded Assignments**.

## Manage Groups

You must ensure to map application roles to groups and add user memberships to groups. This enables users to access the applicable objects and data in Oracle Fusion Data Intelligence and perform various tasks.

If you've set up synchronization of Oracle Fusion Cloud Applications with Oracle Identity Cloud Service, then users, job roles, and group memberships in Oracle Fusion Cloud Applications are synchronized as users, groups, and group memberships respectively. If you reassign a user to a different group in Oracle Identity Cloud Service while synchronization with Oracle Fusion Cloud Applications is enabled, then the synchronization process resets or erases such assignments during its next run.

 [LiveLabs Sprint](#)

### Topics:

- [Add Application Roles to a Group](#)
- [Copy Application Roles to a Group](#)
- [Remove Application Roles from a Group](#)
- [Create an Application Role While Mapping](#)
- [Upload and Download User Group Mappings](#)
- [Enable Easy Data Access to People Leaders](#)

## Add Application Roles to a Group

As a security administrator, you can map the application roles available for Oracle Fusion Data Intelligence with the predefined and custom groups. This enables the groups to inherit the security setup at each application role level.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Security** under **Service Administration**.

3. On the Security page, click the Groups tab.
4. In the Groups region, search for a group and select it or select a group from the displayed list of groups.
5. In the group details region, click the Application Roles tab, and then click **Add Mapping**.
6. In Add Application Role Mappings, search for an application role and select it or select from the displayed list of application roles.

You can filter the display to view only the data or duty roles or view both role types.

7. Click **Save**.

## Copy Application Roles to a Group

As a security administrator, you can copy the application roles available from an existing group to another group.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Security** under **Service Administration**.
3. On the Security page, click the **Groups** tab.
4. In the Groups list, select the group to which you want to apply the application roles
5. On the Groups tab, click **Copy Role Mappings**.
6. In Copy Role Mappings From Another Group, search for a group that you want to copy roles from.
7. Click the roles in the Copy Roles area to select or deselect them, and then click **Copy**.
8. Click **Save**.

## Remove Application Roles from a Group

You can remove capabilities inherited by a group from the application roles mapped to it.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Security** under **Service Administration**.
3. On the Security page, under the Groups tab, select a group from the displayed list of groups or search for a group.
4. In the group details region, click the Application Roles tab.
5. Select one or more roles from the displayed list or search for application roles and select the applicable role.
6. Click **Remove Mapping**.
7. In Remove Role Mapping, click **Remove Mapping**.

## Create an Application Role While Mapping

While mapping application roles to a group, if you need an application role that isn't available in Oracle Fusion Data Intelligence, then you can create an application role.

The new role is mapped onto the specific group. You can map the new application role to other groups too. See [Add Application Roles to a Group](#).

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Security** under **Service Administration**.
3. On the Security page, under the Groups tab, select a group from the displayed list of groups or search for a group.
4. In the group details region, click the Application Roles tab, and then click **New Application Role**.
5. In Create a New Application Role , enter the application role name and specify the role type as data or duty.
6. Click **Save**.

## Upload and Download User Group Mappings

You can download user group mapping template files to help you set up user group mappings, and then upload the files to your environment.

### LiveLabs Sprint

You can download "Sample" or "Current" files. Sample provides a csv file with relevant headers to help familiarize you with the types of data you can expect. Current provides a list of current data assignments you can download to your test or production environments. Regardless of the file you download, you need to populate the USERNAME and GROUPNAME columns. Use the Operation column to make bulk changes to the user group mappings. Don't change any of the header names in the downloaded files. When you're done updating the files, you can upload them to your environment.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Uploads** under Application Administration.
3. On the Uploads page, click **Download File**, select **User Group Mapping**, and then select the type of file you want to download.
4. Open the csv file you downloaded and complete the fields as required:
  - USERNAME: The username in Oracle Identity Cloud Service.
  - GROUPNAME: The group name in Oracle Identity Cloud Service.
  - OPERATION: Enter ADD or leave it blank to add the user group mappings or enter REMOVE to remove the user group mappings.
5. When you're done updating the security file, save your changes.
6. On the Uploads page, click **Upload File** and then select the applicable file type.
7. Select the file you want to upload and click **Upload File**.

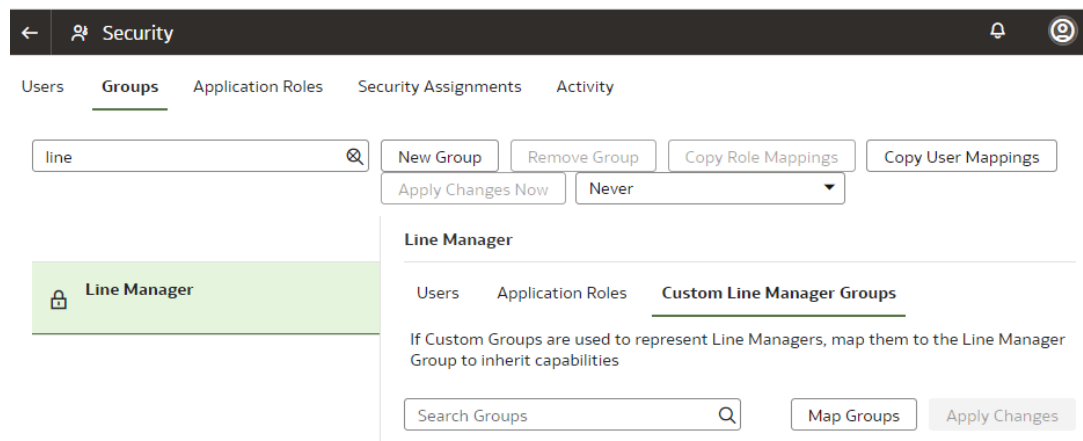
You can review the status of the upload on the **Uploads** tab.
8. Use **Actions** (⋮) next to the file name to perform actions on a specific upload file:
  - Click **Properties** to check the upload statistics.
  - Click **Download** to download the file you just uploaded in the event you want to upload the file again.
  - Click **Delete** if a file fails to process and you want to remove the file history.

## Enable Easy Data Access to People Leaders

As a security administrator, you can provide data access to people leaders such as line managers. This access enables line managers to create indepth analytics that influence and guide finance and human resource related decisions.

You can provide easy access by mapping the custom line manager groups from Oracle Fusion Cloud Applications to theprebuilt line manager group available in Oracle Fusion Data Intelligence. This mapping ensures that the prebuilt line manager group inherits the capabilities of the custom line manager groups.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Security** under **Service Administration**.
3. On the Security page, click the Groups tab, and then search for the prebuilt **Line Manager** group.



4. Select the prebuilt **Line Manager** group and click the **Custom Line Manager Groups** tab.
5. In the **Custom Line Manager Groups** tabbed section, click **Map Groups**.
6. In the Map Custom Line Manager Groups dialog, select the custom groups and click **Assign Group Mapping**.

## Map Custom Line Manager Groups

Q

	Group	Description
<input type="checkbox"/>	Accounts Payable Custom Group	
<input checked="" type="checkbox"/>	Accounts Payable Manager	
<input type="checkbox"/>	Accounts Payable Specialist	
<input type="checkbox"/>	Accounts Payable Supervisor	
<input checked="" type="checkbox"/>	Accounts Receivable Manager	
<input type="checkbox"/>	Accounts Receivable Specialist	

- In the **Custom Line Manager Groups** tabbed section, for a selected custom line manager group, click the Access Level dropdown arrow and select the appropriate access level such as **Author (edit capabilities)** or **Consumer (read-only)**.

← 👤 Security 🔔 🌐

Users
Groups
Application Roles
Security Assignments
Activity

🔒
Line Manager

Users
Application Roles
Custom Line Manager Groups

If Custom Groups are used to represent Line Managers, map them to the Line Manager Group to inherit capabilities

Group	Access Level
Accounts Payable Custom Group	Consumer (read only) ▼
	<div style="background-color: #e0f2f1; padding: 2px 5px; margin-bottom: 2px;">Consumer (read only)</div> <div style="padding: 2px 5px;">Author (edit capabilities)</div>

8. In the **Custom Line Manager Groups** tabbed section, click **Apply Changes**.

## Manage Application Roles

Application roles consist of duty roles for objects security and data roles for data access. You can create, update, and delete application roles and add or remove groups mapped to an application role.

You can map the ready-to use or custom application roles to groups to define the permissions associated with the group. You can configure a custom application role using the Security Configuration section on the Semantic Model Extensions page. See [Configure Data Security](#).

### Topics:

- [Create an Application Role](#)
- [Delete an Application Role](#)
- [Assign Groups to Application Roles](#)
- [Remove a Group Mapped to an Application Role](#)

## Create an Application Role

You can create custom duty and data roles to secure subject areas, front-end objects, and row-level data respectively when the predefined application roles don't meet your business needs.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Security** under **Service Administration**.
3. On the Security page, click the Application Roles tab and then click **New Application Role**.
4. In Create a New Application Role, enter the application role name and specify the role type as data or duty.
5. Click **Save**.

## Delete an Application Role

You can delete the custom application roles. Upon deletion of the custom application roles, Oracle Fusion Data Intelligence deletes the mappings to the groups.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Security** under **Service Administration**.
3. On the Security page, click the Application Roles tab.
4. Search for an application role or select from the displayed list of application roles.
5. Click **Remove Application Role**.
6. In the Delete Application Role? dialog, click **Delete Role**.

## Assign Groups to Application Roles

Use these instructions to map application roles to groups.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Security** under **Service Administration**.
3. On the Security page, click the Application Roles tab.
4. Search for an application role or select from the displayed list of application roles.
5. In the application role details region, click **Assign Groups**.
6. In Add Group Mappings, search for a group and select it or select from the displayed list of groups.
7. Click **Save**.

## Remove a Group Mapped to an Application Role

Use these instructions to remove a group mapped to an application role.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Security** under **Service Administration**.
3. On the Security page, click the Application Roles tab.
4. Search for an application role or select from the displayed list of application roles.
5. In the application role details region, select the check box for a displayed group or search for a group and select it, and then click **Remove Group**.
6. In the Remove Group Mapping? dialog, click **Remove Group**.

## Manage Data Access through Security Assignments

As a security administrator, you need to map data security assignments to users to enable data level access.

Use the Security Assignments tab on the Security page to search for the currently set up data security assignments. You may either search for all records or narrow your search to a specific security context, security value, or user. You can remove a security assignment that you had set up or add new security assignments to a user.

### Topics:

- [Create a Security Assignment](#)
- [Delete a Security Assignment](#)
- [Remove Users from a Security Assignment](#)
- [Manage Users for a Security Assignment](#)
- [Set Exclusion Rules for Security Assignments](#)
- [Update Security Assignments Automatically](#)

## Create a Security Assignment

Use these instructions to create a security assignment in a specific security context.

Security contexts are categories that contain values that you can secure a user for. For example, you can define which users have access to which "ledgers" or "departments". In this

example, "ledgers" and "departments" are security contexts. Within "ledgers", you can have "ledger A", "ledger B", or "ledger C" as values. You first select "ledger", then select a value such as "ledger A", and then select the users to secure for "ledger A". The selected users can access "ledger A".

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Security** under **Service Administration**.  
You see the Security page.
3. On the Security page, click the Security Assignments tab.  
You see all users who have been granted the security assignments in a specific security context.
4. Click **New Assignment**.
5. In New Security Assignment, under **Select Security Assignments**, select a security context, and then search for a security value or select from the displayed list. Move the selected security assignments to the column on the right.
6. Under **Select Users**, search for a user and select the user and move the user to the column on the right.  
Users are filtered based on the role associated with that context.
7. Click **Add to Cart** and then click **View Cart**.
8. In Security Assignments, click **Apply Assignments**.  
You can grant this security assignment to other users as required. Bulk assignments may take some time to process. See the Security Activity tab for details.

## Delete a Security Assignment

Use these instructions to delete a security assignment. When you delete a security assignment, Oracle Fusion Data Intelligence removes all users associated with the security assignment.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Security** under **Service Administration**.  
You see the Security page.
3. On the Security page, click the Security Assignments tab.
4. Select a security assignment from the displayed list of assignments or search for a security assignment and select it.
5. Click **Delete Assignment**.

## Remove Users from a Security Assignment

You can revoke the security assignment granted to one or more users.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Security** under **Service Administration**.  
You see the Security page.



3. On the Security page, click the Security Assignments tab.
4. Select a security assignment from the displayed list of assignments or search for a security assignment and select it.
5. In the security assignment details region, select the users from the displayed list of users or search for and select the users.
6. Click **Remove User**.
7. In Revoke User Assignment, click **Revoke Assignment**.

## Manage Users for a Security Assignment

As a security administrator, you can manage users for existing data security assignments. In the Manage Users dialog, you can revoke users for an existing assignment or add new users for that assignment.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Security** under **Service Administration**.  
You see the Security page.
3. On the Security page, click the Security Assignments tab.
4. Select a security assignment from the displayed list of assignments or search for a security assignment and select it.
5. In the security assignment details region, click **Manage Users**.
6. In Manage Users:
  - a. Under **Add User**, search for a user and select the user.
  - b. Under **User**, click the **Delete** icon to revoke the user from the assignment.
7. Click **Save**.

## Set Exclusion Rules for Security Assignments

You can set up data security to exclude access for specific users within a security context for specific security assignments.

For example, you can grant access to all security assignments but the business unit ABC. This enables you to have a single rule for a single user within a security context. You can also remove the indirectly derived security assignments of the specific user. Ensure that the users for whom you want to exclude assignments are members of a group related to the security context. You can automate the application of the security exclusion rules by downloading the `DataSecurityExclusionAssignments_csv.zip`, making changes, and then uploading it; see [Download and Upload Data Security Exclusion Rules](#).

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Security** under Service Administration.
3. On the Security page, click **Security Assignments**, and then click **Exclusion Rules**.
4. On the Set Exclusion Rules for Security Assignments page, select the security context such as Ledgers in **Security Context**, select a user to exclude security assignments in **Users**, and then in **Security Values**, select the assignments that you want to exclude from the selected user within the selected security context.

← Set Exclusion Rules for Security Assignments
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Exclude security assignments using a security context and users, then select the Assignments that needs to be excluded. Users must first be members of a group related to the context to receive an assignment. Cancel Save

**Security Context**  
 ⓘ Changing the context updates the users and assignments displayed below

**Users**  
 ⓘ Select user to exclude security assignments.

**Security Values (0 Selected)**  
 Select values from the selected security context to assign

No data to display.

No data to display.

>

5. Click **Save**.

## Update Security Assignments Automatically

As a security administrator, automate the updating of security assignments to effectively manage the regular security assignment changes in your organization.

If you want to automate the insertion and deletion of data in the format of USERNAME, SEC\_OBJ\_CODE, SEC\_OBJ\_MEMBER\_VAL, Operation (to add or to remove the mapping), then configure the changes in the security assignments to be updated automatically and regularly.

To ensure that the changes in security assignment are updated automatically, you must create a table for the OAX\_USER schema in Oracle Autonomous Data Warehouse associated with your Oracle Fusion Data Intelligence instance. Ensure that you name the table "CUSTOMER\_FAW\_CONTENT\_AUTOSYNC\_ASSIGNMENT". You must seed data into this table regularly with the timestamp in universal time (UTC) format in the "CREATION\_DATE" column of the table. The CREATION\_DATE column ensures that the same records aren't processed repeatedly and no record is missed. Oracle Fusion Data Intelligence periodically scans the synonym (2 hours once), pick up the values, and based on the "CREATION\_DATE" criteria, populates the FAW\_CONTENT\_AUTOSYNC\_ASSIGNMENT table in the OAX\$INFRA schema in Oracle Autonomous Data Warehouse. Later, Oracle Fusion Data Intelligence processes the data and uploads the security assignments as per the FAW\_CONTENT\_AUTOSYNC\_ASSIGNMENT table.

1. In Oracle Autonomous Data Warehouse associated with your Oracle Fusion Data Intelligence instance, create the CUSTOMER\_FAW\_CONTENT\_AUTOSYNC\_ASSIGNMENT table in OAX\_USER schema using the following script:

```
CREATE TABLE CUSTOMER_FAW_CONTENT_AUTOSYNC_ASSIGNMENT (
  "USERNAME"          VARCHAR2(256 CHAR),
  "SEC_OBJ_CODE"      VARCHAR2(256 CHAR),
  "SEC_OBJ_MEMBER_VAL" VARCHAR2(4000 CHAR),
  "OPERATION_TYPE"    VARCHAR2(65 CHAR),
  "CREATION_DATE"     TIMESTAMP(6)
);

-- Grant access from the schema OAX_USER
```

```
GRANT SELECT ON CUSTOMER_FAW_CONTENT_AUTOSYNC_ASSIGNMENT TO OAX$INFRA;
COMMIT;
```

2. In the CUSTOMER\_FAW\_CONTENT\_AUTOSYNC\_ASSIGNMENT table, specify the actual values for "USERNAME", "SEC\_OBJ\_CODE", "SEC\_OBJ\_MEMBER\_VAL", "OPERATION\_TYPE", and "CREATION\_DATE". For "OPERATION\_TYPE", enter "ADD" and enter the timestamp in "CREATION\_DATE" in "2024-02-21 12:34:56.789" format.

## Configure Permissions for Metadata and Front-End Objects

Configure the permissions for metadata objects such as subject areas and its elements and front-end objects such as key metrics and workbooks with the prebuilt or the custom-created duty roles.

You secure the subject areas and their elements through "Configure Object Permissions", a prebuilt single step. See [Configure Object Permissions](#).

For the front-end objects such as key metrics and workbooks, set the permissions individually for each object by adding the applicable duty role and the corresponding access.

## View Activity History

View all the security-related activities or filter them by object type and by date for security audit purposes.

The status icon next to each action shows whether it is in progress, in a warning state (if items in a bulk action failed), failed (and therefore incomplete), or completed successfully. You can also hover over error icons to read the full error message that might assist with troubleshooting.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Security** under **Service Administration**.

You see the Security page.

3. On the Security page, click the **History** tab.

You see all the activities by object type and date, by default. You can organize the display by sorting columns, searching for descriptive text, selecting a specific object type, or selecting the number of days from the drop-down lists.

## Manage Uploads and Downloads

As the cloud account administrator with security administrator or functional administrator or service administrator role, you can upload and download data to your data warehouse using the Upload tile on the Console.

### Topics:

- [About Uploading and Downloading Your Data](#)
- [Upload and Download Data Security Assignments](#)
- [Upload and Download Financial Categories](#)
- [Upload and Download Financial Category Assignments](#)

- [Upload and Download User Group Mappings](#)
- [Download and Upload Area of Responsibility Data](#)
- [Download and Upload Custom Job Roles Mappings](#)
- [Download and Upload Data Security Exclusion Rules](#)

## About Uploading and Downloading Your Data

The Upload tile in the Console enables the cloud account administrators to upload and download the following:

- Data security assignments
- Financial categories
- Financial category assignments
- User to group associations

You can upload and download only csv files.

## Upload and Download Data Security Assignments

You can download security assignment template files to help you set up security assignments, and then upload the files to your environment.

You can download **Sample** or **Current** files. Sample provides a csv file with relevant headers to help familiarize you with the types of data you can expect. Current provides a list of current data assignments you can download to your test or production environments. If you need to filter your options to show specific data security contexts, use the Filter option. Regardless of the file you download, you need to populate these columns: USERNAME, SEC\_OBJ\_CODE, and SEC\_OBI\_MEMBER\_VAL. Don't change any of the header names in the downloaded files. When you're done updating the files, you can upload them to your environment.

You can also download data security assignment files using the **Download File** button available from the Security Assignments tab on the Security page. In this case, you don't need to specifically select **Data Security Assignments**. Click **Download File**, select the type of file you want to download, and proceed with the remaining steps. You can also upload data security assignment files using the **Upload** button available from the Security Assignments tab on the Security page. In this case, you don't need to specifically select **Data Security Assignments**. Click **Upload** and then proceed with the remaining steps.

### Note:

**Replace existing configuration settings** deletes existing data security assignments.

Ensure that these prerequisites are in place:

- Security assignment has 1:1 mapping with application roles.
- Application roles are assigned to groups.
- Users who are being assigned to a security context are part of the group that's linked to the security context through the application roles.

1. Sign in to your service.

2. In Oracle Fusion Data Intelligence **Console**, click **Uploads** under Application Administration.
3. On the Uploads page, click **Download File**, select **Data Security Assignments** and then select the type of file you want to download.
4. Open the csv file you downloaded and complete the fields as required:
  - **USERNAME**: The user name and user display name.
  - **SEC\_OBJ\_CODE**: The object code for which you're adding the data security assignment.
  - **SEC\_OBJ\_MEMBER\_VAL**: The security assignment member for each context. See [Security Object Tables](#).
5. When you're done updating the file, save your changes.
6. On the Uploads page, click **Upload File** and the applicable file type.
7. Select whether you want to **Merge to the existing settings** or **Replace existing configuration settings**.
8. Select the file you want to upload and click **Upload File**.  
You can review the status of the upload on the **Uploads** tab.
9. Use **Actions** (⋮) next to the file name to perform actions on a specific upload file:
  - Click **Properties** to check the upload statistics.
  - Click **Download** to download the file you just uploaded in the event you want to upload the file again.
  - Click **Delete** if a file fails to process and you want to remove the file history.

## Security Object Tables

Use these security object codes and associated SQL to access the assignment member for each context.

### Security Objects

**Table 6-1 Security Object Codes**

Security Object	Code
AP Business Units	OA4F_SEC_FIN_AP_BUSINESSUNIT_LIST
AR Business Units	OA4F_SEC_FIN_AR_BUSINESSUNIT_LIST
Cost Organizations	OA4F_SEC_CST_COST_ORG_LIST
FA Asset Book	OA4F_SEC_FIN_FA_ASSET_BOOK_LIST
HCM Business Units	OA4F_SEC_HCM_BUSINESSUNIT_LIST
HCM Country List	OA4F_SEC_HCM_COUNTRY_LIST
HCM Departments	OA4F_SEC_HCM_DEPARTMENT_LIST
HCM Legal Employers	OA4F_SEC_HCM_LEGAL_EMPLOYER_LIST
HCM Show Self Record	OA4F_SEC_HCM_SEE_SELF_RECORD
Inventory Business Units	OA4F_SEC_INV_BUSINESSUNIT_LIST
Inventory Organizations	OA4F_SEC_INV_ORG_TRANSACTIONS_LIST
Ledgers	OA4F_SEC_FIN_LEDGER_LIST
Order Management Business Units	OA4F_SEC_OM_BUSINESS_UNIT_LIST

**Table 6-1 (Cont.) Security Object Codes**

Security Object	Code
Project Business Units	OA4F_SEC_PPM_PROJECT_BUSINESSUNIT_LIST
Project Expenditure Business Units	OA4F_SEC_PPM_EXPENDITURE_BUSINESSUNIT_LIST
Project Organizations	OA4F_SEC_PPM_PROJECT_ORGANIZATION_LIST
Requisition Business Units	OA4F_SEC_PROC_REQ_BUSINESSUNIT_LIST
Spend Procurement Business Units	OA4F_SEC_PROC_SPEND_PRC_BUSINESSUNIT_LIST

**Assignment Member SQL****Table 6-2 Assignment Member SQL**

Security Object Code	SQL Code
OA4F_SEC_CST_COST_ORG_LIST	<pre> SELECT DISTINCT TL.ORGANIZATION_NAME AS NAME, TL.ORGANIZATION_ID AS VALUE FROM DW_CST_COST_ORG_BOOKS_D D, DW_INTERNAL_ORG_D_TL TL WHERE D.COST_ORG_ID = TL.ORGANIZATION_ID AND TL.LANGUAGE = (SELECT PARAMETER_VALUE FROM DW_CONTENT_PARAM_CONFIG WHERE PARAMETER_CODE='PARAM_GLOBAL_FAW_LANGUAGES') AND D.COST_ORG_ID &lt;&gt;-99999 </pre>

Table 6-2 (Cont.) Assignment Member SQL

Security Object Code	SQL Code
OA4F_SEC_FIN_AP_BUSINESSUNIT_LIST	<pre>SELECT TL.ORGANIZATION_NAME AS NAME, TL.ORGANIZATION_ID AS VALUE FROM DW_INTERNAL_ORG_D D, DW_INTERNAL_ORG_D_TL TL WHERE (D.PAYABLES_INVOICING_BU_FLAG = 'Y' OR D.PAYABLES_PAYMENT_BU_FLAG = 'Y') AND D.ORGANIZATION_ID = TL.ORGANIZATION_ID AND TL.LANGUAGE = (SELECT PARAMETER_VALUE FROM DW_CONTENT_PARAM_CONFIG WHERE PARAMETER_CODE='PARAM_GLOBAL_FAW_LANG UAGES') AND D.ORGANIZATION_ID &lt;&gt; -99999</pre>
OA4F_SEC_FIN_AR_BUSINESSUNIT_LIST	<pre>SELECT TL.ORGANIZATION_NAME AS NAME, TL.ORGANIZATION_ID AS VALUE FROM DW_INTERNAL_ORG_D D, DW_INTERNAL_ORG_D_TL TL WHERE (D.BILLING_REVENUE_MNG_BU_FLAG = 'Y' OR D.CUSTOMER_PAYMENTS_BU_FLAG = 'Y') AND D.ORGANIZATION_ID = TL.ORGANIZATION_ID AND TL.LANGUAGE = (SELECT PARAMETER_VALUE FROM DW_CONTENT_PARAM_CONFIG WHERE PARAMETER_CODE='PARAM_GLOBAL_FAW_LANG UAGES') AND D.ORGANIZATION_ID &lt;&gt; -99999</pre>
OA4F_SEC_FIN_FA_ASSET_BOOK_LIST	<pre>SELECT BOOK_TYPE_CODE AS name, BOOK_TYPE_CODE AS value FROM DW_FA_MC_BOOK_CONTROLS_D WHERE MC_FLAG = 'N'</pre>

Table 6-2 (Cont.) Assignment Member SQL

Security Object Code	SQL Code
OA4F_SEC_FIN_LEDGER_LIST	<pre>SELECT ledger.ledger_name AS name,            ledger.ledger_id AS value FROM dw_ledger_d ledger WHERE ledger.ledger_id &lt;&gt; - 99999</pre>
OA4F_SEC_HCM_BUSINESSUNIT_LIST	<pre>SELECT TL.BUSINESS_UNIT_NAME AS NAME, TL.BUSINESS_UNIT_ID AS VALUE FROM DW_BUSINESS_UNIT_D_TL TL WHERE TL.LANGUAGE = (SELECT PARAMETER_VALUE FROM DW_CONTENT_PARAM_CONFIG WHERE PARAMETER_CODE='PARAM_GLOBAL_FAW_LANG UAGES')</pre>
OA4F_SEC_HCM_COUNTRY_LIST	<pre>SELECT TL.COUNTRY_NAME AS NAME, TL.COUNTRY AS VALUE FROM DW_COUNTRY_D_TL TL WHERE TL.LANGUAGE = (SELECT PARAMETER_VALUE FROM DW_CONTENT_PARAM_CONFIG WHERE PARAMETER_CODE='PARAM_GLOBAL_FAW_LANG UAGES')</pre>
OA4F_SEC_HCM_DEPARTMENT_LIST	<pre>SELECT TL.BUSINESS_UNIT_NAME AS NAME, TL.BUSINESS_UNIT_ID AS VALUE FROM DW_BUSINESS_UNIT_D_TL TL WHERE TL.LANGUAGE = (SELECT PARAMETER_VALUE FROM DW_CONTENT_PARAM_CONFIG WHERE PARAMETER_CODE='PARAM_GLOBAL_FAW_LANG UAGES')</pre>
OA4F_SEC_HCM_LEGAL_EMPLOYER_LIST	<pre>SELECT TL.LEGAL_EMPLOYER_NAME AS NAME, TL.LEGAL_EMPLOYER_ID AS VALUE FROM DW_LEGAL_EMPLOYER_D_TL TL WHERE LANGUAGE = (SELECT PARAMETER_VALUE FROM DW_CONTENT_PARAM_CONFIG WHERE PARAMETER_CODE='PARAM_GLOBAL_FAW_LANG UAGES')</pre>



Table 6-2 (Cont.) Assignment Member SQL

Security Object Code	SQL Code
OA4F_SEC_HCM_SEE_SELF_RECORD	<pre>SELECT YESNO_LKP_CODE AS VALUE,        NAME              AS NAME FROM DW_YESNO_LKP_TL WHERE CODE_TYPE LIKE 'FA_YESNO' AND LANGUAGE       = (SELECT PARAMETER_VALUE FROM DW_CONTENT_PARAM_CONFIG WHERE PARAMETER_CODE='PARAM_GLOBAL_FAW_LANG UAGES') AND YESNO_LKP_CODE IN ( 'NO')</pre>
OA4F_SEC_INV_BUSINESSUNIT_LIST	<pre>SELECT TL.BUSINESS_UNIT_NAME AS NAME, TL.BUSINESS_UNIT_ID AS VALUE FROM DW_BUSINESS_UNIT_D_TL TL WHERE TL.BUSINESS_UNIT_ID IN (SELECT DISTINCT(INV_BUSINESS_UNIT_ID) FROM DW_INV_ORGANIZATION_D) AND TL.LANGUAGE = (SELECT PARAMETER_VALUE FROM DW_CONTENT_PARAM_CONFIG WHERE PARAMETER_CODE='PARAM_GLOBAL_FAW_LANG UAGES') AND TL.BUSINESS_UNIT_ID &lt;&gt; '-99999'</pre>
OA4F_SEC_INV_ORG_TRANSACTIONS_LIST	<pre>SELECT INV_ORGANIZATION_NAME AS NAME, INV_ORGANIZATION_ID AS VALUE FROM DW_INV_ORGANIZATION_D_TL TL WHERE TL.LANGUAGE = (SELECT PARAMETER_VALUE FROM DW_CONTENT_PARAM_CONFIG WHERE PARAMETER_CODE='PARAM_GLOBAL_FAW_LANG UAGES') AND TL.INV_ORGANIZATION_ID &lt;&gt; '-99999'</pre>

Table 6-2 (Cont.) Assignment Member SQL

Security Object Code	SQL Code
OA4F_SEC_OM_BUSINESS_UNIT_LIST	<pre> SELECT TL.BUSINESS_UNIT_NAME AS NAME, TL.BUSINESS_UNIT_ID AS VALUE FROM DW_BUSINESS_UNIT_D_TL TL WHERE TL.LANGUAGE = (SELECT PARAMETER_VALUE FROM DW_CONTENT_PARAM_CONFIG WHERE PARAMETER_CODE='PARAM_GLOBAL_FAW_LANG UAGES') AND TL.BUSINESS_UNIT_ID&lt;&gt;-99999 </pre>
OA4F_SEC_PPM_EXPENDITURE_BUSINESSUNIT_LIST	<pre> SELECT TL.ORGANIZATION_NAME AS NAME, TL.ORGANIZATION_ID AS VALUE FROM DW_INTERNAL_ORG_D D, DW_INTERNAL_ORG_D_TL TL WHERE (D.PROJECT_ACCOUNTING_BU_FLAG = 'Y' AND D.BUSINESS_UNIT_FLAG = 'Y') AND D.ORGANIZATION_ID = TL.ORGANIZATION_ID AND TL.LANGUAGE = USERENV('LANG') AND D.ORGANIZATION_ID&lt;&gt;-99999 </pre>
OA4F_SEC_PPM_PROJECT_BUSINESSUNIT_LIST	<pre> SELECT TL.ORGANIZATION_NAME AS NAME, TL.ORGANIZATION_ID AS VALUE FROM DW_INTERNAL_ORG_D D, DW_INTERNAL_ORG_D_TL TL WHERE (D.PROJECT_ACCOUNTING_BU_FLAG = 'Y' AND D.BUSINESS_UNIT_FLAG = 'Y') AND D.ORGANIZATION_ID = TL.ORGANIZATION_ID AND TL.LANGUAGE = USERENV('LANG') AND D.ORGANIZATION_ID&lt;&gt;-99999 </pre>

Table 6-2 (Cont.) Assignment Member SQL

Security Object Code	SQL Code
OA4F_SEC_PPM_PROJECT_ORGANIZATION_LIST	<pre>SELECT TL.ORGANIZATION_NAME AS NAME, TL.ORGANIZATION_ID AS VALUE FROM DW_INTERNAL_ORG_D D, DW_INTERNAL_ORG_D_TL TL WHERE (D.PROJECT_ORGANIZATION_FLAG = 'Y' ) AND D.ORGANIZATION_ID = TL.ORGANIZATION_ID AND TL.LANGUAGE = USERENV('LANG') AND D.ORGANIZATION_ID&lt;&gt;-99999</pre>
OA4F_SEC_PROC_REQ_BUSINESSUNIT_LIST	<pre>SELECT TL.ORGANIZATION_NAME AS NAME, TL.ORGANIZATION_ID AS VALUE FROM DW_INTERNAL_ORG_D D, DW_INTERNAL_ORG_D_TL TL WHERE (D.REQUISITION_BU_FLAG = 'Y' AND D.BUSINESS_UNIT_FLAG = 'Y') AND D.ORGANIZATION_ID = TL.ORGANIZATION_ID AND TL.LANGUAGE = (SELECT PARAMETER_VALUE FROM DW_CONTENT_PARAM_CONFIG WHERE PARAMETER_CODE='PARAM_GLOBAL_FAW_LANG UAGES') AND D.ORGANIZATION_ID&lt;&gt;-99999</pre>

**Table 6-2 (Cont.) Assignment Member SQL**

Security Object Code	SQL Code
OA4F_SEC_PROC_SPEND_PRC_BUSINESSUNIT_LIST	<pre> SELECT TL.ORGANIZATION_NAME AS NAME, TL.ORGANIZATION_ID AS VALUE FROM DW_INTERNAL_ORG_D D, DW_INTERNAL_ORG_D_TL TL WHERE (D.PROCUREMENT_BU_FLAG = 'Y' AND D.BUSINESS_UNIT_FLAG = 'Y') AND D.ORGANIZATION_ID = TL.ORGANIZATION_ID AND TL.LANGUAGE = (SELECT PARAMETER_VALUE FROM DW_CONTENT_PARAM_CONFIG WHERE PARAMETER_CODE='PARAM_GLOBAL_FAW_LANGUAGES') AND D.ORGANIZATION_ID&lt;&gt;-99999 </pre>

## Upload and Download Financial Categories

You can download financial category template files to help you set up financial categories, and then upload the files to your environment.

You can download **Sample** or **Current** files. Sample provides a csv file with relevant headers to help familiarize you with the types of data you can expect. Current provides a list of current data assignments you can download to your test or production environments. Regardless of the file you download, you need to populate the `FINANCIAL_CATEGORY` column. Don't change any of the header names in the downloaded files. When you're done updating the files, you can upload them to your environment.



### Note:

**Replace existing configuration settings** deletes existing data security assignments.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Uploads** under Application Administration.  
You see the Uploads page.
3. On the Uploads page, click **Download File**, select **Financial Categories** and then select the type of file you want to download.
4. Open the csv file you downloaded and populate the fields as required:
  - `FINANCIAL_CATEGORY`: The financial category code.
5. When you're done updating the file, save your changes.

6. On the Uploads page, click **Upload File** and the applicable file type.
7. Select whether you want to **Merge to the existing settings** or **Replace existing configuration settings**.
8. Select the file you want to upload and click **Upload File**.  
You can review the status of the upload on the **Uploads** tab.
9. Use **Actions** (⋮) next to the file name to perform actions on a specific upload file:
  - Click **Properties** to check the upload statistics.
  - Click **Download** to download the file you just uploaded in the event you want to upload the file again.
  - Click **Delete** if a file fails to process and you want to remove the file history.

## Upload and Download Financial Category Assignments

You can download financial category assignment template files to help you set up financial categories, and then upload the files to your environment.

You can download **Sample** or **Current** files. Sample provides a csv file with relevant headers to help familiarize you with the types of data you can expect. Current provides a list of current data assignments you can download to your test or production environments. Prior to download a file, you must select the segment combination you want to use to map your financial categories in the Select Columns dialog. The list prepopulates the segments defined in your chart of accounts that are BI enabled. Regardless of the file you download, you need to populate the FINANCIAL\_CATEGORY column. Don't change any of the header names in the downloaded files. When you're done updating the files, you can upload them to your environment.

### Note:

**Replace existing configuration settings** deletes existing data security assignments.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Uploads** under Application Administration.  
You see the Uploads page.
3. On the Uploads page, click **Download File**, select **Financial Category Assignments** and then select the type of file you want to download.
4. Open the csv file you downloaded and populate the fields as required:
  - CHART\_OF\_ACCOUNTS – Name of your chart of accounts.
  - Actual segment values.
  - FINANCIAL\_CATEGORY: The financial category code. This can be a predefined category or a custom category defined using the Financial Categories upload option.
5. When you're done updating the file, save your changes.
6. On the Uploads page, click **Upload File** and the applicable file type.

7. Select whether you want to **Merge to the existing settings** or **Replace existing configuration settings**.

 **Note:**

If you want to change the segment combination for your financial category definition, then ensure to provide the data for all chart of accounts and use the replace option. The data is completely replaced. Different segment combinations for different chart of accounts is NOT supported.

8. Select the file you want to upload and click **Upload File**.  
You can review the status of the upload on the **Uploads** tab.
9. Use **Actions** (⋮) next to the file name to perform actions on a specific upload file:
  - Click **Properties** to check the upload statistics.
  - Click **Download** to download the file you just uploaded in the event you want to upload the file again.
  - Click **Delete** if a file fails to process and you want to remove the file history.

## Upload and Download User Group Mappings

You can download user group mapping template files to help you set up user group mappings, and then upload the files to your environment.

 [LiveLabs Sprint](#)

You can download "Sample" or "Current" files. Sample provides a csv file with relevant headers to help familiarize you with the types of data you can expect. Current provides a list of current data assignments you can download to your test or production environments. Regardless of the file you download, you need to populate the USERNAME and GROUPNAME columns. Use the Operation column to make bulk changes to the user group mappings. Don't change any of the header names in the downloaded files. When you're done updating the files, you can upload them to your environment.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Uploads** under Application Administration.
3. On the Uploads page, click **Download File**, select **User Group Mapping**, and then select the type of file you want to download.
4. Open the csv file you downloaded and complete the fields as required:
  - USERNAME: The username in Oracle Identity Cloud Service.
  - GROUPNAME: The group name in Oracle Identity Cloud Service.
  - OPERATION: Enter ADD or leave it blank to add the user group mappings or enter REMOVE to remove the user group mappings.
5. When you're done updating the security file, save your changes.
6. On the Uploads page, click **Upload File** and then select the applicable file type.
7. Select the file you want to upload and click **Upload File**.  
You can review the status of the upload on the **Uploads** tab.

8. Use **Actions** (⋮) next to the file name to perform actions on a specific upload file:
  - Click **Properties** to check the upload statistics.
  - Click **Download** to download the file you just uploaded in the event you want to upload the file again.
  - Click **Delete** if a file fails to process and you want to remove the file history.

## Download and Upload Area of Responsibility Data

If you use Oracle Fusion HCM Analytics, then you can manage the area of responsibility (AOR) data in the Oracle Autonomous Data Warehouse associated with the Oracle Fusion Data Intelligence instance for security setups.

You can use the AOR-related data in custom security setups and for mass assignment. You can download the latest AOR data security assignment files to make changes to the existing data and upload it back. This enables you to avoid using other methods to get the AOR data into Oracle Autonomous Data Warehouse.

The downloaded AOR data security assignment file supports only the prebuilt security contexts. For custom contexts, you can utilize the AOR data available in the DW\_ASG\_RESPONSIBILITY\_D table while configuring custom security. The format of the AOR file that you download is different from the data security assignment file that you can upload, hence you must copy the required columns from the AOR file to the security assignment file prior to uploading it as the AOR-related security assignment file. For example, the AOR file has additional columns like AOR TYPE, which is for your reference only.

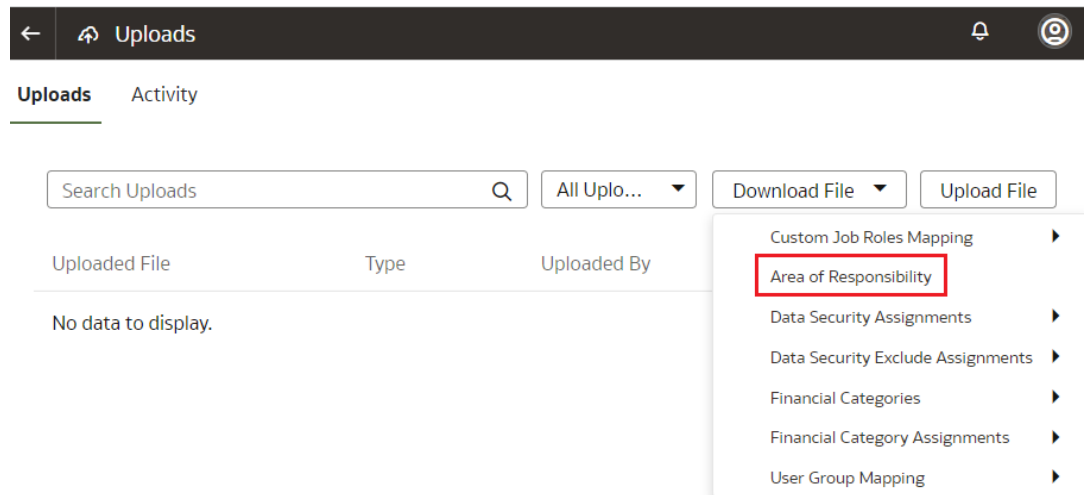
When you run the data pipeline for the Area of Responsibility functional area after activating it, Oracle Fusion Data Intelligence loads the AOR-related data from the DW\_ASG\_RESPONSIBILITY\_D view, transforms it, and uses this data to populate the AOR file. The data in the AOR-related downloadable file is formatted as per the current data security assignment .csv file and pertains to the prebuilt security contexts of business unit, country, legal entity, and organization.

After uploading the security assignments data to Oracle Autonomous Data Warehouse, if the AOR assignment ends, then you must download the AOR and data security assignment files, compare mismatches between the two files, and take necessary actions of adding or removing contexts from the data security context and upload the correct data as and when required. The AOR file has only the current effective records; hence any end-dated record won't be available in this file.

 **Note:**

**Replace existing configuration settings** deletes existing data security assignments.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Uploads** under Application Administration.
3. On the Uploads page, click **Download File** and select **Area of Responsibility**.



4. Unzip the DataSecurityAssignmentAOR\_csv.zip file you downloaded and edit the csv file as required.

When you are done updating the file, save your changes.

5. On the Uploads page, click **Upload File** and select **Data Security Assignments** in **File Type**.

### Upload a File

File Type

Merge to the existing settings  
 Replace existing configuration settings

Upload a .csv file

**Drag and Drop**

Select a file or drop one here.

6. Select whether you want to **Merge to the existing settings** or **Replace existing configuration settings**.
7. Select the file you want to upload and click **Upload File**.  
You can review the status of the upload on the Uploads tab.
8. Use **Actions** (⋮) next to the file name to perform actions on a specific upload file:
  - Click **Properties** to check the upload statistics.
  - Click **Download** to download the file you just uploaded in the event you want to upload the file again.
  - Click **Delete** if a file fails to process and you want to remove the file history.



## Download and Upload Data Security Exclusion Rules

If you want to automate the application of the security exclusion rules, then download the file to make the changes and upload it.



### Note:

**Replace existing configuration settings** deletes existing data security assignments.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Uploads** under Application Administration.
3. On the Uploads page, click **Download File** and select **Data Security Exclude Assignments**, and then select the sample or current type of file that you want to download.

The screenshot shows the 'Uploads' page in the Oracle Fusion Data Intelligence Console. At the top, there is a navigation bar with a back arrow, a refresh icon, and the text 'Uploads'. Below this, there are tabs for 'Uploads' and 'Activity'. A search bar labeled 'Search Uploads' is present, along with a dropdown menu for 'All Uplo...' and two buttons: 'Download File' and 'Upload File'. The 'Download File' dropdown menu is open, displaying a list of file types: Custom Job Roles Mapping, Area of Responsibility, Data Security Assignments, **Data Security Exclude Assignments** (highlighted with a red box), Financial Categories, Financial Category Assignments, and User Group Mapping. Below the dropdown, a table with columns 'Uploaded File', 'Type', and 'Uploaded By' is shown, containing the text 'No data to display.'

4. Unzip the DataSecurityExclusionAssignments\_csv.zip file you downloaded and edit the csv file as required.  
When you're done updating the file, save your changes.
5. On the Uploads page, click **Upload File** and select **Data Security Exclude Assignments** in **File Type**.

## Upload a File

**File Type**

Merge to the existing settings  
 Replace existing configuration settings

Upload a .csv file

**Drag and Drop**  
Select a file or drop one here.

6. Select whether you want to **Merge to the existing settings** or **Replace existing configuration settings**.
7. Select the file you want to upload and click **Upload File**.  
You can review the status of the upload on the Uploads tab.
8. Use **Actions** (⋮) next to the file name to perform actions on a specific upload file:
  - Click **Properties** to check the upload statistics.
  - Click **Download** to download the file you just uploaded in the event you want to upload the file again.
  - Click **Delete** if a file fails to process and you want to remove the file history.

## Download and Upload Custom Job Roles Mappings

If you've custom job roles in Oracle Fusion Cloud Applications and want to use them as data and duty roles in Oracle Fusion ERP Analytics, then you can map the job roles to the data and duty roles, and upload the mappings.

Oracle Fusion Data Intelligence uses the mappings to apply the security assignments to the applicable Oracle Fusion Cloud Applications users in Oracle Fusion Data Intelligence during the automatic synchronization of the data security assignment configurations between Oracle Fusion Cloud Applications and Oracle Fusion Data Intelligence.

During the next data pipeline run, Oracle Fusion Data Intelligence applies this mappings.

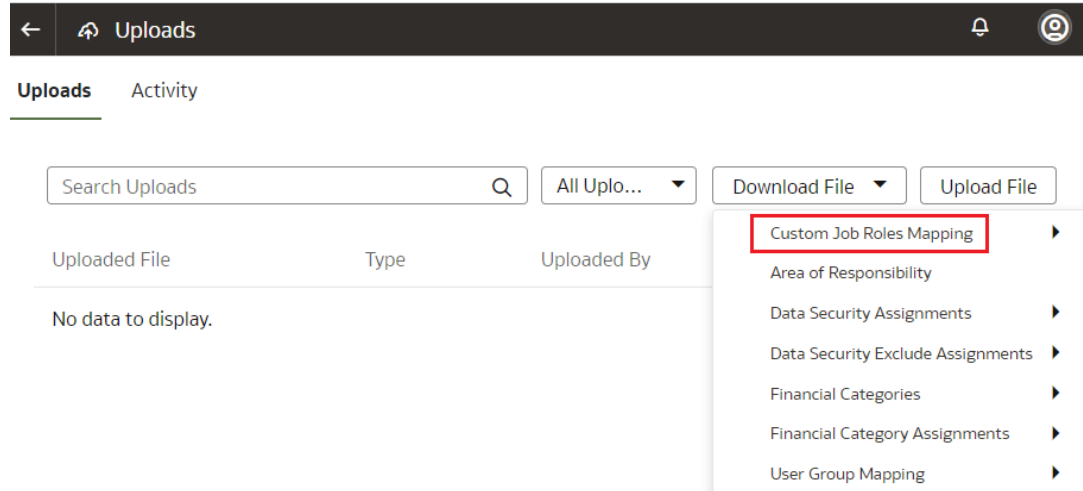


### Note:

**Replace existing configuration settings** deletes the existing custom role mappings.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Uploads** under Application Administration.

- On the Uploads page, click **Download File** and select **Custom Job Roles Mapping**, and then select the sample or current type of file that you want to download.



- Unzip the CustomRoleMapping\_csv file you downloaded and create the mapping by entering the Oracle Fusion Cloud Applications job role in the FA\_JOB\_ROLE column and a corresponding Oracle Fusion Data Intelligence data or duty role in the FAW\_ROLE column.

When you're done updating the file, save your changes.

- On the Uploads page, click **Upload File** and select **Custom Job Roles Mapping** in **File Type**.

### Upload a File

**File Type** Custom Job Roles Mapping ▼

Merge to the existing settings  
 Replace existing configuration settings

Upload a .csv file

**Drag and Drop**  
Select a file or drop one here.

- Select whether you want to **Merge to the existing settings** or **Replace existing configuration settings**.
- Select the file you want to upload and click **Upload File**.  
You can review the status of the upload on the Uploads tab.
- Use **Actions** (⋮) next to the file name to perform actions on a specific upload file:

- Click **Properties** to check the upload statistics.
- Click **Download** to download the file you just uploaded in the event you want to upload the file again.
- Click **Delete** if a file fails to process and you want to remove the file history.

## Set Up Custom Security

You can set up custom security to meet your business requirements.

Setting up custom security involves:

- Creation of job-specific custom groups. As a security administrator, you can perform user-group management if you've the User Administrator role in Oracle Identity Cloud Service. See [Managing Oracle Identity Cloud Service Users and Groups in the Oracle Cloud Infrastructure Console](#).
- Creation of custom duty and data roles. See [Create an Application Role](#).
- Mapping of custom application roles to either the predefined or custom job-specific groups. See [Add Application Roles to a Group](#) and [Assign Groups to Application Roles](#).
- Configure the custom application roles. See [Custom Security in Fusion Data Intelligence](#). Ensure that you're signed into Cloud Customer Connect prior to viewing this document.

# 7

## Customize Oracle Fusion Data Intelligence

You can customize the semantic model and groups to extend it for your business requirements.

As a modeler or modeler administrator, you can customize your semantic model. Customization enables you to make the data that you moved into the analytics warehouse more useful for reporting. As a security administrator, you can add security configurations to secure the subject areas and data with prebuilt and custom duty and data type of application roles.

### Topics:

- [About Semantic Model Customization](#)
- [About Recommendations and Tips to Extend the Semantic Model](#)
- [Create a Branch](#)
- [Edit a Branch](#)
- [Add a Step to a Branch](#)
- [Edit or Delete a Branch Step](#)
- [Reapply a Branch Step](#)
- [Disable and Enable the Disabled Steps](#)
- [Copy Steps from One Branch to Another](#)
- [View Details of Failed Branch Steps](#)
- [Merge the Customization Branches with the Main Branch](#)
- [Reorder Steps of Customization Branches](#)
- [Delete a Main Branch Step](#)
- [Tag the Main Branch's Steps](#)
- [Add Security Configurations](#)
- [View Activity History of Semantic Model Extensions](#)
- [Publish the Model](#)
- [Load Customization Data to the Autonomous Data Warehouse](#)
- [Promote Your Customizations to the Production Environment](#)
- [View Promotion History](#)
- [Republish Your Customizations](#)
- [Merge External Applications](#)

### About Semantic Model Customization

You can customize the semantic model to extend it for your business requirements. You extend the semantic model to make the data that you moved into the warehouse more useful for reporting.

You customize your semantic model in the non-production environments such as development or test by creating branches and adding steps to those branches. You use a branch or version to publish your changes to the model. You can apply the model from the branch to a local service instance for testing. When the changes are correct, you can merge that branch with the main branch. You can merge multiple branches with the main branch over time. When you have a set of changes finalized, you can version the main branch and promote that branch to the production environment. After promoting the customizations to the production environment, you can't directly add further customizations to the semantic model in the production environment.

You can copy the steps from the main branch, edit them directly, and later merge them with the main branch. However, you must ensure not to perform two or multiple levels of copies. For example, you must not copy steps from the main branch to another branch, then copy the steps over to yet another branch, and then merge the second branch with the main branch.

You can customize the model by extending prebuilt dimensions with additional attributes from another data source, by adding a fact to an existing subject area, and by reorganizing the prebuilt subject areas to create a new subject area to name a few. If you've merged an external application, then note that both external semantic model and semantic model extensions can co exist. On the Publish Model page, select "Yes" if you want the external semantic model to be included.

The semantic model consists of these components:

- Oracle Content: This is the base model provided by Oracle. Your customizations are layered on this.
- System Extensions: Your descriptive flexfield and data augmentation changes are available in this component. See [View Activity History of Semantic Model Extensions](#) to know about the scenarios in which Oracle Fusion Data Intelligence applies the system extensions.
- User Extensions: Your customization branches and versions are available in this component.
- Security Configurations: You can secure the objects of all the other components against the application roles in this component.

From release Platform 23.R4 onwards, Oracle Fusion Data Intelligence periodically evaluates the customizations and sends notifications to the users with Modeler Administrator and Modeler privileges to correct errors and warnings in branches and steps as soon as possible to prevent errors during patching. If these errors aren't fixed and a patch is initiated (or a mandatory patch is auto-applied), then patching may encounter issues. In that case, customizations that haven't been merged to the main branch are removed and the factory semantic model is upgraded. You must reapply the applicable customizations after the patching is complete.

### **Learn About the New Semantic Model Extensibility Experience**

A new set of wizards are available for you to create semantic model extensions. These wizards will replace the existing wizards in a future release. With the new wizards, you can create extensions with objects created using the merged external application. For this reason, the External Applications is the second layer to be applied and other options are applied subsequently. If you've already merged an external application, then you can create extensions with wizards as well. Though you may choose not to in order to keep all changes in the external semantic model. None of your customizations are lost as a result of this change in order and no reimplementations is necessary.

You can schedule when to switch to the new wizards after learning about it. When you switch to the new wizards, Oracle will migrate your current customizations to the new framework. See [About Migrating to the Enhanced Semantic Model Extension Framework](#).

The new user interface provides a modeler-centric view of the data model. Here is a comparison:

Existing but soon to be replaced	New
Action centric view.	Model centric view.
Steps done one-by-one but are independent of each other.	Related steps are grouped together making it easier to complete a fully consistent unit of work.
Has the concept of branches that can contain steps that are unrelated.	Has the concept of a sandbox that can contain fully formed dimensional models or “stars”. All objects within a star are related.
No graphical view of the model.	Complete graphical view of each star that shows the ready-to-use and custom objects.
Publish branches to test. Merge to main when completed.	Publish sandbox to test, merge to main when completed.
Customization steps are disconnected. Different steps done on the same object can override each other in different branches.	All customizations done to an object are visible together. You see the result of all operations at any time.

As a modeler, there are generally three types of customizations you can do:

- Add or update objects, attributes, joins, and calculations.
- Change how objects are presented to the user such as change subject areas.
- Create variables to control behaviour of sessions and queries.

All other complexities and allowed operations are abstracted and done by the wizards. Operations of each type are possible with these new wizards and connected steps are done together. The key benefit is better usability and understanding of the model and customizations. Another key benefit is better performance and consistency of the semantic model. In the current wizards, each step is compiled and applied one at a time. In the new framework, the entire sandbox is compiled and applied, which results in a much faster time to have all changes available for reporting.

The new semantic model extensibility capabilities enable you to create customizations in a sandbox. For each sandbox, you can perform these actions:

- Manage Subject Areas - Create a new Subject Area or modify an existing one that you created earlier.
- Manage Logical Star - create a new or modify an existing logical star. You start by creating a fact, then add dimensions, and then joins. You modify an existing logical star by adding dimensions, attributes, and other tables. You can add dimensions to existing ready-to-use facts while creating a new logical star. You can create many logical stars.
- Manage variables - similar to adding session variables in the existing capability for the semantic model extension.

After you create your sandbox, you merge it with the main sandbox and then publish the merged main sandbox in the non-production environments such as development or test to ensure that there are no errors.

See [Use the Enhanced Semantic Model Extensibility Capabilities](#).

## About Migrating to the Enhanced Semantic Model Extension Framework

Prior to switching over to the new semantic model extensions framework, do note these and take appropriate action where required:

- Before migration, merge all your changes to the main branch and publish it because Oracle will migrate the current main branch, but not the custom branches.
- Security configurations will remain unchanged in the new framework, hence no action from you is required.
- Upgrade all non-production and production instances to the new framework before attempting any migration of semantic extensions from non-production to production instances using the Bundles functionality.

You can initiate migration of your extensions to the enhanced framework by submitting the request from the banner message on the Semantic Model Extensions page when you click **User Extensions**. You can initiate it automatically by scheduling the migration from the banner message. After initiating the migration:

- You can't use the semantic model extensions capability during the migration process.
- Oracle migrates the existing customizations to the new framework. Once the migration is complete, you receive a notification on the console. You can also monitor the status in the Activity tab for Semantic Model Extensions.
- Sign in and sign out of your service after migration completes.
- Once the migration is completed, you see a downloadable report that shows which customizations are available for which object with the Main branch object to Main sandbox object mapping (so that you can see all your customizations that have been brought over). In most cases, operations like Add Dim, Add Fact, Add Variable, Extend Dimension, Add Columns have 1:1 correspondence between the old and the new framework. The Main sandbox is published and ready for use. All of your subject areas, visualizations, and reports remain unchanged. An option to revert to the old framework if customizations aren't as expected is available and the migration rollback option gets disabled after 60 days from the migration date. Ensure to complete the reversal process within this period, if you must revert. If you choose to revert, then the semantic model reverts to the state prior to the migration being initiated. You can't rollback the migration if you've completed a content upgrade after completion of the migration process.
- Oracle maintains a backup of the existing semantic model extensions at the time the migration is initiated. If you encounter issues during or after migration, Oracle uses the backup to troubleshoot and enable required extensions on the new framework. Should you choose to revert back to the previous state, the semantic model is restored from this backup. If you've made further changes to the semantic model in the new framework before choosing to revert, these customizations can't be migrated to the previous semantic model extensions framework.

## About Recommendations and Tips to Extend the Semantic Model

Before extending your semantic model, review the recommendations and tips to ensure that your extensions work as expected.

Recommended naming conventions: Ensure that you follow these naming conventions to avoid loss of customizations after an upgrade and to easily identify the custom objects:

- Prefix a custom object with `x_ zzz_` where `zzz` is an abbreviation of your organization.



- Suffix different objects as:
  - `_A` = Aggregate
  - `_D` = Dimension
  - `_DH` = Dimension Hierarchy
  - `_F` = Fact
  - `_H` = Helper
  - `_M` = Map Dimension
  - `_MD` = Mini Dimension
- Use unique names for objects in your semantic model extensions to avoid issues caused by duplicate names.

Recommendations applicable across the types of extensions:

- Perform all development activities in one environment that you consider as the master development environment. Subsequently, you must move the extensions from that environment to other non-production or production environments.
- When you need to create a star schema (custom dimensions and custom facts), always create the custom dimensions first followed by the custom facts.
- When you define joins in any customization wizard, ensure that the join columns are of compatible data types.
- Don't extend a prebuilt fact to alter the structure. For example, don't add Invoice Distribution ID into the Invoice Line fact table.
- Don't keep changes in a local branch for long periods of time. Local branches can become out of synchrony when changes to the Oracle Fusion Data Intelligence environment occur. Use a local branch for testing and merge to the main branch soon and frequently. Promote the main branch to Production using the Test to Production (T2P) process.
- Ensure that the changes in source are addressed in your Oracle Fusion Data Intelligence instance. For example, if a descriptive flexfield used in a custom subject area has been disabled in the source, then you must replace or remove the applicable descriptive flexfield in Oracle Fusion Data Intelligence else the applicable semantic model extension fails.
- Ensure that the table and column names don't have leading or trailing spaces in the semantic model extension steps.
- Ensure to check and correct the errors and warnings on the Semantic Model Extensions page regularly.
- If you want to use any dataset that has been brought in through data augmentation to build the joins or incorporate any object from the dataset into your semantic model, then you must ensure to run an incremental load before using the dataset.
- While reapplying any extension, ensure that you cleanup the view in schema `OAX_CUSTOM_DATA`, re-edit the extension in the Main branch, and re-apply it.

Recommendations while adding a dimension:

- While defining the joins, you can choose to skip the joins and proceed to the next action. This results in the step ending up in a warning state but the process adds the custom facts. Oracle Fusion Data Intelligence clears the warning when you define the joins later.
- Always specify the primary key and display attribute when you define the hierarchies for the custom dimension.

When extending a dimension, combine multiple extensions for the same dimension in the database. Same dimension extensions always join to the base dimension on the same columns. Hence, in the database, combine the extensions into one object and then extend all columns using that object.

 **Note:**

Multiple steps defined for the same dimension eventually lead to a constraint causing the extensions to fail. For example, in step 1, you use table A and add a set of columns and then in step 5, you use the same table A, extend the same dimension, and add the same set of columns. This results in failure because in step 1, the columns are already added; hence, step 5 fails and the user extensions aren't available. Combining the extensions into one database object and then defining all extensions using one step is highly recommended.

When adding a fact, always set the content levels for the custom dimensions that are joining to the custom fact.

Whenever a system extension run is replaying the master branch, you must not edit the main branch during this time as that might cause a conflict leading to failure of the semantic extensions.

Minimize the number of semantic extensions as much as possible. For examples, don't create multiple extensions to modify the same subject area; instead, you must consolidate the modifications to the same subject area. If you've to modify the same dimension, then consolidate changes to a single logical table source.

When adding a custom hierarchy, avoid aiming to display the grand total levels in visualizations because custom hierarchies are exposed only from the first level. The ready-to-use hierarchies too don't expose the total levels. The Grand Total level just gives the grand total amount; hence use it only when there is no join between a fact and dimension and the metric has to be set at a total level.

Don't export the semantic model extensions bundle separately and then do security promotion through test to production. Generate the semantic model extensions bundle and include the extensions you want and then include security as well.

## Create a Branch

To begin customizing your semantic model, create a branch of the main semantic model.

You can add customizations to a test instance only. After you have added and tested your customizations, you can promote them to the production environment. See [Promote Your Customizations to the Production Environment](#).

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **User Extensions**.

You see the main and existing customization branches.

4. In the User Extensions region, for Customization Branches, click **Create Branch** to create a branch as an empty container.
5. In Create a Branch, enter a name for your branch, for example, `Add Cost Center`.

6. Optional: Add a description and click **Done**.

You see the Add Step dialog. You can continue to add the steps or you can add steps to the new branch container later using the **Add Step** button. See [Add a Step to a Branch](#). You see the new branch on the Semantic Model Extensions page under **Customization Branches**.

## Edit a Branch

Before you apply a branch to the main branch of your semantic model, you can edit the branch description to make it more meaningful.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **User Extensions**.
4. In the User Extensions region, under Customization Branches, hover over a branch to view **Actions** (⋮).  
You see the actions that are applicable to the branch.
5. From **Actions**, click **Edit Description** to update the branch description, and then click **Done**.

## Add a Step to a Branch

You can add customization types such as "Extend a Dimension" as a step to an existing unapplied branch or a new branch that you create.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **User Extensions**.  
You see the main and existing customization branches.
4. In the User Extensions region, under Customization Branches, click a branch to open the Branch page.
5. On the Branch page, click **Add Step**.
6. In Add Step, select a customization type such as **Extend a Dimension**.  
You see the wizard sequence to add details for the selected customization type.

## Add a Dimension

You can create a custom dimension, join it to the prebuilt or custom facts, and add the custom dimension to any subject area to meet your business requirements.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **User Extensions**.  
You see the main and existing customization branches.

4. In the User Extensions region, under Customization Branches, click a branch to open the Branch page.
5. On the Branch page, click **Add Step**.
6. In Add Step, select **Add a Dimension**.  
You see the wizard sequence to add a dimension.
7. In step 1 of the wizard, enter a name for your customization step, for example, `Add Point of Sale Dimension` and add a brief description.
8. In step 2 of the wizard, select the schema, and then select the dimension table in **Object**. For example, `COST_CENTER_VIEW1`.

 **Note:**

If you don't see the schema or table, then ensure that you have granted select permission to the OAX\$OAC schema in the autonomous data warehouse. For example, `grant select on <schema>.<table> to OAX$OAC`. See [Load Customization Data to the Autonomous Data Warehouse](#).

You see the attributes available in the selected dimension table. You can use the **Search** and **Filter** fields to limit the attributes displayed for the dimension table.

9. Select the attributes that you want to use from the dimension table and indicate an attribute to be used as the key for joining with a fact table in the target subject area.
10. If any of the selected attributes have been removed or modified in the source table since the last refresh, then you see such columns highlighted and a message asking whether you want to update the table. Select **OK** in the message to reload the source columns. If you want to review the changes to the source columns, then click **Cancel** in the message, and later click **Refresh** to reload the source columns. If any of the attributes that you haven't selected have been removed or modified in the source table, then you see the refreshed list of source columns. If any of the custom columns fail validation during the refresh, then you see a message asking you to resolve the cause of failure and revalidate.
11. Optional: Click **Create Column** to add another column to your dimension table in the target subject area using these instructions:
  - a. In Create Column, enter a display name.
  - b. Under **Data Elements**, search for a data element from the physical table of the selected dimension table.
  - c. From the search results, double-click the data element to place it in the text pane.
  - d. Under **Functions**, search for a function to construct a column using expressions. For example, search for functions like "substring" or "concatenate" to construct new expression-based columns. From the search results, double-click the applicable result to add it to the central text pane.
  - e. Click **Validate**, and then click **Save**.
12. In step 3 of the wizard, select, drag, and drop available data elements into the Selected Data elements pane to design a hierarchy for the dimension and then click **Next**. In the Selected Data Elements pane, click a level to update its primary key and set its display attribute in the Properties pane.

You can add multiple levels in your hierarchy by right-clicking at a level and selecting Add Child or Add 'n' Child Levels. For example, your Region Hierarchy can have Region Total at Level 1, Region at Level 2, Country at Level 3, State at Level 4, and City at Level 5.

13. In step 4 of the wizard, select **Skip Joins** if you don't want to join the selected dimension table to any facts. To join the selected dimension table to a fact, select the fact table, fact key, and join type. Click **Content Level** to specify the content level for your fact.

You can join a single fact key column to multiple dimension keys.

 **Note:**

Ensure that the data types of the join key pairs match. If your data types don't match but you want to proceed, then click Yes in the message. However, if the data types can't be absolutely matched, then the server-side validation rejects that join completely and you must change the data type of custom key column to match the factory data type.

14. Optional: Click **Add Fact Table** to select another fact table to link your dimension to and define the join.
15. Click **Next**.
16. Optional: In step 5 of the wizard, select the subject areas to include the new dimension and click **Finish**.

You see a message that your step is being applied to the customization branch. After it's applied, you see the new customization step in the customization branch. You can now apply the customization branch to the main branch or edit it to add more steps.

 **Note:**

If you've created Add a Dimension steps using the previous functionality, you can still edit and reapply through the Edit option.

## Add a Fact Table

Add a fact table to an existing subject area.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **User Extensions**.  
You see the main and existing customization branches.
4. In the User Extensions region, under Customization Branches, click a branch to open the Branch page.
5. On the Branch page, click **Add Step**.
6. In Add Step, select **Add a Fact**.  
You see the wizard sequence to add a fact.
7. In step 1 of the wizard, enter a name for your customization step, for example, Add Travel Expense and add a brief description.

8. Select a target subject area to which you want to add the fact. For example, `Financials - AP Expense`.

You see the details of the selected subject area.

9. Click **Next**.

10. In step 2 of the wizard, select the schema, and then select a view or table or synonym as the object. For example, `FCT_CALC_Extensions`.

You see the fact table for the selected object.

11. In the details of the fact table for the selected source table, click the **Select Fact** and **Use for Key** check boxes for the source columns that you want to add to your new fact table in the target subject area.
12. Optional: In the details of the fact table for the selected source table, under **Select Degen Attribute**, click the check boxes for the attributes for which you need the degenerate dimension to be created.
13. If any of the selected attributes have been removed or modified in the source table since the last refresh, then you see such columns highlighted and a message asking whether you want to update the table. Select **OK** in the message to reload the source columns. If you want to review the changes to the source columns, then click **Cancel** in the message, and later click **Refresh** to reload the source columns. If any of the attributes that you haven't selected have been removed or modified in the source table, then you see the refreshed list of source columns. If any of the custom columns fail validation during the refresh, then you see a message asking you to resolve the cause of failure and revalidate.
14. Optional: Click **Create Column** to add a new column to your new fact table in the target subject area using these instructions:
  - a. In Create Column, enter a display name.
  - b. Under **Data Elements**, search for a data element from the physical table of the selected dimension table.
  - c. From the search results, double-click the data element to place it in the text pane.
  - d. Under **Functions**, search for a function to construct a column using expressions. For example, search for functions like "substring" or "concatenate" to construct new expression-based columns. From the search results, double-click the applicable result to add it to the central text pane.
  - e. Click **Validate**, and then click **Save**.

15. Click **Next**.

16. In step 3 of the wizard, use the Diagram or Tabular tabs to specify the joins to link your new fact table to the dimensions in the selected subject area.

Follow these instructions to specify the joins using the Diagram tab:

- a. Click **Add Table**.
- b. In Add Table, select the dimensions to add and click **OK**.
- c. Drag from the dimension's port (dark green circle) to the fact table's port (brown circle) to create a join link. You see the Join dialog.
- d. In the Join dialog, select the type of join, the fact table column, and the dimension key column. Click **Add Join Condition** to add multiple join conditions and then click **Join**. If you want to provide expressions as join conditions, then click **Complex Join** and in Create Joins, click **Add Joins**, select the target and source logical tables, enter the join condition as an expression, and click **OK**.

Follow these instructions to specify the joins using the Tabular tab:

- a. Click **Add Join**.
  - b. In Add Table, select the dimension to add and click **OK**. You see the Join dialog.
  - c. In the Join dialog, select the type of join, the fact table column, and the dimension key column. Click **Add Join Condition** to add multiple join conditions and then click **Join**. If you want to provide expressions as join conditions, then click **Complex Join** and in Create Joins, click **Add Joins**, select the target and source logical tables, enter the join condition as an expression, and click **OK**.
17. Optional: Click **Skip Joins** if you don't want to join a dimension now.
  18. Click **Next**.
  19. In step 4 of the wizard, select the aggregation rule for each fact column to set the aggregation behaviors.
  20. Optional: You can set the time-balanced aggregation rule for a time dimension and hierarchy level-based aggregation rule for a dimension using these steps:
    - a. For a fact column, click the Time-Balanced Aggregation icon.
    - b. In the Time-Balanced Aggregation dialog, click **Add Time Dimension**, adjust the aggregation rule, and then click **OK**.
    - c. For a fact column, click the Hierarchy Level-Based Aggregation icon, select the dimension and level. Click **Add Dimension** to add more dimensions. Click **OK**.

Use a time-balanced aggregation when the added measure mustn't be "aggregated" by default across a time dimension. Oracle Fusion Data Intelligence supports non-aggregation types like "Last" or "First" in place of the "SUM" aggregation type when required. Use a level-based aggregation when the underlying measure must always be calculated to a specific level of a predefined dimensional hierarchy. For example, in a product hierarchy that has the Product Total, Product Category, Product Sub-Category, and Product Details levels, you add a new measure called "Revenue" and need this "Product Category Revenue" measure to be aggregated to Product Category, then you must use the level-based aggregation and choose the right level of the Product Dimension. This setting enables Oracle Fusion Data Intelligence to always aggregate and show the value of the measure at the Product Category level. This is useful when you need to calculate Product Revenue as a % of Category Revenue.

21. Click **Next**.
22. Optional: Select additional subject areas to add the fact.
23. Click **Finish**.

You see a message that your step is being applied to the customization branch. After it's applied, you see the new customization step in the customization branch. You can now apply the customization branch to the main branch or edit it to add more steps.

## Add a Hierarchy

Add a hierarchy to a dimension table in an existing subject area.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **User Extensions**.

You see the main and existing customization branches.

4. In the User Extensions region, under Customization Branches, click a branch to open the Branch page.
5. On the Branch page, click **Add Step**.
6. In Add Step, select **Add a Hierarchy**.  
You see the wizard sequence to add a hierarchy.
7. In step 1 of the wizard, enter a name for your customization step, for example, `Add Region Hierarchy` and add a brief description.
8. Select the subject area, the folder of the dimension table, and the dimension table to which you want to add a hierarchy.  
You see the existing hierarchies and the hierarchy levels in the selected dimension. If there aren't any hierarchies, then you see a message informing you that there are no hierarchies in the selected dimension.
9. Click **Next**.
10. In step 2 of the wizard, assemble the product hierarchy using the attributes from this dimension table with these instructions:
  - a. Enter a hierarchy name. For example, `Region Hierarchy`.
  - b. Select, drag, and drop available data elements into the Selected Data elements pane to design a hierarchy that you want. You can add multiple levels in your hierarchy by right-clicking at a level and selecting **Add Child** or **Add 'n' Child Levels**. For example, your `Region Hierarchy` can have `Region Total` at Level 1, `Region` at Level 2, `Country` at Level 3, `State` at Level 4, and `City` at Level 5.
  - c. In the Selected Data Elements pane, click a level to update its primary key and set its display attribute in the Properties pane.
11. Click **Next**.
12. Optional: In step 3 of the wizard, select additional subject areas to include the new hierarchy.
13. Click **Finish**.  
You see a message that your step is being applied to the customization branch. After it's applied, you see the new customization step in the customization branch. You can now apply the customization branch to the main branch or edit it to add more steps.

## Add Session Variables

Add custom session variables that you can include in the analyses.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **User Extensions**.  
You see the main and existing customization branches.
4. In the User Extensions region, under Customization Branches, click a branch to open the Branch page.
5. On the Branch page, click **Add Step**.
6. In Add Step, select **Add Session Variables**.



You see the wizard sequence to add the session variables and a list of existing session variables.

7. In step 1 of the wizard, check if any of the existing session variables serve your purpose. If yes, then you can exit the wizard and use the applicable existing session variables in your analyses. If no, then continue with the next steps to create the session variables that you require.
8. Enter a name for your customization step, for example, `Add a Session variable using Invoice Received Date` and add a brief description. Click **Row-wise Initialization** to configure cache settings.
9. Click **Next**.
10. In step 2 of the wizard, define the SQL query and create the initialization block using these instructions:
  - a. Enter a name and description for the initialization block.
  - b. Select a preceding initialization block.
  - c. Enter the SQL query that would be executed in the autonomous data warehouse and return a value that you can use in the reports. For example, if you want to get the Exchange Rate Type that's defined in Oracle Fusion Data Intelligence into a session variable, then you can use the following SQL script:

```
SELECT PARAMETER_VALUE FROM DW_CONTENT_PARAM_CONFIG WHERE  
PARAMETER_CODE='PARAM_GLOBAL_EXCHANGE_RATE_TYPE'
```

11. Click **Next**.
12. In step 3 of the wizard, create the session variables using the output of the initialization block created in step 2 of the wizard.
13. Click **Finish**.

You see a message that your step is being applied to the customization branch. After it's applied, you see the new customization step in the customization branch. You can now apply the customization branch to the main branch or edit it to add more steps.

## Extend a Dimension

Extend prebuilt dimensions with additional attributes from another data source.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **User Extensions**.

You see the main and existing customization branches.
4. In the User Extensions region, under Customization Branches, click a branch to open the Branch page.
5. On the Branch page, click **Add Step**.
6. In Add Step, select **Extend a Dimension**.

You see the wizard sequence to extend a dimension.
7. Enter a name for your customization step, for example, `Add Cost Center Type`.
8. Select a target subject area, for example, `Financials GL Profitability`.

9. In **Folder**, select a dimension that you want to extend, for example, `Cost Center`.
10. Select a logical table, for example, `Dim - Cost Center`.  
You see the available attributes in the table.
11. Click **Next**.
12. Select a schema and table from the database.  
You see the available attributes in the table.
13. Select the columns that you want to expose or use as a key for creating the join.
14. Click in the **Display Name** table field to enter a new name for the column or to edit an existing one and then click **Enter** to accept or click **Esc** to cancel.
15. If any of the selected attributes have been removed or modified in the source table since the last refresh, then you see such columns highlighted and a message asking whether you want to update the table. Select **OK** in the message to reload the source columns. If you want to review the changes to the source columns, then click **Cancel** in the message, and later click **Refresh** to reload the source columns. If any of the attributes that you haven't selected have been removed or modified in the source table, then you see the refreshed list of source columns. If any of the custom columns fail validation during the refresh, then you see a message asking you to resolve the cause of failure and revalidate.
16. Optional: Click **Create Column** to create a new column in the selected dimension table using these instructions:
  - a. In **Create a new column**, enter a display name, for example, `Cost Type`.
  - b. Under **Data Elements**, search for a data element from the physical table of the selected dimension table.
  - c. From the search results, double-click the data element to place it in the text pane.
  - d. Under **Functions**, search for a function to construct a column using expressions. For example, search for functions like "case" to construct new expression-based columns. From the search results, double-click the applicable result to add it to the text pane.
  - e. Click **Validate**, and then click **Save**.
17. Click **Save**.
18. Click in the **Source Column** table field to edit the column definition.
19. Click **Save**.  
You see the new column in the Data preview section in a highlighted color.
20. Click **Next**.
21. Select a join key to pair with the source column. If you want to provide expressions as join conditions, then click **Complex Join** and in **Create Joins**, click **Add Joins**, select the target and source logical tables, enter the join condition as an expression, and click **OK**.
22. Click **Next**.
23. Select the subject areas that should use this customization.

 **Note:**

The Subject Area that you initially selected is selected by default and is read-only. By default, all additional subject areas are selected. Deselect the additional subject areas that shouldn't use this customization.

**24. Click Finish.**

You see the new customization step in the customization branch. You can now apply the customization branch to the main branch or edit it to add more steps.

## Add Derived Columns

Add a derived column to an existing subject area.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **User Extensions**.  
You see the main and existing customization branches.
4. In the User Extensions region, under Customization Branches, click a branch to open the Branch page.
5. On the Branch page, click **Add Step**.
6. In Add Step, select **Add a Column**.  
You see the wizard sequence to add a column.
7. In step 1 of the wizard, enter a name for your customization step, for example, *Regional Revenue* and add a brief description.
8. Select a target subject area to which you want to add the column. For example, *Profitability*.  
You see the details of the selected subject area.
9. Select the presentation folder within the selected subject area and the logical table to which you want to add the column.
10. Click **Next**.  
You see the Create Column dialog in step 2 of the wizard.
11. In step 2 of the wizard, define your new column using these instructions:
  - a. In Create Column, enter a display name.
  - b. Under **Data Elements**, search for a data element from the subject area that you had selected previously.
  - c. From the search results, double-click the data element to place it in the text pane.
  - d. Under **Functions**, search for a function to construct a column using expressions. From the search results, double-click the applicable result to add it to the central text pane. For example, search for functions like "Filter" or "Avg" to construct expression-based columns. A sample expressions to derive the average supplier payment days is  

```
avg(ROUND(((CASE WHEN Invoice Received Date is not null THEN (Financials - AP Payments.Payment Date.Payment Date - Invoice Received Date) ELSE (Financials - AP Payments.Payment Date.Payment Date - Financials - AP Invoices.Invoice Date.Invoiced Date) END)/Financials - AP Payments.Facts - Analytics Currency.Total Payment Count),0)).
```
  - e. Click **Validate**, and then click **Save**.
12. Optional: If you want the underlying measure of the column to be calculated to a specific level of a predefined dimensional hierarchy, then complete these steps:
  - a. Click the **Hierarchy Level-Based Aggregation** icon.



You see a message that your step is being applied to the customization branch. After it's applied, you see the new customization step in the customization branch. You can now merge the customization branch with the main branch or edit it to add more steps.

## Modify a Subject Area

Modify a custom subject area using these instructions.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **User Extensions**.  
You see the main and existing customization branches.
4. In the User Extensions region, under Customization Branches, click a branch to open the Branch page.
5. On the Branch page, click **Add Step**.
6. In Add Step, select **Modify a Subject Area**.  
You see the wizard sequence to modify a subject area.
7. In step 1 of the wizard, enter a name for your customization step, for example, `Custom AP Invoices` and add a brief description.
8. Select a subject area that you had created using the instructions in [Create a Subject Area](#).  
You see the details of the selected subject area.
9. Click **Next**.
10. In step 2 of the wizard, from the Available Data Elements pane, select or deselect the data elements that you want to use or don't want in the selected subject area.
11. Optional: Click **Add Subject Area** to select and add data elements from multiple subject areas.
12. Click **Next**.
13. In step 3 of the wizard, organize and rename the data elements in your modified subject area.
14. Optional: Click the **Advanced Properties** icon next to the custom subject area to select an implicit fact that allows dimensions to be used for analytic queries even when not joined to a logical fact table.
15. Click **Next**.
16. In step 4 of the wizard, review your modified subject area and click **Finish**.

## Edit or Delete a Branch Step

As the owner of the branch or a user with the Modeler Administrator role, you can edit a step to modify the details or delete it if it's no longer required. You can delete multiple steps together.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.

3. On the Semantic Model Extensions page, click **User Extensions**.
4. In the User extensions region, under Customization Branches, click a branch to display the steps.
5. Hover over a step to view **Actions** (⋮).
6. Click **Edit** and update the details.
7. Click **Delete** to remove it from the branch.

## Reapply a Branch Step

As the owner of a branch or a user with the Modeler Administrator role, you can reapply a failed step after resolving any issues that might have occurred with tables or columns in the autonomous data warehouse.

You can reapply the steps from the Branch details page without opening the steps.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **User Extensions**.  
You see the main and existing customization branches.
4. In the User Extensions region, under Customization Branches, click a branch to display the steps.
5. Hover over a step to view **Actions** (⋮).
6. Click **Reapply**.

## Disable and Enable the Disabled Steps

You can disable and enable the disabled steps in the main and customization branches in the development and production environments. This helps you in troubleshooting issues in the branches.

You can perform these actions on the steps in the User Extensions and Security Configurations regions. You can disable and enable individual steps or select multiple steps using the **Manage Steps**, **Enable**, and **Disable** buttons on the branch details page. You can't disable a published step.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **User Extensions**.  
You see the main and existing customization branches.
4. In the User Extensions region, click **Main** to view the details.
5. On the Main branch page, hover over a step to display the options.
6. Click **Disable**.
7. In Confirm Disable Steps, click **Disable**.

8. On the Main branch page, click **Manage Steps**, select the check box for the disabled steps, and then click **Enable**.
9. In Confirm Enable Steps, click **Enable**.
10. Perform these actions for steps in the customization branches.

## Copy Steps from One Branch to Another

Use these instructions to copy steps from a customization branch to another customization branch.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **User Extensions**.  
You see the main and existing customization branches.
4. In the User extensions region, under Customization Branches, click a branch whose steps you want to copy.
5. On the Branch page, click **Manage Steps**.
6. Select the check box for the steps that you want to copy and click **Copy**.
7. In Copy Steps, select the target branch to which you want to copy the selected steps and click **OK**.

Alternately, you can create a branch using the "Create Branch" option available in the Copy Steps dialog and copy the steps into this new branch in a single action.

You see a confirmation message that the steps have been successfully copied.

## View Details of Failed Branch Steps

You can view the reasons why a branch step had failed and then correct the errors.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **User Extensions**.  
You see the main and existing customization branches.
4. In the User extensions region, under Customization Branches, click the branch with the **Failed** icon to view the details.
5. On the Branch page, click the **Failed** status for a step that has failed and view the error details.

## Merge the Customization Branches with the Main Branch

Merge the customization branches with the main branch to use the customization steps as the sequence of steps.

The main branch lives in the test environment. When you edit a branch, the system automatically locks it to prevent another user from simultaneously editing the same branch. As

you complete each step or reorder the steps, the system unlocks the branch, saves it, and notes the change in the change log tab.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **User Extensions**.  
You see the main and existing customization branches.
4. In the User Extensions region, under Customization Branches, hover over a branch to view **Actions (+)**.
5. From **Actions**, click **Merge to Main Branch**, and then click **Ok**.  
When a branch gets merged into Main, the other branches go out of synchronization and you must resynchronize them with the Main branch.

## Reorder Steps of Customization Branches

You can reorder the steps in a branch that has been applied or is yet to be applied to the main branch.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **User Extensions**.  
You see the main and existing customization branches.
4. In the User Extensions region, under Customization Branches, click a branch to display the steps.
5. On the Branch page, click **Manage Steps**.
6. Select the check box for the steps that you want to reorder and click **Reorder**.
7. In Reorder Steps, use the drag handles to drag and drop the steps in the new order that you want, and then click **Reorder**.

## Delete a Main Branch Step

As a modeler administrator, you can delete all steps of a main branch that have been either applied or have failed. With modeler permissions, you can delete only failed steps of a main branch.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **User Extensions**.
4. In the User Extensions region, click **Main** to view the details.
5. On the Main Branch page, hover over a step to display the options.
6. Click **Delete** to remove it from the main branch.



## Tag the Main Branch's Steps

You can create tags on the "Applied" steps of the Main branch as a snapshot at a given point in time.

When you have a set of customizations ready for promotion and merged them with the Main branch, you can tag the Main branch's steps with "Applied" status using the **Create Tag** option for the Main branch or tag any of its steps with "Applied" status directly on the Main branch detail page using the **Tag** option. When you tag a step directly on the Main branch details page or include a step while tagging using the **Create Tag** option for the Main branch, the steps prior to the selected step are included in the tag too. You can untag the tags that you create for the Main branch's steps using the **Untag** option.

You later promote the tagged steps of the Main branch to the production environment. See [Promote Your Customizations to the Production Environment](#).

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **User Extensions**.  
You see the main and existing customization branches.
4. To create a tag for a step in the Main branch, in the User Extensions region, click **Create Tag**.
5. In Create a Tag, enter a name for the tag and a description.
6. Select a merged step that you want to include in this tag.
7. Click **Done**.
8. To tag a step directly, hover over the Main branch to view **Actions** (⋮) and then click **View Details**.
9. On the Main branch details page, hover over a step to view **Actions** and then click **Tag**.
10. In Create a Tag, enter a name for the tag and a description.
11. Click **Done**.
12. To untag a tag for the Main branch and the step included in the Tag, on the Main branch details page, hover over a step to view **Actions** and then click **Untag**.
13. In Confirm Untag, click **Untag**.

### Note:

If there're multiple tags on the same step, then you can select the check boxes for the applicable tags in the Confirm Untag dialog.

## Add Security Configurations

Add security configurations to secure the subject areas and data with prebuilt and custom duty and data type of application roles.

1. Sign in to your service.

2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **Security Configurations**.
4. In the Security Configurations region, click **Add Configure Data Security** to secure your data with the data type of application roles.  
See [Configure Data Security](#).
5. In the Security Configurations region, search for the prebuilt "Configure Object Permissions" to configure permissions for objects such as subjects areas and their elements with duty type of application roles.  
See [Configure Object Permissions](#).
6. Optional: In the Security Configurations region, click **Reapply Steps** to validate the security configuration-related steps against the current state of the model.

## Configure Data Security

As a security administrator, provide users with access to data using the custom-created data type application roles.

You can add filters to data retrieved from logical or presentation objects based on the data roles assigned to users. You can add one customization step for each data role. The elements that you can secure are from the Main branch of the semantic model. Hence, if you need a newly added object to be secured, then you must ensure that the customization branch containing the newly added object is merged with the Main branch before configuring the security. If any of the custom-created role is no longer available, then the security configuration for that role is removed from the "Configure Data Security" step.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **Security Configurations**.  
You see the existing security configurations, if any.
4. In the Security Configurations region, click **Add Configure Data Security Step**.
5. In step 1 of the wizard, enter a name for your step, select a data type application role, and then click **Next**.
6. In step 2 of the wizard, from the **Available Objects** drop-down list, click either Presentation Objects or Logical Objects to select the objects that you want to secure with the selected data type application role.

If you're viewing the presentation objects, then expand the subject area folders and double-click the objects. If you're viewing the logical objects, then double-click the logical table folders or expand the table folders and double-click the objects. You see the selected objects under **Object to be secured** in the right pane.

7. Optional: Specify the functional group to combine the data filters using the OR and AND operators.

Oracle Fusion Data Intelligence combines all the filters in the same functional group using the OR operator and combines all sets of filters in different functional groups using the AND operator.

8. Click the **Function** icon to define how the data filter gets applied.

Use the Expression Editor to enter the filter, based on the session variables that you had created previously. To view an example, see [Custom Security in Fusion Data Intelligence](#).

9. Click **Next**.
10. Click **Finish**.
11. Optional: In the Security Configurations region, click **Reapply Steps** to validate the security configuration-related steps against the current state of the model.

## Configure Object Permissions

Configure the permissions for objects such as subject areas and its elements with the ready-to-use or the custom-created duty roles.

You secure the subject areas and their elements using the **Configure Object Permissions**, a prebuilt single step. You edit this single step to specify the subject areas, their elements, and the duty roles to secure these with. The elements that you can secure are from the Main branch. Hence, if you need a newly added object to be secured, then you must ensure that the branch containing the newly added object is merged with the Main branch before configuring the security. If a custom-created role is no longer available, then the security configuration for that role is automatically updated in the existing Configure Object Permissions step. For the front-end objects such as key metrics and workbooks, set the permissions individually for each object by adding the applicable duty role and the corresponding access.

By default, the list of permissions by duty role displays the explicit permissions set for the subject area or the elements of the selected subject area. If you want to add more permissions, then select the duty role from the list and set the required permission. Permission levels that you can set are:

- Default (inherited from the parent element).
- No Access (deny access to the respective subject area or its elements)
- Read-only (access to read the respective subject area or its elements).

Repeat the operation for all the subject areas or the subject area elements that you need to secure.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **Security Configurations**.

You see your existing security configurations and the prebuilt object permissions-related step.

4. In the Security Configurations region, search for the prebuilt "Configure Object Permissions", and hover over it to view **Actions** (⋮), and then click **Edit**.
5. In step 1 of the wizard, click **Next**.
6. In step 2 of the wizard, select the subject areas or elements and set the corresponding desired permission to the duty role selected from the list, and then click **Next**.
7. Review your changes and click **Finish**.

## View Activity History of Semantic Model Extensions

View an audit of all activities performed on the semantic model.

Amongst the activities, you may see that the system steps have been applied. Oracle Fusion Data Intelligence applies the system steps in the following scenarios:

- Any changes to augmentations and new augmentations. A new augmentation replays all the steps in the Main branch because of implicit dependencies.
  - New module activations. Module activations can run augmentations related to that module, but the Main branch steps are always replayed.
  - Any changes done to flexfields (like DFFs) in your Oracle Fusion Cloud Applications instance such as deletion or addition. It doesn't matter where the DFF's are. If they are deleted in the source, then they get deleted in the prebuilt subject area. Hence, the custom subject area also must be modified to remove it. In this case, augmentation won't fail but the Main branch fails as it's custom and needs to be modified.
  - Application update such as the Oracle Fusion Data Intelligence version upgrade also runs the Apply System Steps.
1. Sign in to your service.
  2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
  3. On the Semantic Model Extensions page, click **Activity History** to view an audit of all activities performed on the semantic model.
  4. Hover over an activity to view details of the activity.

## Publish the Model

You can publish the versions on the main development branch and the other branches in the non-production environments such as development or test to ensure that there are no errors.

While publishing the data model, you can select the user extensions and security configurations that you added as part of customizing the semantic model. If you select the security configurations, then Oracle Fusion Data Intelligence applies them on the user extensions that you selected. If the security configurations refer to elements in the model that aren't part of the user extensions, then Oracle Fusion Data Intelligence excludes them at the time of publishing the model.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic model Extensions page, click **Publish Model**.
4. In Publish Model, select the user extensions and security configurations that you want to publish.
5. Click **Publish**.

## Load Customization Data to the Autonomous Data Warehouse

You can load your customization data to the autonomous data warehouse provisioned with your Oracle Fusion Data Intelligence instance.

You need the autonomous data warehouse wallet and credentials of the administrator. The credentials of the administrator are same as what you had mentioned for the autonomous data warehouse resource while creating the Oracle Fusion Data Intelligence instance. See [Create an Oracle Fusion Data Intelligence Subscription Instance](#) .

1. Connect to the autonomous data warehouse corresponding to your Oracle Fusion Data Intelligence instance.

See [Connect to Autonomous Database](#).

2. Create a custom schema to store the customization data.

**Syntax:** `create user <custom_schema-name> identified by <custom_schema-password>;`

**Example:** `create user example_schema identified by abcDEF123654;`

3. Create one or more tables in the custom schema that you created.

**Syntax:** `CREATE TABLE <custom_schema-name>.<custom_extent_table_name> (<parameters>);`

**Example:** `CREATE TABLE example_schema.ABC_EXTN ("DATE" DATE, "CATEGORY" VARCHAR2(1024 BYTE) , "MANAGER" VARCHAR2(1024 BYTE) );`

4. Populate the required data and grant select permissions to the OAX\$OAC schema in the autonomous data warehouse using this script:

**Syntax:** `grant select on <custom_schema-name> to OAX$OAC;`

**Example:** `grant select on example_schema.ABC_EXTN to OAX$OAC;`

5. Commit the changes to the autonomous data warehouse and disconnect.

## Promote Your Customizations to the Production Environment

When you have a set of changes to the semantic model, security configurations, and customized key metrics (previously called KPIs) ready for promotion, you can tag the Applied steps of the Main branch as a snapshot at a given point in time, and then promote the tags to the production environment.

While promoting customizations from the source to the target instance, Oracle Fusion Data Intelligence removes the customizations in the target instance and overwrites it with the one from the source instance. After promoting the customizations to the production environment, you can't directly add further customizations to the semantic model in the production environment.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Promote Objects** under **Application Administration**.
3. On the Promote Objects page, select the target environment to which you want to publish your customizations.
4. Select the customized objects that you want to promote to the target environment.

For example:

- Select the **Semantic Model Extensions** check box. Select the applicable tag to promote the tagged steps. Select **Reset All** to promote the original main branch to the target environment without any tags.
- Select the **KPIs** check box. Select the **Promote All** option to promote all the key metrics or click **Choose KPIs**, search for and select the customized key metrics that you want to promote, and then click **OK**.

 **Note:**

If you delete a key metric from the development instance that was previously promoted to the production instance and you later use the **Promote All** option to promote all the key metrics to the production instance, then you need to explicitly delete the “applicable” key metric from the production instance. For example, if you had promoted key metrics A, B, and C and later deleted key metric B in the development instance and again promoted using the **Promote All** option, then Oracle Fusion Data Intelligence promotes only A and C without deleting key metric B in the production instance. You must explicitly delete key metric B in the production instance.

- Under **Security Configurations**, select **Roles and Mappings**, **Object Security**, and **Data Security** independently. Complete these actions:
  - a. For **Roles and Mappings**, select the **Promote All** option or **Select roles to promote** option and then click **Choose Roles and Mappings**. In the Choose Roles and Mappings dialog, select the roles and mappings to promote to your target environment, and then click **Save**.
  - b. For Object Security and Data security, select the **Promote All** option to promote all the security configurations for the applicable elements to the target environment. Select the **Reset All** option to remove all the security configurations done on the target system for the applicable elements.

 **Note:**

For data and duty security, ensure that you select the dependent elements too. If you don't select the roles or the correct repository file version, then the promotion of the data and duty security configurations may fail or the promotion process may silently ignore the missing elements.

5. On the Promote Objects page, click **Promote**.
6. Click **Check Status** to view the progress.

## View Promotion History

View an audit of all artifacts promoted to another environment.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Promote Objects** under **Application Administration**.
3. On the Promote Objects page, click **Activity History** to view the promoted artifacts.

## Republish Your Customizations

As the owner of a branch or a user with the Modeler Administrator role, you can republish your user extensions, security configurations, and tagged steps of the Main branch if you've modified them after publishing them initially.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **User Extensions**.  
You see the main and existing customization branches.
4. In the User Extensions region, under Customization Branches, you see a warning icon for a published branch that has been modified and the **Republish** button on the Semantic Model Extensions page.
5. Click **Republish** to publish the branch with the latest details.

## About Merging External Applications

If you've an external semantic model such as an Oracle Analytics Cloud instance other than the Oracle Analytics Cloud instance associated with your Oracle Fusion Data Intelligence instance, then you can merge it with the semantic model of Oracle Fusion Data Intelligence only in your non-production instance.

You can also merge your existing catalogs in the external Oracle Analytics Cloud with those in the Oracle Analytics Cloud instance associated with your Oracle Fusion Data Intelligence instance. Both external semantic model and semantic model extensions can co exist and you can include the external semantic model in your semantic model extensions. On the Publish Model page, select "Yes" if you want the external semantic model to be included.

Merging external semantic models may require you to scale up your Oracle Analytics Cloud compute resources to ensure better performance. In particular, if you're merging a semantic model that was in use on a live Oracle Analytics Cloud instance, then Oracle recommends scaling up Oracle Fusion Data Intelligence's Oracle Analytics Cloud compute resources by the same number of CPUs as the instance the semantic model is merged from.

To conform common dimensions between Oracle Fusion Data Intelligence and your other Oracle Analytics Cloud, ensure that the:

- Data types of the conforming columns are matching, else you can't merge.
- Data for the mapped columns match, else queries don't fetch correct results.
- Level of details at which data is stored in the dimensions match, else queries return incorrect results.
- External semantic model is up to 25 MB in size.
- Catalog objects are in folder names that don't conflict with the prebuilt folders of Oracle Fusion Data Intelligence and in `/Shared/Custom/` folder.
- New logical table source that you add has a higher priority group than the prebuilt logical table source. For example, if the logical table source of the prebuilt object is 2, then you must specify a priority group of 3 or higher.
- Additional hierarchy has its own total level.

The external semantic model connects only to the Oracle Autonomous Data Warehouse associated with Oracle Fusion Data Intelligence. After enabling the external application merge functionality, if you make semantic model changes with data augmentation, then it'll result in unexpected errors. If such changes exist, then you must update the data augmentations to remove the semantic model changes. Ensure that you make the semantic model changes in the external semantic model.

Prior to merging the external semantic model, ensure that you:

- Import or migrate your external warehouse data to the Oracle Autonomous Data Warehouse associated with Oracle Fusion Data Intelligence using the Oracle database utilities or any ETL tool.
- While importing the objects, create a new physical schema for the custom schema such as X\_FAW\_MERGE\_POC and import the objects into this physical schema. Though the objects are under the schema called X\_FAW\_MERGE\_POC, because read access is provided, the SQL is formed as X\_FAW\_MERGE\_POC.custom table.
- Download and save a copy of the external semantic model on your local machine using the **Download Imported Semantic Model** option in **Actions** on the External Application page, if you have imported it earlier.
- Download the template semantic model using the **Export Semantic Model Template** option in **Actions** on the External Application page.
- Use the Model Administration Tool that's a part of the Oracle Analytics Client Tools to:
  - Merge the template semantic model with your external semantic model
  - Update connections to the custom schema to which you migrated your warehouse data. See [Set up Metadata Import in the Repository File](#) and [Set Up Table Import in the Repository File](#).
  - Update joins with conformed dimensions as appropriate, keeping in mind the mentioned constraints. See [Conformed Dimensions to Merge External Applications](#).
  - Make the external semantic model consistent and free of errors and warnings. Ensure that the column mapping is fully qualified in the external semantic model to avoid any application upgrade failures. You can download the latest semantic model from the user interface, make the necessary changes using the Model Administration Tool, and reupload it. See [Download and Install Oracle Analytics ClientTools](#).

To move the merged semantic model from your non-production instance to your production instance, perform the test to production process using the Promote Objects tile or use the Bundles functionality. See [Promote Your Customizations to the Production Environment](#) and [Bundle Your Application Artifacts](#).

## Set up Metadata Import in the Repository File

Set up how to import the metadata of an external application such as another Oracle Analytics Cloud instance into the repository file of Oracle Fusion Data Intelligence to enable merging of the external semantic model with the semantic model of Oracle Fusion Data Intelligence.

Perform this one-time setup while installing the Model Administration Tool. Ensure that you redo this setup if you plan to install a new version of the Model Administration Tool. See [Download and Install Oracle Analytics ClientTools](#) to download the tool.

1. Sign in to the Oracle Cloud Infrastructure Console, download the wallet for your autonomous data warehouse, and unzip the wallet to a folder on your local machine.
2. Place the `cwallet.sso` file into a specific folder on the local machine where you have installed the Model Administration Tool.



3. Place the `sqlnet.ora` file and replace (if existing) the file in the `$OBIEE12c\domains\bi\config\fmwconfig\bienv\core` location where you have installed the Model Administration Tool.
4. Navigate to `$OBIEE12c\domains\bi\config\fmwconfig\bienv\core` and edit the `sqlnet.ora` file to point the **WALLET\_LOCATION** variable to the folder which has the `cwallet.sso` file that you had previously downloaded.

Ensure that the location points to the folder that has the wallet file. For example, `WALLET_LOCATION = (SOURCE = (METHOD = file) (METHOD_DATA = (DIRECTORY="D:\test"))))SSL_SERVER_DN_MATCH=yes.`

5. Save your changes to the `sqlnet.ora` file.

## Set Up Table Import in the Repository File

Set up how to import the tables of an external application such as another Oracle Analytics Cloud instance into the repository file of Oracle Fusion Data Intelligence to enable merging of the external semantic model with the semantic model of Oracle Fusion Data Intelligence.

Ensure that your corporate virtual private network (VPN) allows connectivity to your autonomous data warehouse. You can use the transparent network substrate (TNS) entry of the low offering of your autonomous data warehouse to import the tables. For example, `(description= (retry_count=20) (retry_delay=3) (address=(protocol=tcps) (port=<>) (host=<>)) (connect_data=(service_name=<>)) (security=(ssl_server_cert_dn="CN=my domain.com,OU=my organization,O=organization,L=my location,ST=my state,C=my country")))`

The table import process creates the tables in a separate physical schema called `OAX_USER`. After you have imported the tables and tested, revert the settings back to the old state.

### Note:

Ensure that you don't remove the externalize connection setting in the connection pool when you upload the repository file back into Oracle Fusion Data Intelligence.

1. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
2. On the Semantic Model Extensions page, in the External Application region, click **Actions**, and then click **Export Semantic Model Template** to download the template semantic model.
3. Sign in to the Model Administration Tool that's a part of the Oracle Analytics Client Tools.
4. In the Model Administration Tool, open the downloaded semantic model, navigate to **Oracle\_Data\_Warehouse**, and edit **Oracle\_Data\_Warehouse\_Connection\_Pool**.
5. Provide the TNS entry of your autonomous data warehouse and enter the username and password of the `OAX_USER` credentials.
6. Save your changes to the connection pool.

## Merge External Applications

As a modeler, modeler administrator, and security administrator, you can merge the semantic model of an external application such as another Oracle Analytics Cloud instance with Oracle

Fusion Data Intelligence. You can also merge your existing catalogs in the external Oracle Analytics Cloud with those in the Oracle Analytics Cloud instance associated with your Oracle Fusion Data Intelligence instance.

The merge enables you to join the external semantic model with the conformed dimensions of Oracle Fusion Data Intelligence to create connected analytics across the enterprise for cross-functional insights.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. In the External Application region, click **Actions**, and then click **Import Application** to import the external semantic model.
4. In **Select Application and Content to Merge**, enter a name for your application in **External Application Description**, select **Semantic Model Import**, and click **Select Semantic Model** to import the applicable Oracle Analytics Cloud semantic model from your local machine, and enter the password that you use to encrypt the semantic model file.

### Select Application and Content to Merge

**External Application Description**

**Semantic Model Import**

+ Select Semantic Model

Cu [REDACTED].rpd

**Resolve imported content conflicts**  
Rename imported objects when conflicts occur

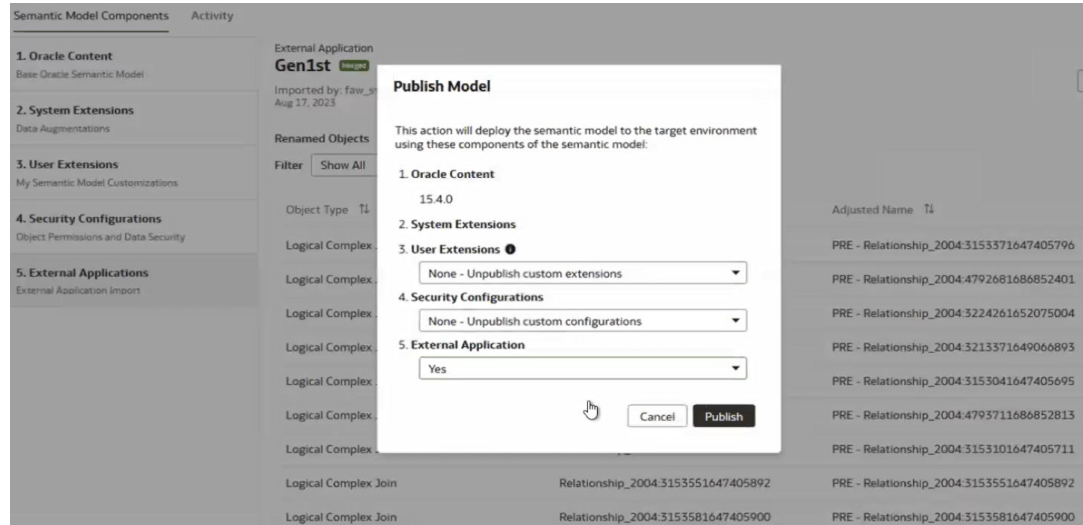
Append prefix for name conflicts

Append suffix for name conflicts

Expose custom columns in out of the box subject areas

5. In **Resolve imported content conflicts**, choose the option to rename the imported objects with either a prefix or suffix when a conflict occurs.

6. Select **Expose custom columns in out of the box subject areas** to expose columns added to the conformed dimensions in all the applicable subject areas.
7. Click **Import**.
8. In the External Application region, verify that the import process has completed and then click **Publish Model**. In the Publish Model dialog, select the values and click **Publish**.



9. In the External Application region, click **Actions**, and then click **Import Application** to import the external BAR file.
10. In **Select Application and Content to Merge**, enter a name for your application in **External Application Description**, click **Application Import**, and click **Select Bar File** to import the applicable Oracle Analytics Cloud bar file from your local machine, and enter the password that you use to encrypt the bar file.

You can select the external bar file only after importing the external semantic model. The bar file imports the JAZN file and the catalogs.

**Select Application and Content to Merge**

External Application Description

BAR

Semantic Model Import

+ Select Semantic Model

Password used to encrypt file

Application Import

+ Select Bar File demo.bar

.....

Cancel Import

11. Click **Import**.
12. In the External Application region, click the Activity tab to verify that the import process has completed.
13. Navigate to the Security pages and assign applicable groups to users to provide access to the merged external catalogs.

## Use the Enhanced Semantic Model Extension Capabilities

The enhanced semantic model extensibility provides better usability and understanding of the model and customizations along with better performance and consistency of the semantic model. The enhanced capabilities result in a much faster time to have all changes available for reporting.

The enhanced semantic model extensions capability adopts an object focused experience instead of a task focused experience in the existing capability. This enables you to see changes done to a specific objects rather than having to derive the changes from several scattered steps. The enhanced capability has a logically organized flow for better usability with recommended practices enforced and better performance.

The enhanced capability allows you to:

- Make changes within sandboxes, which are each user's work area.
- Publish a sandbox to test and merge it to the Main once tested.

- Keep all changes for an object available in one place.
- Publish only one sandbox at a time. Publishing a sandbox removes any sandbox already published. If you've merged a sandbox, then the system preserves the changes if you publish any other sandbox.
- Zoom and focus on specific areas of the logical star using the Graphic tab on the Logical Star page.
- Rearrange the objects in the logical star using the Graphic tab on the Logical Star page.
- View all the joins in a tabular format using the Tabular tab on the Logical Star page.

A typical workflow to create extensions involves these:

1. Create a sandbox.
2. Select Perform Action and then select Create or Manage a Star.
3. Make changes as required (the changes are done to the logical model).
4. Select Perform Action and then select Manage Subject Areas.
5. Incorporate logical changes in the desired subject areas.
6. Go back to Semantic Model Extensions page, select User Extensions, select Publish Model, and then select the sandbox to publish.
7. In Oracle Analytics Cloud associated with your Oracle Fusion Data Intelligence instance, verify if the changes are reflected in the subject area.

**Topics:**

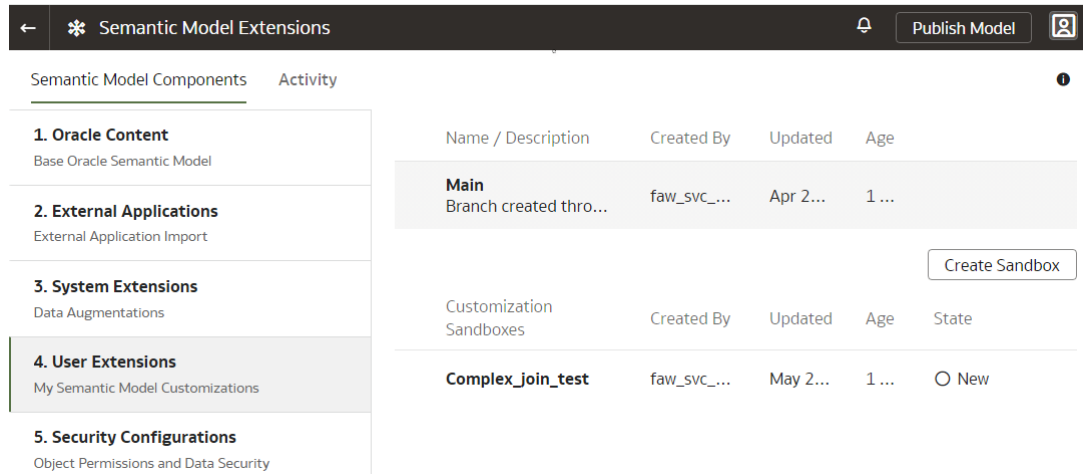
- [Create Sandbox](#)
- [Manage Subject Areas](#)
- [Manage Logical Star](#)
- [Manage Variables](#)
- [Merge Customization Sandbox to Main Sandbox](#)
- [Apply Changes](#)
- [Publish Model](#)

## Create Sandbox

To begin customizing your semantic model, create a sandbox.

You can add customizations to a test instance only. After you have added and tested your customizations, you can promote them to the production environment. See [Promote Your Customizations to the Production Environment](#).

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **User Extensions**.
4. In the User Extensions region, for Customization Sandboxes, click **Create Sandbox** to create your customizations.



- In Create a Sandbox dialog, enter a **Name** having up to 80 characters or less, provide a **Description**, and click **Done**.

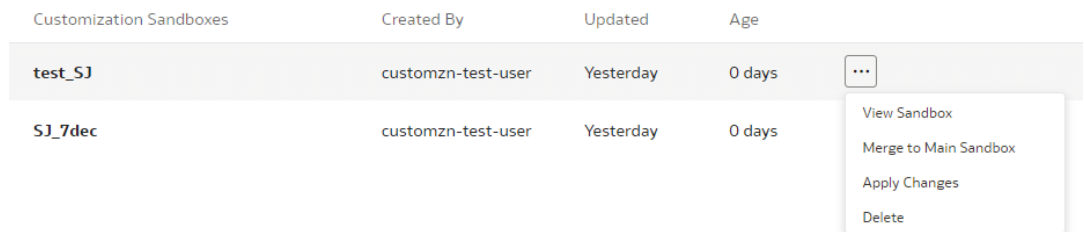
### Create a Sandbox

Name

Description

Cancel Done

- On the Semantic Model Extensions page, under Customizations Sandbox, hover over an applicable sandbox to view **Actions**, and then click **View Sandbox**.



- On the selected sandbox Details page, click **Perform Action**, and select as applicable.

Name	Object	Type	Created By	Updated By
Dw Ap Sla Invoice Schedule Cf 1	"Core"."Dw Ap Sla Invoice Schedule Cf 1"	STAR	customzn-test-user	customzn-test-user
Fact - CX - Activity	"Core"."Fact - CX - Activity"	STAR	customzn-test-user	customzn-test-user
AP Custom Liabilities	AP Custom Liabilities	SA	customzn-test-user	customzn-test-user
AP Exp	AP Exp	SA	customzn-test-user	customzn-test-user
AP Holds	AP Holds	SA	customzn-test-user	customzn-test-user
AP Invoice	AP Invoice	SA	customzn-test-user	customzn-test-user
CUSTOM PAYMENTS	CUSTOM PAYMENTS	SA	customzn-test-user	customzn-test-user
TEST_SA NEW	TEST_SA NEW	SA	customzn-test-user	customzn-test-user

See:

- [Manage Subject Areas](#)
- [Manage Logical Star](#)
- [Manage Variables](#)

## Manage Subject Areas

The Manage Subject Areas action enables you to organize all entities and attributes available for reporting in subject areas.

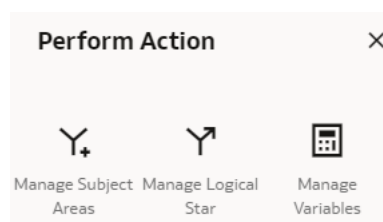
You can create business-friendly names and organize them in a desired order within folders to make it easier to find and include in the reports. The typical organization is to have each dimension organized in a folder with all its attributes within it, followed by folder for facts and calculations. You can rearrange columns based on your organizational preferences.

You can create a subject area or modify a subject area.

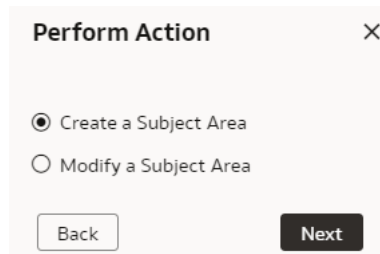
## Create Subject Area

You can create a subject area as a container and later add facts and dimensions to your new subject area or create a subject area based on an existing one. The subject area enables you to organize all entities and attributes available for reporting.

1. On the Semantic Model Extensions page, under Customizations Sandbox, hover over an applicable sandbox to view **Actions**, and then click **View Sandbox**.
2. On the selected sandbox Details page, click **Perform Action**, and then select **Manage Subject Areas**.



3. In Perform Action, select **Create a Subject Area**, and then click **Next**.



4. In step 1 of the wizard, create a subject area using one of the methods:
  - Select **Create a Subject Area** to create a subject area container, and provide these details:
    - a. Enter a name without any leading or trailing white spaces, add a description, and then click **Next**.
    - b. In step 2 of the wizard, click **Manage Elements**, and then click either **Manage New Customizations** to select custom elements that you created or **Manage Factory Customizations** to select factory data elements to rearrange the subject area elements that are delivered by Oracle.
    - c. Click **Add Subject Area** to select and add data elements from multiple subject areas.
    - d. In step 3 of the wizard, organize and rename the data elements in your new subject area, and then click **Next**.
    - e. In step 4 of the wizard, review your new subject area and click **Finish** to create it.
  - Select **Create a Subject Area based on an existing one** to create a subject area using an existing one in the system, select an existing subject area, name your subject area, and then click **Next**. Complete steps 2, 3, and 4 of the wizard.

## Modify Subject Area

Modify a custom subject area to change the previously selected data elements or add more data elements.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **User Extensions**.
4. On the Semantic Model Extensions page, under Customizations Sandbox, hover over an applicable sandbox to view **Actions**, and then click **View Sandbox**.
5. On the selected sandbox Details page, click **Perform Action**, and then select **Manage Subject Areas**.
6. In Perform Action, select **Modify a Subject Area**, select the subject area that you want to modify, and then click **Next**.



The image shows a 'Perform Action' dialog box with a close button (X) in the top right corner. It contains two radio button options: 'Create a Subject Area' (unselected) and 'Modify a Subject Area' (selected). Below the radio buttons is a dropdown menu labeled 'Select Subject Area'. At the bottom, there are two buttons: 'Back' and 'Next'.

7. Follow through the wizard to modify the subject area and in step 4 of the wizard, review your modified subject area and click **Finish**.

## Manage Logical Star

A logical star is the basic complete unit of a dimensional model with a fact at the center and joined to the surrounding dimensions. Manage a logical star by adding and updating objects, attributes, joins, and calculations.

Facts contain elements that you can measure such as count, aggregate, and perform statistical operations on; while dimensions contain elements that provide context to those measurements. Each logical star has one fact and one or more dimensions. You can manage your own custom star or you can manage a prebuilt star by adding dimensions. You do these operations to extend the model to make use of custom data objects or elements that you've added to the warehouse or to create new calculations or joins to address your reporting needs.

## Create Logical Star

Create a custom logical star to use custom data objects or elements that you have added to the warehouse or to create new calculations or joins to address your reporting needs.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **User Extensions**.
4. On the Semantic Model Extensions page, under Customizations Sandbox, hover over an applicable sandbox to view **Actions**, and then click **View Sandbox**.
5. On the selected sandbox Details page, click **Perform Action**, and then select **Manage Logical Star**.
6. In Perform Action, select **Create Logical Star**, and then click **Next**.

The image shows a 'Perform Action' dialog box with a close button (X) in the top right corner. It contains two radio button options: 'Create Logical Star' (selected) and 'Edit Logical Star' (unselected). At the bottom, there are two buttons: 'Back' and 'Next'.

You're now ready to add facts, dimensions, hierarchy, and additional columns.

## Add Fact

Add elements that you can measure such as count and aggregate, and perform statistical operations to your custom logical star using the Add Fact option.

While selecting an aggregation rule for each fact column to set the aggregation behaviour, use a time-balanced aggregation when the added measure mustn't be "aggregated" by default across a time dimension. Oracle Fusion Data Intelligence supports non-aggregation types like "Last" or "First" in place of the "SUM" aggregation type when required. Use a level-based aggregation when the underlying measure must always be calculated to a specific level of a predefined dimensional hierarchy. For example, in a product hierarchy that has the Product Total, Product Category, Product Sub-Category, and Product Details levels, you add a new measure called "Revenue" and need this "Product Category Revenue" measure to be aggregated to Product Category, then you must use the level-based aggregation and choose the right level of the Product Dimension. This setting enables Oracle Fusion Data Intelligence to always aggregate and show the value of the measure at the Product Category level. This is useful when you need to calculate Product Revenue as a % of Category Revenue.

1. Navigate to the Semantic Model Extensions page, under Customizations Sandbox, hover over an applicable sandbox to view **Actions**, and then click **View Sandbox**.
2. On the selected sandbox Details page, click **Perform Action**, select **Manage Logical Star**, and then select **Create Logical Star**.
3. On the Logical Star page, click **Add Fact**, and in step 1 of the Add a Fact wizard, select the schema, and then select a view or table or synonym as the object. For example, FCT\_CALC\_Extensions.

You see the fact table for the selected object.

4. In the details of the fact table for the selected source table, click the **Select Fact** and **Use for Key** check boxes for the source columns that you want to add to your new fact table in the target subject area.
5. Optional: In the details of the fact table for the selected source table, under **Select Degen Attribute**, click the check boxes for the attributes for which you need the degenerate dimension to be created.
6. If any of the selected attributes have been removed or modified in the source table since the last refresh, then you see such columns highlighted and a message asking whether you want to update the table. Select **OK** in the message to reload the source columns. If you want to review the changes to the source columns, then click **Cancel** in the message, and later click **Refresh** to reload the source columns.

If any of the attributes that you haven't selected have been removed or modified in the source table, then you see the refreshed list of source columns. If any of the custom columns fail validation during the refresh, then you see a message asking you to resolve the cause of failure and revalidate.

7. Optional: Click Create Column to add a new column to your new fact table in the target subject area using these instructions:
  - a. In Create Column, enter a display name.
  - b. Under **Data Elements**, search for a data element from the physical table of the selected dimension table.
  - c. From the search results, double-click the data element to place it in the text pane.
  - d. Under **Functions**, search for a function to construct a column using expressions. For example, search for functions like "substring" or "concatenate" to construct new

expression-based columns. From the search results, double-click the applicable result to add it to the central text pane.

- e. Click **Validate**, and then click **Save**.
8. Select the aggregation rule for each fact column to set the aggregation behaviour. You can set the time-balanced aggregation rule for a time dimension and hierarchy level-based aggregation rule for a dimension using these steps:
  - a. For a fact column, click the **Time-Balanced Aggregation** icon.
  - b. In the Time-Balanced Aggregation dialog, click **Add Time Dimension**, adjust the aggregation rule, and then click **OK**.
  - c. For a fact column, click the **Hierarchy Level-Based Aggregation** icon, select the dimension and level. Click **Add Dimension** to add more dimensions. Click **OK**.

## Manage Dimensions

You can create a custom dimension, join it to the prebuilt or custom facts, and add the custom dimension to any subject area to meet your business requirements.

You can add a new or an existing dimension.

1. Navigate to the Semantic Model Extensions page, under Customizations Sandbox, hover over an applicable sandbox to view **Actions**, and then click **View Sandbox**.
2. On the selected sandbox Details page, click **Perform Action**, select **Manage Logical Star**, select **Edit Logical Star**, select the applicable fact and then select **Next**.
3. On the Logical Star – Fact page, click **Manage Dimension**, and select either **Add Dimension** or **Add Existing Dimension**.

## Add Dimension

Add dimensions to facts to complete a new star or to update existing stars. You can create joins from your custom dimension to a prebuilt fact.

1. In step 1 of the Add a Dimension wizard, select the schema, and then select the dimension table in **Object**. For example, COST\_CENTER\_VIEW1, and add a name in **Dimension Name**.

### Note:

If you don't see the schema or table, then ensure that you have granted select permission to the OAX\$OAC schema in the autonomous data warehouse. For example, `grant select on <schema>.<table> to OAX$OAC`. See [Load Customization Data to the Autonomous Data Warehouse](#).

You see the attributes available in the selected dimension table. You can use the **Search** and **Filter** fields to limit the attributes displayed for the dimension table.

2. Select the attributes that you want to use from the dimension table and indicate an attribute to be used as the key for joining with a fact table in the target subject area.
3. If any of the selected attributes have been removed or modified in the source table since the last refresh, then you see such columns highlighted and a message asking whether you want to update the table. Select **OK** in the message to reload the source columns. If you want to review the changes to the source columns, then click **Cancel** in the message, and later click **Refresh** to reload the source columns.

If any of the attributes that you haven't selected have been removed or modified in the source table, then you see the refreshed list of source columns. If any of the custom columns fail validation during the refresh, then you see a message asking you to resolve the cause of failure and revalidate.

4. Optional: Click **Create Column** to add another column to your dimension table in the target subject area using these instructions:
  - a. In Create Column, enter a display name.
  - b. Under **Data Elements**, search for a data element from the physical table of the selected dimension table.
  - c. From the search results, double-click the data element to place it in the text pane.
  - d. Under **Functions**, search for a function to construct a column using expressions. For example, search for functions like "substring" or "concatenate" to construct new expression-based columns. From the search results, double-click the applicable result to add it to the central text pane.
  - e. Click **Validate**, and then click **Save**.
5. In step 2 of the wizard, assemble the product hierarchy using the attributes from this dimension and click **Finish**. See [Add Hierarchy](#).
6. On the Logical Star: Fact page, in the Graphic tab, click on the prebuilt fact and drag drop on the custom dimension that you created to open the Join dialog.
7. In the Join dialog, select the join type, and then select the dimension keys to join them with the extended dimension keys. If you want to provide expressions as join conditions, then click **Complex Join** and in Create Joins, select applicable **Content Level**, click **Add Joins**, select the target and source logical tables, enter the join condition as an expression, and then click OK.

## Add Existing Dimension

If you want to provide additional context to facts, you can create your own dimension and join to an existing available column in a fact.

For example, if you want to report on invoice categories, create a dimension called "Invoice Category" and join to a column in the fact that has that information. It is important to remember that one dimension record must join to one or more fact records; it should be a 1-many join. You shouldn't have many to one or many to many joins between a dimension and fact table.

1. On the Logical Star – Fact page, click **Manage Dimension**, and select **Add Existing Dimension**.
2. In Add Table, select the dimensions to add.

## Manage Extensions

After adding the extension, you can extend the dimensions, add hierarchy, and add columns to ensure that your custom logical star meets your business requirements..

On the Logical Star – Fact page, right click on an extension, click **Manage Extension**, and select any of these:

- Extend Dim
- Add Hierarchy
- Add Column

## Extend Dimension

Extend prebuilt dimensions with additional attributes from another data source. For example, you can create a category column that isn't available in the prebuilt dimensions.

1. In step 1 of the Extend a Dimension wizard, select a schema and table from the database.
2. Select the columns that you want to expose or use as a key for creating the join.
3. Click in the **Display Name** table field to enter a new name for the column or to edit an existing one and then click **Enter** to accept or click **Esc** to cancel.
4. If any of the selected attributes have been removed or modified in the source table since the last refresh, then you see such columns highlighted and a message asking whether you want to update the table. Select **OK** in the message to reload the source columns. If you want to review the changes to the source columns, then click **Cancel** in the message, and later click **Refresh** to reload the source columns.

If any of the attributes that you haven't selected have been removed or modified in the source table, then you see the refreshed list of source columns. If any of the custom columns fail validation during the refresh, then you see a message asking you to resolve the cause of failure and revalidate.

5. Optional: Click **Create Column** to add another column to your dimension table in the target subject area using these instructions:
  - a. In Create Column, enter a display name.
  - b. Under **Data Elements**, search for a data element from the physical table of the selected dimension table.
  - c. From the search results, double-click the data element to place it in the text pane.
  - d. Under **Functions**, search for a function to construct a column using expressions. For example, search for functions like "substring" or "concatenate" to construct new expression-based columns. From the search results, double-click the applicable result to add it to the central text pane.
  - e. Click **Validate**, and then click **Save**.
6. Click **Next**.
7. In step 2 of the wizard, select the join type, and then select the dimension keys to join them with the extended dimension keys. If you want to provide expressions as join conditions, then click **Complex Join** and in Create Joins, click **Add Joins**, select the target and source logical tables, enter the join condition as an expression, and click **OK**.
8. Click **Finish**.

## Add Hierarchy

Assemble the product hierarchy using the attributes from a dimension table. Hierarchies enable you to define aggregations and drill downs. This makes it easier to report on summary level and drill into details easily and within the same visualization.

1. In step 1 of the Add a Hierarchy wizard, name your hierarchy in **Hierarchy Name**.
2. Select, drag, and drop available data elements into the Selected Data elements pane to design a hierarchy for the dimension.
3. In the Selected Data Elements pane, click a level to update its primary key and set its display attribute in the Properties pane.

You can add multiple levels in your hierarchy by right-clicking at a level and selecting **Add Child** or **Add 'n' Child Levels**. For example, your Region Hierarchy can have Region Total at Level 1, Region at Level 2, Country at Level 3, State at Level 4, and City at Level 5.

4. Ensure **Add hierarchy to Subject Area** is selected and click **Finish**.

## Add Columns

You can create columns to provide additional data elements or calculations. You can add derived and physical columns.

1. On the Add Column page, select **Add Derived Column**, and complete these steps:
  - a. In Create Column, enter a display name.
  - b. Under **Data Elements**, search for a data element from the physical table of the selected dimension table.
  - c. From the search results, double-click the data element to place it in the text pane.
  - d. Under **Functions**, search for a function to construct a column using expressions. For example, search for functions like "substring" or "concatenate" to construct new expression-based columns. From the search results, double-click the applicable result to add it to the central text pane.
  - e. Click **Validate**, and then click **Save**.
2. On the Add Column page, select **Add Physical Column**, and complete these steps:
  - a. In Select Physical Column, select the columns and click **OK**.
  - b. On the Add Columns page, for the physical columns, select the **Display** check box to expose the columns, and click the **Logical Level** icon to set the required level.
  - c. In Set Logical Level, select the dimension, select the level of the dimension hierarchy, and then click **OK**.

## Edit Logical Star

Edit your logical star to modify any of the extensions that you had previously added or to add further extensions.

1. Navigate the Semantic Model Extensions page, under Customizations Sandbox, hover over an applicable sandbox to view **Actions**, and then click **View Sandbox**.
2. On the selected sandbox Details page, click **Perform Action**, and then select **Manage Logical Star**.
3. In Perform Action, select **Edit Logical Star**, select the applicable fact, and then click **Next**.
4. On the Logical Star – Fact page, click **Manage Dimension** and proceed with the steps discussed in [Manage Dimensions](#).

## Manage Variables

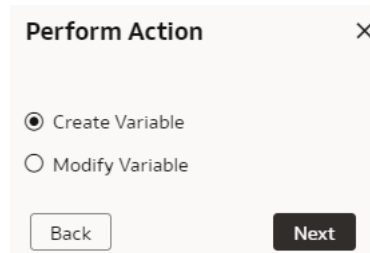
Use the Manage Variables action to control the behaviour of sessions and queries. You can create and modify the custom variables.

## Create Variable

Create custom session variables that you can use in your semantic model.

1. Sign in to your service.

2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **User Extensions**.
4. On the Semantic Model Extensions page, under Customizations Sandbox, hover over an applicable sandbox to view **Actions**, and then click **View Sandbox**.
5. On the selected sandbox Details page, click **Perform Action**, select **Manage Variables**, and then select **Create Variable**.



You see the wizard sequence to add the session variables and a list of existing session variables.

6. In step 1 of the wizard, check if any of the existing session variables serve your purpose. If yes, then you can exit the wizard and use the applicable existing session variables in your analyses. If no, then continue with the next steps to create the session variables that you require.
7. In **Initialization Block Name**, enter a name such as `Add a Session variable using Invoice Received Date`, add a brief description, and select a preceding initialization block in **Preceding Block**.
8. In **SQL Query**, enter the SQL query that would be executed in the autonomous data warehouse and return a value that you can use in the reports and click **Next**. For example, if you want to get the Exchange Rate Type that's defined in the system into a session variable, then you can use the following SQL script:

Copy

```
SELECT PARAMETER_VALUE FROM DW_CONTENT_PARAM_CONFIG WHERE
PARAMETER_CODE='PARAM_GLOBAL_EXCHANGE_RATE_TYPE'
```

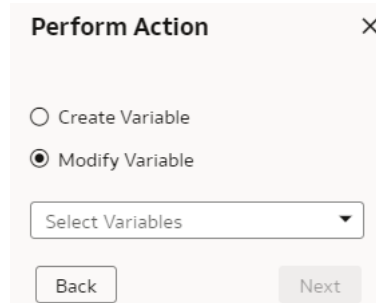
9. In step 2 of the wizard, create the session variables using the output of the initialization block created in step 1 of the wizard. Select **Row-wise Initialization** to reset variable value for each row and **Use caching check boxes** to improve performance.
10. Click **Finish**.

## Modify Variable

Modify a custom variable to update the SQL query that would be executed in the autonomous data warehouse and return a value that you can use in the reports.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **User Extensions**.

4. On the Semantic Model Extensions page, under Customizations Sandbox, hover over an applicable sandbox to view **Actions**, and then click **View Sandbox**.
5. On the selected sandbox Details page, click **Perform Action**, and then select **Manage Variables**.
6. In Perform Action, select **Modify Variable**, select the variables that you want to modify, and then click **Next**.



**Perform Action** [X]

Create Variable

Modify Variable

Select Variables [v]

Back Next

7. Follow through the wizard to modify the variable and click **Finish**.

## Merge Customization Sandbox to Main Sandbox

After creating the semantic model extensions, you must merge the customization sandbox that contains your semantic model extensions into the main sandbox to make the extensions available for processing.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **User Extensions**.
4. On the Semantic Model Extensions page, under Customizations Sandbox, hover over an applicable sandbox to view **Actions**, and then click **Merge to Main Sandbox**.
5. In Confirm Merge with Main, review the message and click **Merge**.

### Confirm Merge with Main

This sandbox will be merged with the main sandbox.  
Are you sure you want to merge?



Cancel Merge

## Apply Changes

After merging your semantic model extensions with the main sandbox, you must apply the changes to your semantic model to use the extensions in your visualizations.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.



3. On the Semantic Model Extensions page, click **User Extensions**.
4. On the Semantic Model Extensions page, under Customizations Sandbox, hover over an applicable sandbox to view **Actions**, and then click **Apply Changes**.

## Publish Model

You can publish the sandbox in the non-production environments such as development or test to ensure that there are no errors.

While publishing the data model, you can select the user extensions and security configurations that you added as part of customizing the semantic model. If you select the security configurations, then the system applies them on the user extensions that you selected. If the security configurations refer to elements in the model that aren't part of the user extensions, then the system excludes them at the time of publishing the model.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Semantic Model Extensions** under **Application Administration**.
3. On the Semantic Model Extensions page, click **Publish Model**.
4. In Publish Model, select the user extensions and security configurations that you want to publish.

### Publish Model

This action will deploy the semantic model to the target environment using these components of the semantic model:

1. Oracle Content
2. System Extensions
3. User Extensions ⓘ

4. S

None - Unpublish custom extensions

Sandboxes

Main

Cancel Publish

5. Click **Publish**.

# 8

## Manage Oracle Fusion Data Intelligence

As the cloud account administrator with the functional administrator or system administrator application role, you can manage your Oracle Fusion Data Intelligence instance to ensure that you have the latest application updates, backups to restore in case of emergencies, and snapshots of your application artifacts.

### Topics:

- [Manage Application Updates](#)
- [Bundle Your Application Artifacts](#)
- [Configure a Virus Scanner](#)
- [About Backup and Restore](#)
- [About Disaster Recovery](#)
- [About Scaling Resources](#)
- [About Licensing](#)

## Manage Application Updates

As a service administrator, you can decide when to apply the application updates except the emergency patches that are deployed automatically.



### Topics:

- [About Application Updates](#)
- [Update Your Application](#)
- [View Release Update Activity](#)

## About Application Updates

Application updates are available for major releases (quarterly basis), patches (monthly basis), and emergency fixes (as needed).

Except the emergency patches, you can decide when to apply the application updates. You can schedule the update for current and major releases to occur by a deadline. After the deadline, Oracle automatically updates your application. These updates have zero downtime. The auto-update process updates the data model and immediately after the data model update, this process updates the content. This process runs the incremental data pipelines as part of the data model upgrade process when upgrade is scheduled to run for the day. You can check the last refresh date either from the Console or the subject area to ensure that the data has been refreshed as part of the data model upgrade process.

You can view the application updates and plan accordingly using the Release updates tile under Service Administration on the Console. You also see a notification on the Data

Configuration page when an application update is available. You can then plan to uptake using the Release Updates tile.

During the application upgrade, all records in the tables gets updated with the date of the upgrade. The upgrade process then performs a full data refresh during which the data pipelines pull data from the tables based on the date of the upgrade. This process also performs an incremental data refresh. This upgrade adds new pillars, modules, data models (facts and dimension tables), key metrics, workbooks, and visualizations. The data pipelines for functional areas that have been activated are preserved during the upgrade. The data pipelines in Saved or Scheduled status are reset to Saved status. To activate these data pipelines, you must set them to Activated status. You can skip an upgrade for one release. However, you must upgrade when the next patch is available. The application upgrade adds new and replaces existing modified content with the latest version. If you've merged an external application, then as part of the upgrade some objects within the external semantic model gets upgraded too. Hence after every upgrade, you're recommended to download the latest semantic model uploaded through the user interface and make any changes on top of it.

See [About Oracle Fusion Data Intelligence Releases](#).

## Update Your Application

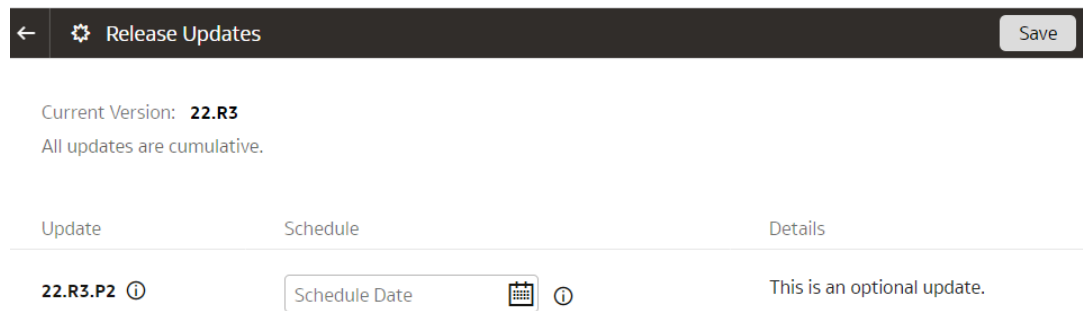
As the service administrator, you can view available application updates and schedule a date to accept the update.

Oracle Fusion Data Intelligence provides automatic updates of the application to ensure you're using the most current software. You can schedule the update earlier than the predefined date and time. If you do nothing, the application upgrade automatically runs on the date shown on the Release Updates page. However, prior to updating your application, you must ensure that a data pipeline for at least one functional area has been activated.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Release Updates** under **Service Administration**.



3. On the Release Updates page, select an application update under **Update**, and then in **Schedule**, select the date on which you want to apply it.



4. Click **Save**.






## View Release Update Activity

You can view the actual date when a release was deployed for the instance and any service administrator actions such as date selections for release or patch uptake.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Release Updates** under **Service Administration**.
3. On the Release Updates page, click **Activity**.
4. In the Activity section, view the release update details.

## Bundle Your Application Artifacts

As a service administrator, you can manage snapshots of your application artifacts as bundles.

-  [LiveLabs Sprint: How do I migrate DV workbooks from my test environment to my production environment?](#)
-  [LiveLabs Sprint: How do I backup and restore my environment using bundles?](#)
-  [LiveLabs Sprint: How do I create and deploy security bundles?](#)
-  [LiveLabs Sprint: How do I generate content bundles?](#)
-  [LiveLabs Sprint: How do I create and deploy semantic model bundles?](#)

### Topics:

- [About Bundles](#)
- [Create a Bundle](#)
- [Edit a Bundle](#)
- [Publish a Bundle](#)
- [Export a Bundle](#)
- [Import a Bundle](#)
- [Deploy a Bundle](#)
- [Delete a Bundle](#)
- [View the Activity History of Bundles](#)

## About Bundles

Bundles are snapshots of your application artifacts such as configurations and customizations at a certain point in time.

Bundles work on environments where the source and target are at the same level or the source is at a lower version and the target is at a higher version. For example, a bundle generated from a previous content version works on the latest content version. Ensure that your bundle size is less than 1 GB. If the bundle size exceeds 1 GB, then enter a service request in My Oracle Support. Prior to deployment, the system validates the bundles to confirm whether the bundles contain all prerequisites. If there is a validation error, then you see the applicable bundle with "Validation Failed" status and you can't deploy it. You must fix the issue and try to deploy again.

Bundles enable you to:

- Package custom development by defining a bundle that represents a subset of application artifacts in an environment such as development, test, or production.
- Migrate custom development and deploy the bundle on a target environment.
- Synchronize instances by promoting changes from one environment to another such as production to test.
- Restore the system when something goes wrong with an environment and you need to do a complete system restore.
- Create a backup of the environment or subset of application to save current state of the artifacts.
- Restore artifacts by importing from a bundle to restore state of the relevant artifacts to what was in the bundle.

You can bundle your application artifacts as:

- **Data Config bundle:** This includes pipeline parameters, activation metadata, data augmentations, and custom data configurations. You can install this bundle in an existing environment after a hard data reset. This is useful to leave content as-is and reset the data pipeline. When you bundle data configurations, only the deployed data augmentations or configurations are included. Augmentations or configurations that aren't in deployed state in the source instance won't be included in a data configuration bundle.
- **Semantic Model bundle:** This includes main branch, tags, custom branch, and all the security customizations.
- **Security bundle:** This includes custom application roles and custom data security.
- **Content bundle:** This includes snapshots of Oracle Analytics Cloud folders, projects, dataset definitions, workbooks, duty roles for content, and report parameters. The content bundle always merges the catalog content from source to target. While merging, if any conflicts are found, it replaces the content. It doesn't track the deleted content.
- **Composite bundle:** This includes one or more of the other bundles.
- **Environment bundle:** This includes all artifacts of a specific environment to revert to a known state of system. For example, at the end of every week, the service administrator can create a bundle called DevEnv\_YYMMDD to maintain a backup of the environment. You must first deploy the data configuration bundle or manually activate your data pipelines before deploying the environment bundle.

 **Note:**

Ensure that you've activated the functional areas and data is available prior to working with the semantic models or content. Either manually configure and activate your data pipelines in the target environment, or deploy a Data Config bundle to ensure that configurations and activations are at the same level as the source environment. Only then, it makes sense to deploy an Environment bundle, Semantic bundle, or Composite bundle because they depend on data.

Follow these recommended practices to ensure a smooth experience:

- Include the applicable security-related information in the Semantic Model and Content bundles.
- Reassign the groups to the users because the Security bundle doesn't overwrite the user-group mappings.
- Include the security configuration when you're exporting a Semantic Model bundle from a test to a production environment.
- Use unique names for the semantic model extension steps. This enables the tags to work correctly while using the Content bundle to migrate your content to the target instance.

## What's Available In Bundles

Learn what's available in bundles.

Area	Artifact	Included in Bundles
Security	Application roles	Security and Environment
Security	Users and Groups	No – move manually, done in Identity Cloud Service
Security	Group to Role assignments	Security and Environment
Security	Security contexts including Configurable Context	No – move manually
Uploaded files	Financial Categories, Security assignments	No – move manually
System settings	Oracle Analytics Cloud system settings including Preview features	No – create manually in target environment
Enable features	Activated Oracle Fusion Data Intelligence features	No – create manually in target environment
Semantic model extensions	System, user, security configuration	Semantic and Environment
Data validations	Scheduled validations such as AP Invoices, weekly	No – create manually in target environment
Oracle Analytics Cloud content		
Key metrics, Workbooks, Connections, Analyses	Content and Environment	
Data flows, Functions, Machine Learning apps	Environment	
Key metrics	No – create service request	
Datasets	No – move manually	
Reporting configurations	Basic reporting configurations	Content

Area	Artifact	Included in Bundles
Reporting configurations	Advanced (Configurable Account Analysis)	No – create manually in target environment
Data pipeline	Pipeline parameters, functional areas, augmentations	Data configurations
Data pipeline	Frequent refresh modules, tables, prioritized refresh	No – create manually in target environment
Data pipeline	Warehouse full reload schedules	No – create manually in target environment
Data pipeline	Custom data configurations – DFFs, custom applications such as Configurable Account Analysis	No – create manually in target environment
Connections	Data Augmentation Connectors	No – create manually in target environment
Oracle Cloud Infrastructure Console settings	Entitlements, connections, PaaS component settings	No – create manually in target environment
Oracle Autonomous Data Warehouse custom schema	OAX_USER schema objects and data	No – use data pump to back up to and restore from Oracle Object Storage Service

## Create a Bundle

Create a snapshot of your application artifacts to save their current state. You can view the bundles that you created on the Bundles page.

While creating a bundle in your source instance, ensure that you select only the data sources that are also available in the target instance to avoid deployment failures in the target instance.

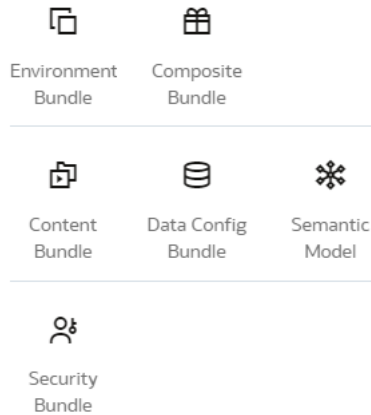
Prior to creating and generating a content bundle, ensure that none of the datasets have names with special characters. Also, if some of the datasets don't have key metrics to back up, manually select the key metrics from the respective subject areas and datasets and regenerate the content bundle. If there aren't any key metrics to back up in the bundle, then you can only select the **OAC Content** option from the user interface.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Bundles** under **Application Administration**.
3. On the Bundles page, click **Create**.

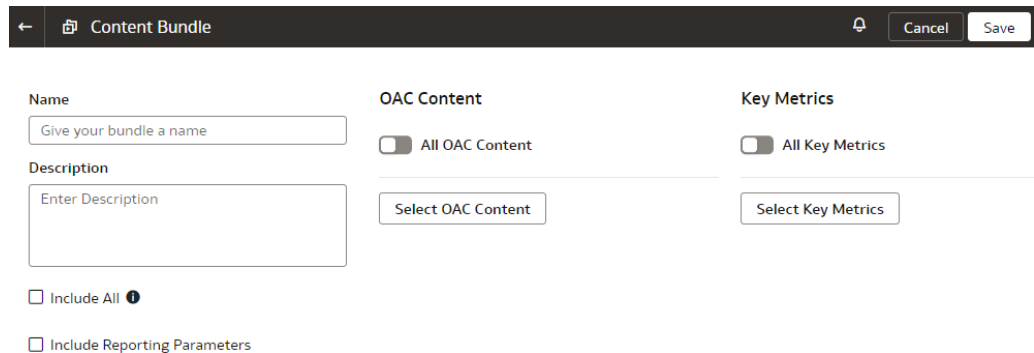


4. In Create Bundles, select the type of bundle that you want to create. For example, Content Bundle.

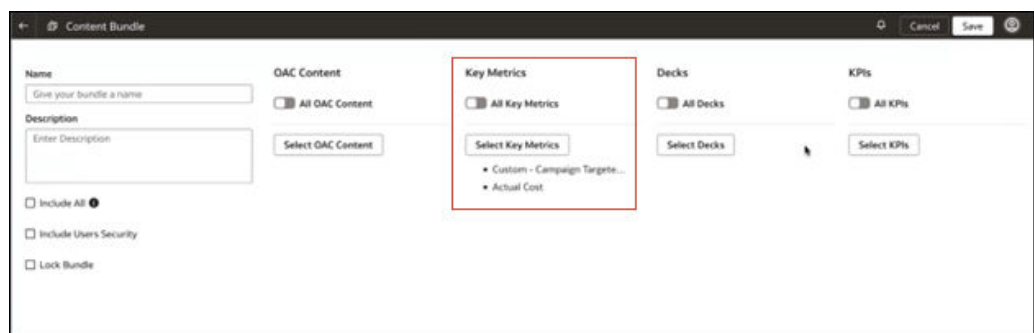
## Create Bundle



5. Enter a name and description for your bundle.
6. Depending on the type of bundle, select the applicable option and then click **Save**:
  - For a content bundle, select the **Include All Content** check box, or select the applicable Oracle Analytics Cloud content, workbooks, and key metrics using the corresponding toggles and buttons. You can select the **Include Users Security** and **Include Reporting Parameters** check boxes.



- For a key metrics content bundle, select the key metrics you want to bundle using the corresponding toggles and buttons. Key metrics are also included with Environment Bundles. To improve performance, select the specific key metrics you want to bundle.

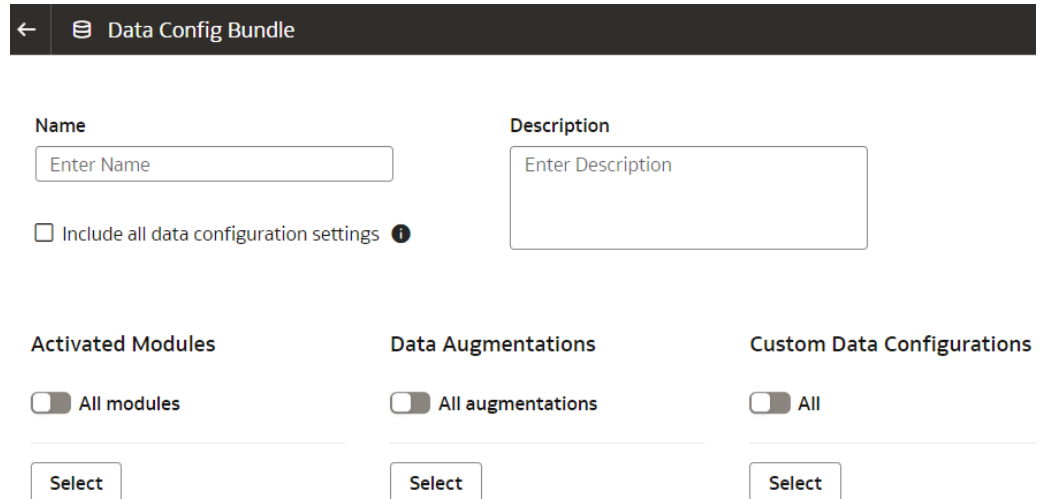




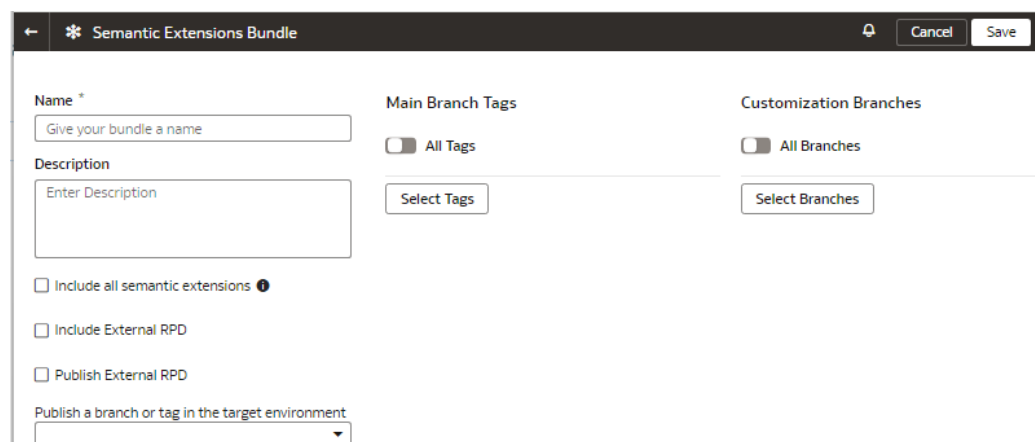
 **Note:**

To import key metrics, you must deploy a key metric bundle into a new instance with key metrics enabled. You can import key metrics in datasets however the entire dataset won't be imported due to security limitations. Datasets without key metrics aren't included in key metrics.

- For a data configuration bundle, select the **Include all data configuration settings** check box, or select the applicable modules, augmentations, and custom data configurations using the corresponding toggles and buttons.



- For a semantic extensions bundle, select the **Include all semantic extensions** check box, or select the applicable branch or tag in the **Publish a branch or tag in the target environment** field, or select applicable tags and branches using the corresponding toggles and buttons. You can select the **Include External RPD** or **Publish External RPD** check boxes to include or publish the external semantic model.



If you've migrated to the latest wizards for extending the semantic model, then select the applicable external application and select the **Semantic Extensions** check box to include all the extensions.

← \* Semantic Extensions Bundle 🔔 Cancel Save


**Name**  
Give your bundle a name

**Description**  
Enter Description

External Application

Semantic Extensions

- For a security bundle, select the **Include all security settings** check box select the application roles using the toggle and button.

 **Note:**

If you've uptaken the enhanced security capability of Oracle Fusion Data Intelligence, then you no longer can specifically select groups as part of the Security bundle. See [About Managing Users, Groups, Application Roles, and Data Access](#).

← \* Security Bundle 🔔 Cancel Save

**Name**  
Give your bundle a name

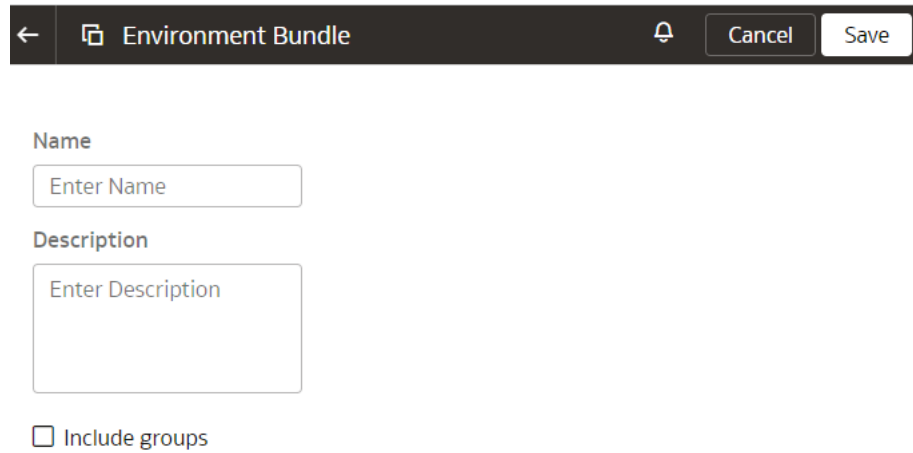
**Description**  
Enter Description

**Application Roles**  
 All Application Roles

Select Application Roles

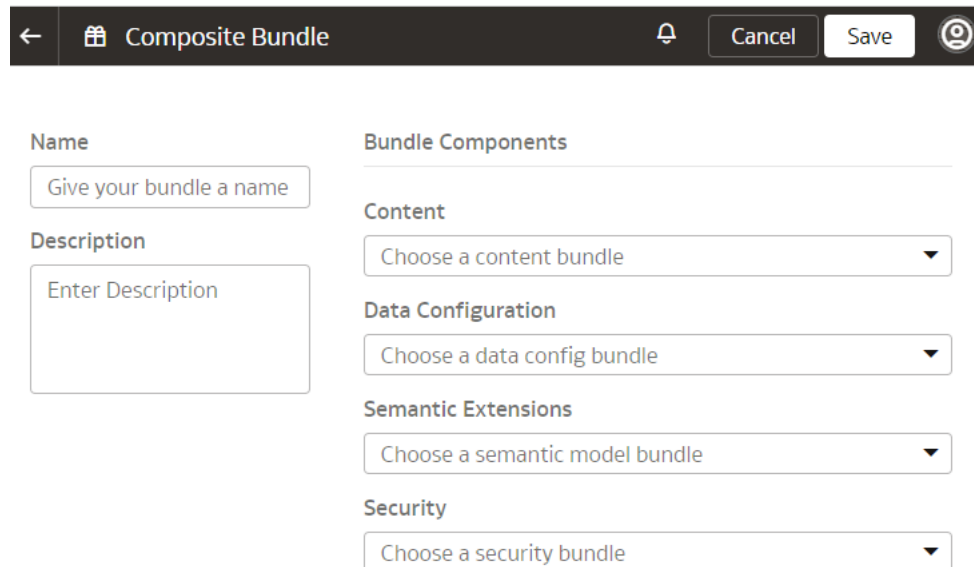
Include All ⓘ

- For an environment bundle, provide a name.



The screenshot shows a dark-themed dialog box titled "Environment Bundle". At the top, there is a back arrow, a home icon, and the title. On the right side, there are "Cancel" and "Save" buttons. The main content area includes a "Name" field with the placeholder text "Enter Name", a "Description" field with the placeholder text "Enter Description", and a checkbox labeled "Include groups" which is currently unchecked.

- For a composite bundle, select any of the other bundles.

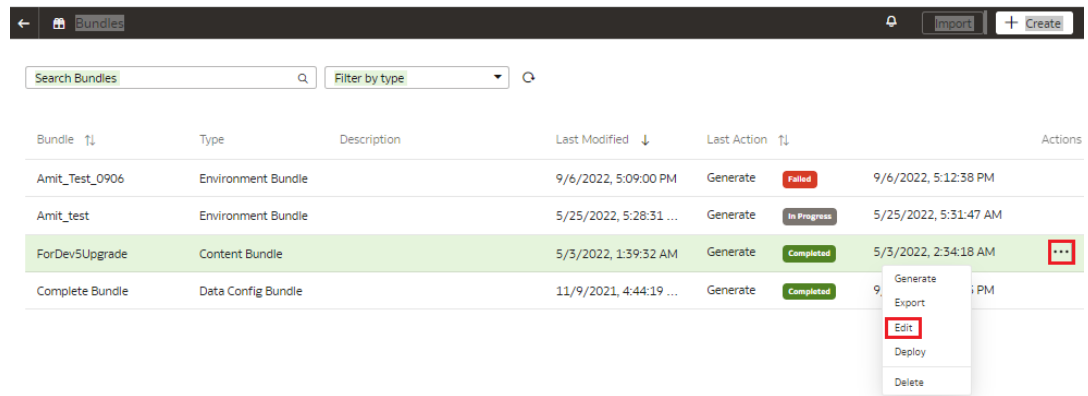


The screenshot shows a dark-themed dialog box titled "Composite Bundle". At the top, there is a back arrow, a home icon, the title, a notification bell icon, "Cancel" and "Save" buttons, and a user profile icon. The main content area is split into two columns. The left column has a "Name" field with the placeholder "Give your bundle a name" and a "Description" field with the placeholder "Enter Description". The right column, titled "Bundle Components", contains four dropdown menus: "Content" (placeholder: "Choose a content bundle"), "Data Configuration" (placeholder: "Choose a data config bundle"), "Semantic Extensions" (placeholder: "Choose a semantic model bundle"), and "Security" (placeholder: "Choose a security bundle").

## Edit a Bundle

Edit a bundle if you need to change the application artifacts captured in the bundle.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Bundles** under **Application Administration**.
3. On the Bundles page, hover over the bundle that you created and click under **Actions**.
4. From **Actions**, select **Edit**.

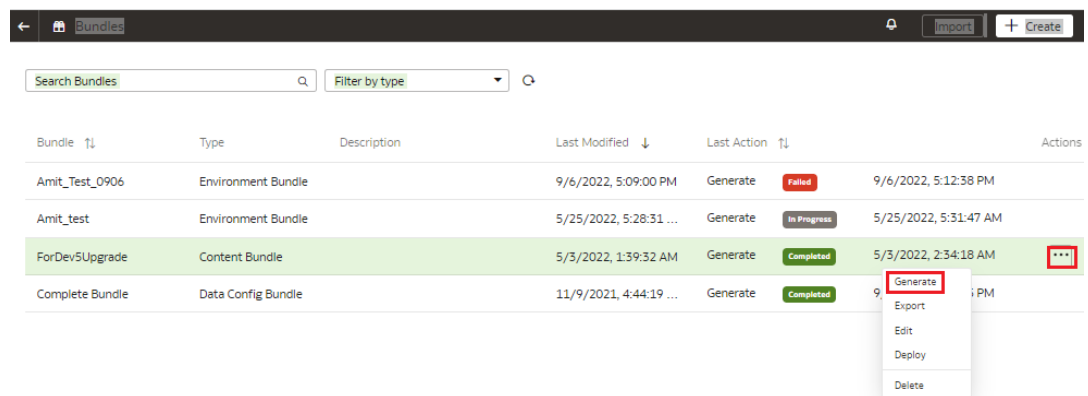


5. On the applicable bundles page, make your changes and then click **Update**.

## Publish a Bundle

Publish a bundle from the source environment. This action generates a snapshot of the application artifacts and saves the snapshot to a repository. You can download this bundled artifact and import it into different instances.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Bundles** under **Application Administration**.
3. On the Bundles page, hover over the bundle that you created and click under **Actions**.
4. From **Actions**, select **Generate** to create and publish the bundle.



You see the bundle with Generated status on the Bundles page.

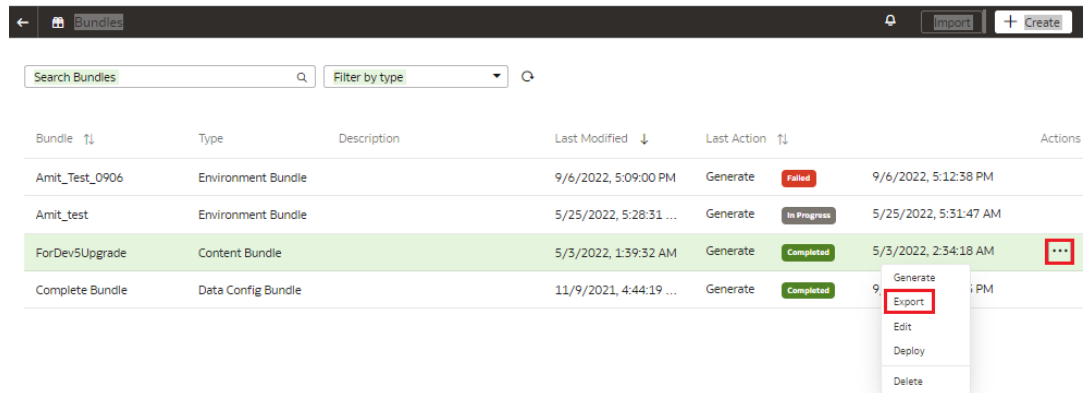
## Export a Bundle

Export the bundle .aab file from your source system to a repository or your local machine.

 [LiveLabs Sprint](#)

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Bundles** under **Application Administration**.

3. On the Bundles page, hover over the bundle that you created and click under **Actions**.
4. From **Actions**, select **Export**.



## Import a Bundle

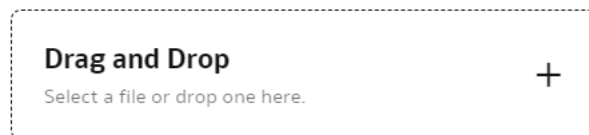
Import the bundle .aab file into the target environment from your computer to restore the state of the application to the checkpoint represented by the bundle.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Bundles** under **Application Administration**.
3. On the Bundles page, click **Import**.



4. In the Import Bundle dialog, click in Drag and Drop, and then select the applicable .aab file from your local machine.

### Import Bundle



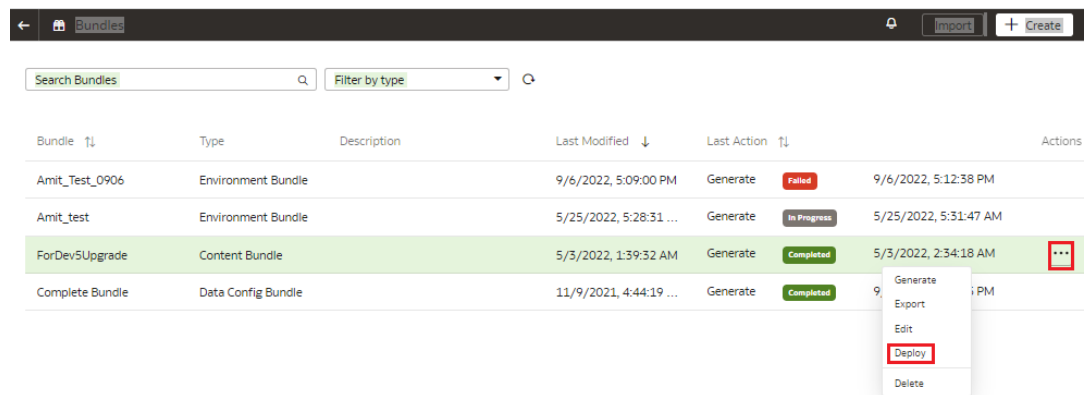
5. Click **Import**.

## Deploy a Bundle

You can deploy a generated bundle in the target environment to revert to the state of artifacts represented by the bundle. The system validates the bundle before attempting any deployment to ensure software and model versions and any other dependencies are met.

For example, if you have a bundle A (created in instance A) and then later made some changes but want to revert those changes, then use the Deploy option. This option restores the artifacts to an older version by deploying the previous bundle in the system.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Bundles** under **Application Administration**.
3. On the Bundles page, hover over the bundle that you created and click under **Actions**.
4. From **Actions**, select **Deploy**.



5. In the Deploy Bundle dialog, ensure that you see the bundle that you have selected.
6. Click **Deploy**.

## Delete a Bundle

Delete a bundle if you no longer require the snapshot of your application artifacts captured in the bundle.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Bundles** under **Application Administration**.
3. On the Bundles page, hover over the bundle that you created and click under **Actions**.
4. From **Actions**, select **Delete**.

Bundle	Type	Description	Last Modified	Last Action	Actions
Amit_Test_0906	Environment Bundle		9/6/2022, 5:09:00 PM	Generate <span>Failed</span>	9/6/2022, 5:12:38 PM
Amit_test	Environment Bundle		5/25/2022, 5:28:31 ...	Generate <span>In Progress</span>	5/25/2022, 5:31:47 AM
ForDev5Upgrade	Content Bundle		5/3/2022, 1:39:32 AM	Generate <span>Completed</span>	5/3/2022, 2:34:18 AM
Complete Bundle	Data Config Bundle		11/9/2021, 4:44:19 ...	Generate <span>Completed</span>	9/6/2022, 5:12:38 PM

## View the Activity History of Bundles

View all the bundles-related activities to understand the changes made to your instance, which bundles to use, and whether the existing bundles are still current. This information enables you to make informed decisions about creating updated bundles or deploying an existing bundle.

You see all the activities by bundle-related action, bundle names, bundle type, status, user who performed the activity, and date. You can organize the display by sorting columns, searching for activities, and filtering by action, bundle type, or status.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Bundles** under **Application Administration**.
3. On the Bundles page, click the **Activity** tab.

Action	Bundle Name	Bundle Type	Status	User	Date
Generate Bundle	Amit_semantic		Completed		August 11,
Update Bundle	Amit_semantic		Completed		August 11,
Update Bundle	Amit_semantic		Completed		August 11,
Deploy Bundle	Amit_content		Completed		August 11,

## Configure a Virus Scanner

To keep Oracle Fusion Data Intelligence virus-free, Oracle highly recommends that you set up the virus scanning servers used by your organization running on either 443 or 1708 ports only, to scan any files that are uploaded to Oracle Fusion Data Intelligence.

When you configure virus scanning, the scanner checks all uploaded files including data files from the data pipeline and snapshots that you upload to restore content or to migrate content from another environment.

1. Sign in to your service.
2. In Oracle Fusion Data Intelligence **Console**, click **Virus Scanner** under **Service Administration**.
3. On the Virus Scanner page, enter the host and port of the virus scanning server. For example, `my.virus.scanning.serverexample.com`.
4. Click **Save**.
5. To remove the current virus scanner configuration, click **Delete**.

## About Backup and Restore

Oracle Fusion Data Intelligence relies on Oracle Autonomous Data Warehouse as the data store and Oracle Analytics Cloud for its semantic models and reports.

Use these database backup options:

- Oracle Autonomous Data Warehouse has automated daily backups for the last 60 days. Use these backups to restore the database within a region. See [About Backup and Recovery on Autonomous Database](#).
- Oracle Data Pump is an option to export Oracle Autonomous Data Warehouse to a resilient file store like Oracle Storage Service. In the case of a region-wide failure, you can import these files into a database in another region. See [Overview of Oracle Data Pump](#).

Oracle Analytics Cloud traditionally provides snapshots as a mechanism to backup artifacts. However, Oracle Fusion Data Intelligence doesn't have the ability to use the Oracle Analytics Cloud snapshots. Use Bundles to backup Oracle Analytics Cloud artifacts and Oracle Fusion Data Intelligence customizations and configurations. For example, you can export an Oracle Fusion Data Intelligence environment bundle periodically (for example, weekly) to a resilient file store like Oracle Storage Service. When something goes wrong with one of your environments, you can import the bundle into another Oracle Fusion Data Intelligence environment and deploy it. See [Bundle Your Application Artifacts](#).

Once you have restored a previous version of the content and completed the next pipeline run, create a service request for Oracle to update the content metadata to ensure the latest definitions of the objects are created. This enables future patching and upgrades to be performed on the restored snapshots.

## About Disaster Recovery

Oracle Fusion Data Intelligence is built upon Oracle Cloud Infrastructure and leverages the Oracle PaaS services for disaster recovery.

For the Oracle Fusion Data Intelligence prebuilt content, you can provision a fresh Oracle Fusion Data Intelligence environment with the latest software and perform the data activation



steps. Oracle Fusion Cloud Applications provides the data for Oracle Fusion Data Intelligence. Use a data reset to populate Oracle Fusion Data Intelligence with historical data from the Oracle Fusion Cloud Applications source at any time. Customizations to Oracle Fusion Data Intelligence and any custom ETL and schemas are the key concerns in case of a region-wide disaster recovery event.

If you need a disaster recovery strategy for region-wide failures keeping in view the customizations and custom objects, then here are two suggestions. For an active solution, you can purchase another Oracle Fusion Data Intelligence subscription and provision it in a region other than production Oracle Fusion Data Intelligence. You can still connect this secondary environment to the same Oracle Fusion Cloud Applications source as the primary and refresh data just like the primary environment. Maintain the secondary environment in synchrony with the primary production environment by repeating any action taken in the primary environment. You can switch business users to the secondary environment any time. For a passive solution, you can provision an Oracle Fusion Data Intelligence Additional Test Environment (ATE) in a different region than the production environment and maintain it in synchrony with the primary production environment in terms of all the customizations. In the case of a disaster event, scale-up the ATE instance, refresh data to production level, and switch business users to using this environment.

You can restore from an Autonomous Data Warehouse backup and then reload from your source. If you've multiple sources, then you must reload all the sources, else you might miss a portion of the data. When you restore the content, the system restores it to the point of backup. Any incremental content that you added between the backup and restore actions won't be available. If your instance has been upgraded after you've taken a backup and you restore on the upgraded instance, then the platform is upgraded to the new instance version before the content is restored.

## About Scaling Resources

You can scale the resources provided by default with Oracle Fusion Data Intelligence based on your workload.

An activated Oracle Fusion Data Intelligence subscription enables a cloud account administrator and service administrator to create the following types of instances:

- Development/Test
- Additional test (ATE)
- Production

The development/test and ATE instances typically have smaller capacity compared to the production instance. These instances are different in the following ways:

- The development instance and ATE are for testing with a subset of data such as last 1 year as opposed to the full history and a subset of concurrent business users.
- The development instance is to develop or test reports and customizations before deploying them in the production instance for business users.
- The production instance is for production level business needs such as all historical data and all business users.
- The production instance has higher resources and therefore higher performance.
- Oracle monitors the production instances to ensure satisfactory level of service for the predefined content.

Prior to scaling these instances, note the following:

- You'll incur additional usage charges if you scale up compute and storage resources.
- You can scale up resources on your own using the Oracle Cloud Infrastructure Console if you've an UCC subscription for PAYGO.
- You can't scale down below the provisioned capacity.
- You might need to scale up the Oracle Analytics Cloud instance associated with your Oracle Fusion Data Intelligence instance in scenarios such as these:
  - Extensive semantic model extensions.
  - Extensive custom reports.
  - Use of large custom data sets.
  - Merge of external applications into the Oracle Fusion Data Intelligence semantic model.
  - Sluggish report performance due to many concurrent users.
- You can monitor the Oracle Analytics Cloud instance associated with your Oracle Fusion Data Intelligence instance using the Metrics option. See [Monitor Metrics](#).
- You might need to scale up the Oracle Autonomous Data Warehouse instance associated with your Oracle Fusion Data Intelligence instance in scenarios such as these:
  - Extensive use of data warehouse tools such as Oracle Machine Learning (OML) and Application Express (APEX).
  - Custom data that exceeds 50 GB.
  - Extensive custom queries.
  - Use of custom apps or tools against the database.
  - Many concurrent users running reports.
- You can monitor the Oracle Autonomous Data Warehouse instance associated with your Oracle Fusion Data Intelligence instance using the Performance Hub and Metrics Explorer options. See [Monitor and Manage Database Performance](#) and [Monitor Metrics](#).
- You can scale up the development/test instance and ATE in scenarios such as these:
  - Testing customizations before deploying them to the production instance.
  - Stress-testing that requires temporarily scaling up the instance.
  - Bringing additional volumes of data into the development/test instance and ATE.

Scale the resources as follows:

- To scale the Oracle Analytics Cloud instance associated with your Oracle Fusion Data Intelligence instance, see [Change Oracle Analytics Cloud Capacity](#).
- To scale the Oracle Autonomous Data Warehouse instance associated with your Oracle Fusion Data Intelligence instance, see [Scale Up Oracle Autonomous Data Warehouse](#).

## About Licensing

If you plan to use the data from Oracle Fusion Data Intelligence with third-party tools or in applications you build on your own or for exporting data to a third-party store, then you need to use the employee metric for your Oracle Fusion Data Intelligence subscription.

For example, if you've a ten-user license of Oracle Fusion ERP Analytics and you export data into a data lake to combine with other data or for any other downstream use, then you need to license Oracle Fusion Data Intelligence for all employees in your organization.

# 9

## Frequently Asked Questions

Here are answers to common questions asked by administrators of Oracle Fusion Data Intelligence.

### Topics:

- [Top FAQs for Activation](#)
- [Top FAQs for Instance Creation](#)
- [Top FAQs for Data Configuration](#)
- [Top FAQs for Security Setup](#)
- [Top FAQs for Customization and Data Augmentation](#)
- [Top FAQs for Managing Oracle Fusion Data Intelligence](#)

## Top FAQs for Activation

The top FAQs for Oracle Fusion Data Intelligence activation are identified in this topic.

### **Do I need to activate my UCC subscription before activating Oracle Fusion Data Intelligence?**

Yes, UCC activation is a prerequisite for Oracle Fusion Data Intelligence. Ensure you activate UCC prior to activating Oracle Fusion Data Intelligence.

### **My UCC order has expired and is preventing Oracle Fusion Data Intelligence activation. What should I do?**

Contact your Oracle Sales representative for assistance with UCC.

### **Do I need to activate my Oracle Fusion Data Intelligence subscription for production and non-production environments separately?**

No, your Oracle Fusion Data Intelligence subscription activation is applicable to all currently subscribed environments.

### **Can I request an additional Oracle Fusion Data Intelligence test environment?**

Yes, you can request an additional test environment (ATE), which must be contracted for a minimum of 12 months.

### **Can I activate Oracle Fusion Data Intelligence into a cloud account different from the one used by Oracle Fusion Cloud Applications?**

The recommended guideline is to activate Oracle Fusion Data Intelligence into the same cloud account as Oracle Fusion Cloud Applications.

## Top FAQs for Instance Creation

The top FAQs for Oracle Fusion Data Intelligence instance creation are identified in this topic.

### **Oracle Fusion Data Intelligence instance creation has failed. What should I do?**

Reach out to Oracle Support by creating a service request against “Fusion Data Intelligence” in My Oracle Support.

### **Do I need to create a compartment before creating an Oracle Fusion Data Intelligence instance?**

Compartments provide logical separation of instances. The best practice is to create a compartment and then create the Oracle Fusion Data Intelligence instance in the said compartment.

### **Can I configure Oracle Fusion Data Intelligence with private endpoints?**

Yes, you can configure Oracle Fusion Data Intelligence with private endpoints. Refer to [Deploy Oracle Fusion Data Intelligence with a Private Endpoint](#), [Overview of Private Fusion Data Intelligence](#), and [Preparing Private Oracle Fusion Data Intelligence](#) for additional details.

### **After creating the Oracle Fusion Data Intelligence instance, why can't I sign into the instance?**

You created the Oracle Fusion Data Intelligence instance as an administrator but to sign into the instance, you must have any of the groups mentioned in [System Groups](#) assigned to you. See [About Creating an Instance](#).

### **Why does an instance get deleted soon after being created successfully?**

Security zones set at the compartment level cause an instance to be deleted soon after being created successfully. Modify the security zone restrictions at the compartment level to avoid this scenario.

## Top FAQs for Data Configuration

The top FAQs for Oracle Fusion Data Intelligence data configuration are identified in this topic.

### **What should I specify as the initial extract date in the pipeline parameters?**

The initial extract date determines how far back the data will be loaded into the autonomous data warehouse as part of the initial load or after a warehouse reset is performed. This is specific to your business and reporting needs and data retention policies.

### **I activated a functional area. Where can I check the status?**

Navigate to the **Console**, click **Data Configuration**, and then click **Request History**.

### **What's the difference between refresh and reset?**

Refresh loads incremental data only, whereas reset reloads all data as of the initial extract date.

### **Can I reset and refresh the data warehouse?**

Yes, you can reset and refresh the data warehouse. See [Reset the Data Warehouse](#).

**Can I reset and refresh a data pipeline for a functional area?**

Yes, you can reset and refresh a data pipeline for a functional area. See [Reload Data for a Data Pipeline](#) and [Refresh a Data Pipeline for a Functional Area](#).

**Where do I check the data load status?**

Navigate to the **Console**, click **Data Configuration**, then click **Pipeline Settings**, and view **Last Refresh Date**.

**How do I increase the frequency of data refresh?**

See [Schedule Frequent Refreshes of Data](#).

**Can I load external data into the autonomous data warehouse?**

Yes, you can load external data into the autonomous data warehouse from external sources and build your own augmentations using connectors. See [About Managing Data Connections](#).

**Is there a limitation on external data volume that's extracted into the autonomous data warehouse?**

By default, custom data is limited to 50GB in the autonomous data warehouse associated with Oracle Fusion Data Intelligence. For any storage of custom data beyond 50GB, you must scale up through the Oracle Cloud Infrastructure Console. This is charged to your cloud account accordingly. See [Scale Up Oracle Autonomous Data Warehouse](#).

**Can I extract Oracle Fusion Data Intelligence data and export it to external storage systems?**

Yes, you can extract Oracle Fusion Data Intelligence data to export into an external storage system. However, care must be taken to ensure an adequate number of user licenses are available to access Oracle Fusion Data Intelligence data through the external system.

**Can I filter the records with "Status" on the Request History page?**

No. You must select both "Status" and "Submitted by" to get the applicable records.

**Does day light savings impact the data refresh process?**

Yes, the incremental refreshes that are scheduled during the start and end of daylight-saving times may not happen.

**Why are some entries missing for the frequent data refresh scheduled runs in the Warehouse Refresh Statistics report?**

If no new records are present at source to get extracted and published to the warehouse during the scheduled frequent data refresh runs, then the Warehouse Refresh Statistics report skips those entries.

**Why does the frequent data refresh schedule for a functional area such as General Ledger get skipped sometimes after performing a reset of multiple functional areas?**

This is an expected behavior. The incremental refresh after performing multiple soft reset of functional areas take more time than usual due to the high volume of records being processed. Due to this the scheduled frequent General Ledger refresh jobs get skipped. The scheduled frequent General Ledger jobs start as soon as the incremental refresh is completed.

## Top FAQs for Security Setup

The top FAQs for Oracle Fusion Data Intelligence security setup are identified in this topic.

### **I can't sign in to Oracle Fusion Data Intelligence; what am I missing?**

Ensure that the Oracle Fusion Data Intelligence licensed groups are assigned to your user account.

### **As a user with Modeler Administrator, Modeler, Author, and Consumer roles, after accessing the Console, why am I unable to perform tasks using each of the tiles?**

Each tile on the Console requires certain permissions. For example, to perform tasks using the Data Configuration tile, you must have the "FAW Functional Administrator" group assigned to you. See [Licensed Roles](#) and [System Roles](#).

### **Can I automatically assign Oracle Fusion Data Intelligence licensed groups to Oracle Fusion Cloud Applications users?**

Yes, you can automatically assign the Oracle Fusion Data Intelligence licensed groups. See [Auto Assign Licensed Groups](#).

### **Do I need duty or data roles?**

Data and duty roles serve different purposes. You need duty roles to access objects such as key metrics, dashboards, and subject areas whereas data roles are required to view the data.

### **Should I assign groups or application roles to users?**

Assign the application roles (duty and data) to groups and groups to users.

### **Can I apply data filters to users based on their security assignments?**

Yes, you can apply data filters to users' security assignments. See [About Data Access through Security Assignments](#).

### **Can I configure custom data security?**

Yes, you can configure custom data security. See [Custom Data Security](#) for additional details.

### **Can I configure custom duty roles?**

Yes, you can configure custom duty roles. See [Custom Duty Role Use Case](#) for additional details.

### **Why are some Oracle Fusion Cloud Applications job roles (groups in Oracle Fusion Data Intelligence) missing under the Groups tab on the Security page while most of them exist?**

If there is any group that provides higher level administrator privileges, then Oracle Fusion Data Intelligence filters out such groups. This is to guard against someone changing security at the identity provider level or elevating their privilege from the Oracle Fusion Data Intelligence console. You may want to create a custom group and associate it with the applicable application role to meet your business requirements in this situation.

**Can I implement security on specific logical objects in few subject areas?**

No. When you apply object security on logical objects, the system applies applicable object security in all subject areas. You can implement security on certain presentation objects in selected subject areas.

## Top FAQs for Customization and Data Augmentation

The top FAQs for Oracle Fusion Data Intelligence customization and data augmentation are identified in this topic.

**Can I customize the prebuilt Oracle content?**

Yes, you can customize the prebuilt Oracle content through semantic model customization.

**Does Oracle Fusion Data Intelligence extract all data from Oracle Fusion Cloud Applications?**

Oracle Fusion Data Intelligence comes with a base semantic model with prebuilt metadata. Data pipelines extract data and load the prebuilt tables for all the activated functional areas. Data augmentation enables you to bring any custom data into Oracle Fusion Data Intelligence.

**Why are some of my data augmentations, custom data configurations, and functional areas rejected?**

When incremental job runs, the system extracts data for all the modules (data augmentations, custom data configurations, and functional areas) that are activated. If you've activated any data augmentation before the next incremental run or marked with Reset Data, then the system fetches the data for these modules in full. It's possible to not get data for some of the data augmentations either because of new columns added or some issue with extraction. In that case, the system rejects those data augmentations, custom data configurations, and functional areas.

**Where can I find the semantic model customization best practices?**

See [About Recommendations and Tips to Extend the Semantic Model](#).

**Can I extend Oracle Fusion Data Intelligence with custom public view objects (PVOs)?**

Yes, you can extend Oracle Fusion Data Intelligence with custom PVOs. Refer to [Fusion Data Intelligence Extension with Custom PVOs](#) for additional details.

**Can I create custom data models with the semantic model framework?**

Yes, you can create custom data models using the semantic model framework. Refer to [Custom Data Model Use Case](#) for additional details.

**Does Oracle Fusion Data Intelligence provide all descriptive flex fields (DFFs)?**

Oracle Fusion Data Intelligence data pipelines don't bring in all DFFs for performance reasons. Ensure that you configure the DFF mapper that provides the ability to select only the DFFs and attributes that are required for reporting purposes. See [Enabling Descriptive Flexfields in Oracle Fusion Data Intelligence](#) for more information on configuring the DFF mapper.

**When I use the DFF mapper, do I get custom DFFs too?**

Yes, you get custom DFFs as long as they are BI Enabled as outlined in [Enabling Descriptive Flexfields in Oracle Fusion Data Intelligence](#).

**Do I get access to the repository file?**

The semantic model in Oracle Fusion Data Intelligence doesn't expose the repository file. However, you can use the Oracle Fusion Data Intelligence Console to define the external connections to the repository file.

**Why are the column changes not reflected immediately after updating an existing augmentation?**

Changes are visible after the next incremental run.

**Why am I seeing the message "There Are Pending System Requests" while publishing a model after activating all the modules successfully?**

You're seeing this message because after every module activation, the customization steps are reapplied. Because the last module activation completed recently, the publishing request is in queue. Oracle Fusion Data Intelligence processes the pending requests shortly.

**Why does it take a long time sometime to modify the subject area step while extending the semantic model?**

The replicated subject area normally inherits everything from the parent subject area such as permissions and roles. Hence, depending on the size of the subject area, it takes a while to complete.

**Can external application and augmentation co-exist if you've augmentation on the same object that is part of the skeleton semantic model used for external application?**

External application and augmentation can't co exist. If you've augmentation on the same object that is part of the skeleton semantic model used for external application, then you must move those augmentations to the external semantic model.

**Why do I see my data augmentations with no data in the public view object (PVO) in "Rejected" status?**

The system automatically rejects data augmentations with zero records. You must ensure that the underlying PVO contains data before creating data augmentation and semantic model extensions on top of it.

## Top FAQs for Managing Oracle Fusion Data Intelligence

The top FAQs for managing Oracle Fusion Data Intelligence are identified in this topic.

**Where can I find release updates?**

Navigate to the **Console**, and click **Release Updates** under **Service Administration**.

**Why is the application release update process stuck with "Update is in progress" status?**

Verify that your semantic model extensions aren't using augmentation tables or columns that are no longer available in the data warehouse associated with the Oracle Fusion Data Intelligence instance. If any of the semantic model extensions are using such tables or columns, then you must delete such extensions and rerun the application release update. If there is an invalid self join defined in an augmentation, then you must delete the join and rerun the application release update.



**Can I take snapshots of application artifacts such as configurations and customizations?**

Yes, you can take snapshots of application artifacts using bundles. Refer to [Bundle Your Application Artifacts](#), [Content Bundles](#), and [Data Augmentation Migration](#) for additional details.

**Can I import my Oracle Business Intelligence Enterprise Edition reports created in a different Oracle Analytics Server or Oracle Analytics Cloud environment into Oracle Fusion Data Intelligence?**

Yes, you can import Oracle Analytics Server or Oracle Analytics Cloud reports into Oracle Fusion Data Intelligence if the versions are compatible.

**Where do I see the number of Oracle Compute Units (OCPU) used?**

Oracle Fusion Data Intelligence includes Oracle Analytics Cloud Enterprise Edition and Oracle Autonomous Data Warehouse. Navigate as follows:

- Oracle Analytics Cloud OCPUs – Sign in to the Oracle Cloud Infrastructure Console, click **Navigator**, click **Analytics & AI**, click **Analytics Cloud** (identify the instance used by Oracle Fusion Data Intelligence), and then click **General Information**.
- Oracle Autonomous Data Warehouse OCPUs – Sign in to the Oracle Cloud Infrastructure Console, click **Navigator**, click **Oracle Database**, click **Autonomous Database** (identify the instance used by Oracle Fusion Data Intelligence), and then click **General Information**.

**Does the autonomous data warehouse have automated daily backup configured?**

Yes, the autonomous data warehouse has automated daily backups for the last 60 days.

**Can I backup and restore Oracle Fusion Data Intelligence?**

Yes, you can backup and restore Oracle Fusion Data Intelligence in another region. See [About Backup and Restore](#) and [About Disaster Recovery](#).

**What should I consider before creating and deploying a data configuration bundle that has all my augmentations?**

Before creating and deploying a data configuration bundle that has augmentations, check the augmentation-related table definitions, and ensure that they are same between the source and target instances.

**After deploying a security bundle taken from one environment to another, why are the application role and group mappings missing in the target environment?**

The application role and group mappings are missing in the target environment when the mapping between roles and groups aren't present in the source environment (from where the security bundle was taken). You must ensure that the role to group mappings exist in the source environment to avoid this issue.

**Can I restore my trial instance, after it expires and I haven't extended it?**

After a trial instance expires, Oracle notifies you before terminating the instance. If you don't extend the trial instance, then a scheduled job initiates to clean up the trial instances. After the instance is deleted, it can't be restored unless you have a backup.

**Why do I see the creation of my Environment bundle being "in progress" forever?**

There is a size restriction in the product today for larger bundles. See [About Bundles](#).

# 10

## Troubleshooting

### **When I log in, Oracle Fusion Data Intelligence doesn't load properly.**

When you log out, be sure to close all Oracle Fusion Data Intelligence sessions and close your browser before logging in as another user. You can have one session of Oracle Fusion Data Intelligence open at a time within the same browser.

### **I see a performance decrease when using Mozilla Firefox.**

If you use Mozilla Firefox and notice a decrease in the performance of the cloud service, then ensure that the Remember History option is enabled. When Firefox is set to not remember the history of visited pages, then web content caching is also disabled, which greatly affects the performance of the service. See Firefox documentation for details on setting this option.

### **After I complete a production to test refresh of my source (for example, Oracle Fusion Cloud Applications), why isn't the data in Oracle Autonomous Data Warehouse associated with my Oracle Fusion Data Intelligence instance synchronized with the source?**

When you complete a production to test refresh on Oracle Fusion Cloud Applications, the data in Oracle Autonomous Data Warehouse associated with your Oracle Fusion Data Intelligence instance may be different than what is in Oracle Fusion Cloud Applications. To ensure that the data in Oracle Autonomous Data Warehouse and Oracle Fusion Cloud Applications is synchronized, the recommendation is to reset and reload the data source. See [Reset and Reload the Data Source](#).

### **The data warehouse reset process is taking a long time.**

Typically, incorrect access control lists on the Oracle Autonomous Data Warehouse instance cause instance health issues and the reset process doesn't complete. Perform these tasks:

1. Review and update the access control list for the Oracle Autonomous Data Warehouse instance. See [SEC Configure an Access Control List with Autonomous Database](#).
2. Enable the data pipeline. See [Disable Data Pipeline](#).

### **When I change a data source, the data configuration bundle didn't update the data for that source.**

If you want to change a data source, perform these actions in the sequence they are mentioned:

1. Create a full data config bundle.
2. Reset the warehouse.
3. Change the source.
4. Deploy the bundle.
5. Alternatively, you can do a full data reset and reload.

 **Note:**

If you do a full data reset and reload, the system reloads all data from the selected sources from the initial extract date. You can't run any other job while this is in progress and this could take a long time to complete.

**When I migrate from the development or test instance to a production instance, I don't see the data immediately.**

Perform the following:

1. Create a full data configuration bundle on your development or test instance.
2. Create an environment bundle on your development or test instance..
3. Export these two bundles as files.
4. Import these files into your production instance.
5. Deploy the full data configuration bundle on your production instance and wait for all pipelines to complete.
6. Deploy the environment bundle on your production instance.

**The data security assignment upload is failing.**

Perform these actions:

1. Verify that the users whose data security assignments you're uploading are assigned the groups that are associated with the security context.
2. Verify that the groups that are associated with the security context are mapped to the applicable application roles.
3. Verify that the security object member values are valid by ensuring that the security object code and security object member values are mapped correctly in the file that you uploaded. If they aren't mapped correctly, then you must correct the mapping and re-upload the file using the Uploads tile on the Console. See [Upload and Download Data Security Assignments](#).

# 11

## Certification Information

This appendix contains certification information for Oracle Fusion Data Intelligence.

### Topics

- [Certification - Supported Browsers](#)

## Certification - Supported Browsers

Oracle Fusion Data Intelligence supports these web browsers:

- **Google Chrome:** Support for the most current major stable channel release only. Visit the Google Chrome FAQ for a description of the Chrome support policy: <https://support.google.com/chrome/a/answer/188447?hl=en>.
- **Microsoft Edge:** Support for the latest major version of Microsoft Edge Chromium. Beginning in Microsoft Edge v77, Microsoft has decoupled Edge from the Windows operating system and shifted to a Chromium-based browser technology and deployment model that follows a continuous 6-week update pattern, similar to Chrome and Firefox. Visit the Microsoft Edge FAQ for a description of the Edge support policy: <https://docs.microsoft.com/en-au/deployedge/microsoft-edge-support-lifecycle>.
- **Mozilla Firefox:** Support for the most current major Extended Support Release (ESR) version and above, in production only. Visit the Mozilla FAQ for a description of the Firefox support policy: <https://www.mozilla.org/en-US/firefox/organizations/faq/>.
- For mobile device operating systems, Oracle provides support for the most recent browser delivered by the device operating system only.

# A

## Preregistered Events

You can subscribe to these preregistered events that are reported by the Fusion Data Intelligence Event Producer service.

Ensure to enable the events notification capability. See [Enable Event Notifications \(Preview\)](#).

Event	When does it get generated?
FA Activation Event DataAugmentation Activate Event	When you activate a schedule for functional area and data augmentation
Generate Custom App Event Deploy Custom App Event	When you generate a custom data configuration schedule
FA Activate Complete Events DataAugmentation Complete Event	When activation completes for functional area and data augmentation
Generate Completed Event Deploy Complete Event	When custom data configuration completes
CustomDataConfiguration Refresh Event DataAugmentation Refresh Event	When data refreshes for functional area, data augmentation, and custom data configuration
DataAugmentation Refresh Complete Event	When the refresh is complete for functional area, data augmentation, and custom data configuration
FA Deactivate Event DataAugmentation Deactivate Event	When you deactivate functional area, data augmentation, and custom data configuration
FA Delete Event DataAugmentation Delete Event CustomDataConfiguration Delete Event	When you delete a scheduled functional area, data augmentation, and custom data configuration
Delete DataAugmentation Event Delete Custom App Event FA Delete Complete Event	When the delete action completes for functional area, data augmentation, and custom data configuration
Reset Warehouse Event Scheduled	When you schedule a warehouse reset
ResetWareHouse Completed Event	When the reset warehouse completes
ResetandReload Scheduled Event	When you schedule the reset and reload of the source
ResetandReload Completed Event	When the reset and reload of source completes
Enable Pipeline Event	When you enable a pipeline
DisableDataPipeline Event	When you disable a pipeline

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<b>Event</b>	<b>When does it get generated?</b>
Target Data Upgrade Schedule Event	When you schedule a target data upgrade
Target Data Upgrade Completed Event	When a target data upgrade completes
Release Available Event	During these Release Update actions: <ul style="list-style-type: none"><li>• Update available</li><li>• Update scheduled</li><li>• Update completed</li></ul>
DataRefresh - Complete Event	When data is refreshed in Autonomous Data Warehouse
DataRefresh - Estimate	When a new data refresh completion estimate is available

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# B

## Conformed Dimensions to Merge External Applications

Prior to merging external applications with Oracle Fusion Data Intelligence, update the joins between the repository files of the external application and Oracle Fusion Data Intelligence with the conformed dimensions as appropriate, keeping in mind the constraints.

### List of Conformed Dimensions

Module	Dimension
Absence Management	Dim - Date Enterprise Calendar
Absence Management	Dim - Date Gregorian Calendar
Absence Management	Dim - Department
Absence Management	Dim - Job
Absence Management	Dim - Legal Employer
Absence Management	Dim - Reporting Establishment
Absence Management	Dim - Worker
Account Analysis Foundation	Dim - Balancing Segment
Account Analysis Foundation	Dim - Balancing Segment Hierarchy
Account Analysis Foundation	Dim - Cost Center
Account Analysis Foundation	Dim - Cost Center Hierarchy
Account Analysis Foundation	Dim - Currency
Account Analysis Foundation	Dim - Date Fiscal Calendar
Account Analysis Foundation	Dim - GL Account
Account Analysis Foundation	Dim - GL Segment1
Account Analysis Foundation	Dim - GL Segment1 Hierarchy
Account Analysis Foundation	Dim - GL Segment10
Account Analysis Foundation	Dim - GL Segment10 Hierarchy
Account Analysis Foundation	Dim - GL Segment2
Account Analysis Foundation	Dim - GL Segment2 Hierarchy
Account Analysis Foundation	Dim - GL Segment3
Account Analysis Foundation	Dim - GL Segment3 Hierarchy
Account Analysis Foundation	Dim - GL Segment4
Account Analysis Foundation	Dim - GL Segment4 Hierarchy
Account Analysis Foundation	Dim - GL Segment5
Account Analysis Foundation	Dim - GL Segment5 Hierarchy
Account Analysis Foundation	Dim - GL Segment6
Account Analysis Foundation	Dim - GL Segment6 Hierarchy
Account Analysis Foundation	Dim - GL Segment7
Account Analysis Foundation	Dim - GL Segment7 Hierarchy
Account Analysis Foundation	Dim - GL Segment8
Account Analysis Foundation	Dim - GL Segment8 Hierarchy



<b>Module</b>	<b>Dimension</b>
Account Analysis Foundation	Dim - GL Segment9
Account Analysis Foundation	Dim - GL Segment9 Hierarchy
Account Analysis Foundation	Dim - Ledger
Account Analysis Foundation	Dim - Natural Account
Account Analysis Foundation	Dim - Natural Account Hierarchy
Account Reconciliation	Dim - Balancing Segment
Account Reconciliation	Dim - Balancing Segment Hierarchy
Account Reconciliation	Dim - Business Unit
Account Reconciliation	Dim - Cost Center
Account Reconciliation	Dim - Cost Center Hierarchy
Account Reconciliation	Dim - Currency
Account Reconciliation	Dim - Customer
Account Reconciliation	Dim - Date Fiscal Calendar
Account Reconciliation	Dim - GL Account
Account Reconciliation	Dim - GL Segment1
Account Reconciliation	Dim - GL Segment1 Hierarchy
Account Reconciliation	Dim - GL Segment10
Account Reconciliation	Dim - GL Segment10 Hierarchy
Account Reconciliation	Dim - GL Segment2
Account Reconciliation	Dim - GL Segment2 Hierarchy
Account Reconciliation	Dim - GL Segment3
Account Reconciliation	Dim - GL Segment3 Hierarchy
Account Reconciliation	Dim - GL Segment4
Account Reconciliation	Dim - GL Segment4 Hierarchy
Account Reconciliation	Dim - GL Segment5
Account Reconciliation	Dim - GL Segment5 Hierarchy
Account Reconciliation	Dim - GL Segment6
Account Reconciliation	Dim - GL Segment6 Hierarchy
Account Reconciliation	Dim - GL Segment7
Account Reconciliation	Dim - GL Segment7 Hierarchy
Account Reconciliation	Dim - GL Segment8
Account Reconciliation	Dim - GL Segment8 Hierarchy
Account Reconciliation	Dim - GL Segment9
Account Reconciliation	Dim - GL Segment9 Hierarchy
Account Reconciliation	Dim - Ledger
Account Reconciliation	Dim - Legal Entity
Account Reconciliation	Dim - Natural Account
Account Reconciliation	Dim - Natural Account Hierarchy
Account Reconciliation	Dim - Supplier
Account Reconciliation	Dim - Supplier Sites
Accounts Payable	Dim - Balancing Segment
Accounts Payable	Dim - Balancing Segment Hierarchy
Accounts Payable	Dim - Business Unit
Accounts Payable	Dim - Cost Center
Accounts Payable	Dim - Cost Center Hierarchy

<b>Module</b>	<b>Dimension</b>
Accounts Payable	Dim - Currency
Accounts Payable	Dim - Date Fiscal Calendar
Accounts Payable	Dim - Expenditure Organization
Accounts Payable	Dim - Expenditure Type
Accounts Payable	Dim - GL Account
Accounts Payable	Dim - GL Segment1
Accounts Payable	Dim - GL Segment1 Hierarchy
Accounts Payable	Dim - GL Segment10
Accounts Payable	Dim - GL Segment10 Hierarchy
Accounts Payable	Dim - GL Segment2
Accounts Payable	Dim - GL Segment2 Hierarchy
Accounts Payable	Dim - GL Segment3
Accounts Payable	Dim - GL Segment3 Hierarchy
Accounts Payable	Dim - GL Segment4
Accounts Payable	Dim - GL Segment4 Hierarchy
Accounts Payable	Dim - GL Segment5
Accounts Payable	Dim - GL Segment5 Hierarchy
Accounts Payable	Dim - GL Segment6
Accounts Payable	Dim - GL Segment6 Hierarchy
Accounts Payable	Dim - GL Segment7
Accounts Payable	Dim - GL Segment7 Hierarchy
Accounts Payable	Dim - GL Segment8
Accounts Payable	Dim - GL Segment8 Hierarchy
Accounts Payable	Dim - GL Segment9
Accounts Payable	Dim - GL Segment9 Hierarchy
Accounts Payable	Dim - Ledger
Accounts Payable	Dim - Legal Entity
Accounts Payable	Dim - Natural Account
Accounts Payable	Dim - Natural Account Hierarchy
Accounts Payable	Dim - Party
Accounts Payable	Dim - Project
Accounts Payable	Dim - Supplier
Accounts Payable	Dim - Supplier Sites
Accounts Payable	Dim - Task
Accounts Receivable	Dim - Balancing Segment
Accounts Receivable	Dim - Balancing Segment Hierarchy
Accounts Receivable	Dim - Business Unit
Accounts Receivable	Dim - Cost Center
Accounts Receivable	Dim - Cost Center Hierarchy
Accounts Receivable	Dim - Currency
Accounts Receivable	Dim - Customer
Accounts Receivable	Dim - Customer Bill To
Accounts Receivable	Dim - Customer Ship To Location
Accounts Receivable	Dim - Customer Sold To
Accounts Receivable	Dim - Date Fiscal Calendar

<b>Module</b>	<b>Dimension</b>
Accounts Receivable	Dim - GL Account
Accounts Receivable	Dim - GL Segment1
Accounts Receivable	Dim - GL Segment1 Hierarchy
Accounts Receivable	Dim - GL Segment10
Accounts Receivable	Dim - GL Segment10 Hierarchy
Accounts Receivable	Dim - GL Segment2
Accounts Receivable	Dim - GL Segment2 Hierarchy
Accounts Receivable	Dim - GL Segment3
Accounts Receivable	Dim - GL Segment3 Hierarchy
Accounts Receivable	Dim - GL Segment4
Accounts Receivable	Dim - GL Segment4 Hierarchy
Accounts Receivable	Dim - GL Segment5
Accounts Receivable	Dim - GL Segment5 Hierarchy
Accounts Receivable	Dim - GL Segment6
Accounts Receivable	Dim - GL Segment6 Hierarchy
Accounts Receivable	Dim - GL Segment7
Accounts Receivable	Dim - GL Segment7 Hierarchy
Accounts Receivable	Dim - GL Segment8
Accounts Receivable	Dim - GL Segment8 Hierarchy
Accounts Receivable	Dim - GL Segment9
Accounts Receivable	Dim - GL Segment9 Hierarchy
Accounts Receivable	Dim - Inventory Item
Accounts Receivable	Dim - Inventory Organization
Accounts Receivable	Dim - Item Category Hierarchy
Accounts Receivable	Dim - Ledger
Accounts Receivable	Dim - Legal Entity
Accounts Receivable	Dim - Natural Account
Accounts Receivable	Dim - Natural Account Hierarchy
Accounts Receivable	Dim - Party
Accounts Receivable	Dim - Unit of Measure
Assets	Dim - Balancing Segment
Assets	Dim - Balancing Segment Hierarchy
Assets	Dim - Cost Center
Assets	Dim - Cost Center Hierarchy
Assets	Dim - Currency
Assets	Dim - Date Fiscal Calendar
Assets	Dim - GL Account
Assets	Dim - GL Segment1
Assets	Dim - GL Segment1 Hierarchy
Assets	Dim - GL Segment10
Assets	Dim - GL Segment10 Hierarchy
Assets	Dim - GL Segment2
Assets	Dim - GL Segment2 Hierarchy
Assets	Dim - GL Segment3
Assets	Dim - GL Segment3 Hierarchy

<b>Module</b>	<b>Dimension</b>
Assets	Dim - GL Segment4
Assets	Dim - GL Segment4 Hierarchy
Assets	Dim - GL Segment5
Assets	Dim - GL Segment5 Hierarchy
Assets	Dim - GL Segment6
Assets	Dim - GL Segment6 Hierarchy
Assets	Dim - GL Segment7
Assets	Dim - GL Segment7 Hierarchy
Assets	Dim - GL Segment8
Assets	Dim - GL Segment8 Hierarchy
Assets	Dim - GL Segment9
Assets	Dim - GL Segment9 Hierarchy
Assets	Dim - Ledger
Assets	Dim - Legal Entity
Assets	Dim - Natural Account
Assets	Dim - Natural Account Hierarchy
B2B Service Analytics	Dim - Business Unit
B2B Service Analytics	Dim - Customer Sold To
COGS And Gross Margin	Dim - Balancing Segment
COGS And Gross Margin	Dim - Balancing Segment Hierarchy
COGS And Gross Margin	Dim - Business Unit
COGS And Gross Margin	Dim - Cost Center
COGS And Gross Margin	Dim - Cost Center Hierarchy
COGS And Gross Margin	Dim - Currency
COGS And Gross Margin	Dim - Customer
COGS And Gross Margin	Dim - Customer Account
COGS And Gross Margin	Dim - Customer Account Bill To
COGS And Gross Margin	Dim - Customer Bill To
COGS And Gross Margin	Dim - Customer Ship To
COGS And Gross Margin	Dim - GL Account
COGS And Gross Margin	Dim - GL Segment1
COGS And Gross Margin	Dim - GL Segment1 Hierarchy
COGS And Gross Margin	Dim - GL Segment10
COGS And Gross Margin	Dim - GL Segment10 Hierarchy
COGS And Gross Margin	Dim - GL Segment2
COGS And Gross Margin	Dim - GL Segment2 Hierarchy
COGS And Gross Margin	Dim - GL Segment3
COGS And Gross Margin	Dim - GL Segment3 Hierarchy
COGS And Gross Margin	Dim - GL Segment4
COGS And Gross Margin	Dim - GL Segment4 Hierarchy
COGS And Gross Margin	Dim - GL Segment5
COGS And Gross Margin	Dim - GL Segment5 Hierarchy
COGS And Gross Margin	Dim - GL Segment6
COGS And Gross Margin	Dim - GL Segment6 Hierarchy
COGS And Gross Margin	Dim - GL Segment7

<b>Module</b>	<b>Dimension</b>
COGS And Gross Margin	Dim - GL Segment7 Hierarchy
COGS And Gross Margin	Dim - GL Segment8
COGS And Gross Margin	Dim - GL Segment8 Hierarchy
COGS And Gross Margin	Dim - GL Segment9
COGS And Gross Margin	Dim - GL Segment9 Hierarchy
COGS And Gross Margin	Dim - Inventory Organization
COGS And Gross Margin	Dim - Item Category Hierarchy
COGS And Gross Margin	Dim - Ledger
COGS And Gross Margin	Dim - Legal Entity
COGS And Gross Margin	Dim - Natural Account
COGS And Gross Margin	Dim - Natural Account Hierarchy
Cost Management	Dim - Currency
Cost Management	Dim - Date Fiscal Calendar
Cost Management	Dim - Inventory Organization
Cost Management	Dim - Item Category Hierarchy
Cost Management	Dim - Ledger
Cost Management	Dim - Legal Entity
Cost Management	Dim - Locator
Cost Management	Dim - Sub Inventory
Cost Management	Dim - Sub Inventory Location
Cost Management	Dim - Unit of Measure
Employee Expense	Dim - Balancing Segment
Employee Expense	Dim - Balancing Segment Hierarchy
Employee Expense	Dim - Business Unit
Employee Expense	Dim - Cost Center
Employee Expense	Dim - Cost Center Hierarchy
Employee Expense	Dim - Currency
Employee Expense	Dim - Date Fiscal Calendar
Employee Expense	Dim - Department
Employee Expense	Dim - Expenditure Organization
Employee Expense	Dim - Expenditure Type
Employee Expense	Dim - GL Account
Employee Expense	Dim - GL Segment1
Employee Expense	Dim - GL Segment1 Hierarchy
Employee Expense	Dim - GL Segment10
Employee Expense	Dim - GL Segment10 Hierarchy
Employee Expense	Dim - GL Segment2
Employee Expense	Dim - GL Segment2 Hierarchy
Employee Expense	Dim - GL Segment3
Employee Expense	Dim - GL Segment3 Hierarchy
Employee Expense	Dim - GL Segment4
Employee Expense	Dim - GL Segment4 Hierarchy
Employee Expense	Dim - GL Segment5
Employee Expense	Dim - GL Segment5 Hierarchy
Employee Expense	Dim - GL Segment6

<b>Module</b>	<b>Dimension</b>
Employee Expense	Dim - GL Segment6 Hierarchy
Employee Expense	Dim - GL Segment7
Employee Expense	Dim - GL Segment7 Hierarchy
Employee Expense	Dim - GL Segment8
Employee Expense	Dim - GL Segment8 Hierarchy
Employee Expense	Dim - GL Segment9
Employee Expense	Dim - GL Segment9 Hierarchy
Employee Expense	Dim - Job
Employee Expense	Dim - Ledger
Employee Expense	Dim - Natural Account
Employee Expense	Dim - Natural Account Hierarchy
Employee Expense	Dim - Project
Employee Expense	Dim - Task
Employee Expense	Dim - Worker
GL Budgets Analysis	Dim - Balancing Segment
GL Budgets Analysis	Dim - Balancing Segment Hierarchy
GL Budgets Analysis	Dim - Cost Center
GL Budgets Analysis	Dim - Cost Center Hierarchy
GL Budgets Analysis	Dim - Currency
GL Budgets Analysis	Dim - Date Fiscal Calendar
GL Budgets Analysis	Dim - GL Account
GL Budgets Analysis	Dim - GL Segment1
GL Budgets Analysis	Dim - GL Segment1 Hierarchy
GL Budgets Analysis	Dim - GL Segment10
GL Budgets Analysis	Dim - GL Segment10 Hierarchy
GL Budgets Analysis	Dim - GL Segment2
GL Budgets Analysis	Dim - GL Segment2 Hierarchy
GL Budgets Analysis	Dim - GL Segment3
GL Budgets Analysis	Dim - GL Segment3 Hierarchy
GL Budgets Analysis	Dim - GL Segment4
GL Budgets Analysis	Dim - GL Segment4 Hierarchy
GL Budgets Analysis	Dim - GL Segment5
GL Budgets Analysis	Dim - GL Segment5 Hierarchy
GL Budgets Analysis	Dim - GL Segment6
GL Budgets Analysis	Dim - GL Segment6 Hierarchy
GL Budgets Analysis	Dim - GL Segment7
GL Budgets Analysis	Dim - GL Segment7 Hierarchy
GL Budgets Analysis	Dim - GL Segment8
GL Budgets Analysis	Dim - GL Segment8 Hierarchy
GL Budgets Analysis	Dim - GL Segment9
GL Budgets Analysis	Dim - GL Segment9 Hierarchy
GL Budgets Analysis	Dim - Ledger
GL Budgets Analysis	Dim - Legal Entity
GL Budgets Analysis	Dim - Natural Account
GL Budgets Analysis	Dim - Natural Account Hierarchy

<b>Module</b>	<b>Dimension</b>
General Ledger	Dim - Balancing Segment
General Ledger	Dim - Balancing Segment Hierarchy
General Ledger	Dim - Cost Center
General Ledger	Dim - Cost Center Hierarchy
General Ledger	Dim - Currency
General Ledger	Dim - Date Fiscal Calendar
General Ledger	Dim - GL Account
General Ledger	Dim - GL Segment1
General Ledger	Dim - GL Segment1 Hierarchy
General Ledger	Dim - GL Segment10
General Ledger	Dim - GL Segment10 Hierarchy
General Ledger	Dim - GL Segment2
General Ledger	Dim - GL Segment2 Hierarchy
General Ledger	Dim - GL Segment3
General Ledger	Dim - GL Segment3 Hierarchy
General Ledger	Dim - GL Segment4
General Ledger	Dim - GL Segment4 Hierarchy
General Ledger	Dim - GL Segment5
General Ledger	Dim - GL Segment5 Hierarchy
General Ledger	Dim - GL Segment6
General Ledger	Dim - GL Segment6 Hierarchy
General Ledger	Dim - GL Segment7
General Ledger	Dim - GL Segment7 Hierarchy
General Ledger	Dim - GL Segment8
General Ledger	Dim - GL Segment8 Hierarchy
General Ledger	Dim - GL Segment9
General Ledger	Dim - GL Segment9 Hierarchy
General Ledger	Dim - Ledger
General Ledger	Dim - Legal Entity
General Ledger	Dim - Natural Account
General Ledger	Dim - Natural Account Hierarchy
Goals and Career Development	Dim - Date Enterprise Calendar
Goals and Career Development	Dim - Date Gregorian Calendar
Goals and Career Development	Dim - Department
Goals and Career Development	Dim - Job
Goals and Career Development	Dim - Legal Employer
Goals and Career Development	Dim - Reporting Establishment
Goals and Career Development	Dim - Worker
Inventory Balances	Dim - Date Fiscal Calendar
Inventory Balances	Dim - Date Gregorian Calendar
Inventory Balances	Dim - Inventory Organization
Inventory Balances	Dim - Item Category Hierarchy
Inventory Balances	Dim - Ledger
Inventory Balances	Dim - Legal Entity
Inventory Balances	Dim - Locator

<b>Module</b>	<b>Dimension</b>
Inventory Balances	Dim - Sub Inventory
Inventory Balances	Dim - Sub Inventory Location
Inventory Management	Dim - Business Unit
Inventory Management	Dim - Customer
Inventory Management	Dim - Customer Account
Inventory Management	Dim - Customer Account Bill To
Inventory Management	Dim - Customer Bill To
Inventory Management	Dim - Customer Ship To
Inventory Management	Dim - Customer Sold To
Inventory Management	Dim - Date Fiscal Calendar
Inventory Management	Dim - Date Gregorian Calendar
Inventory Management	Dim - Expenditure Type
Inventory Management	Dim - Inventory Organization
Inventory Management	Dim - Item Category Hierarchy
Inventory Management	Dim - Ledger
Inventory Management	Dim - Legal Entity
Inventory Management	Dim - Locator
Inventory Management	Dim - Project
Inventory Management	Dim - Sub Inventory
Inventory Management	Dim - Sub Inventory Location
Inventory Management	Dim - Task
Learning Management	Dim - Currency
Learning Management	Dim - Date Enterprise Calendar
Learning Management	Dim - Date Gregorian Calendar
Learning Management	Dim - Department
Learning Management	Dim - Job
Learning Management	Dim - Legal Employer
Learning Management	Dim - Reporting Establishment
Learning Management	Dim - Worker
Marketing Campaign Closed Loop Analytics	Dim - Currency
Marketing Campaign Closed Loop Analytics	Dim - Customer Sold To
Order Management	Dim - Business Unit
Order Management	Dim - Currency
Order Management	Dim - Customer
Order Management	Dim - Customer Account
Order Management	Dim - Customer Account Bill To
Order Management	Dim - Customer Bill To
Order Management	Dim - Customer Ship To
Order Management	Dim - Customer Sold To
Order Management	Dim - Date Fiscal Calendar
Order Management	Dim - Date Gregorian Calendar
Order Management	Dim - Expenditure Type
Order Management	Dim - Inventory Organization
Order Management	Dim - Item Category Hierarchy
Order Management	Dim - Ledger



<b>Module</b>	<b>Dimension</b>
Order Management	Dim - Legal Entity
Order Management	Dim - Project
Order Management	Dim - Task
Order Management	Dim - Unit of Measure
Payroll Management	Dim - Currency
Payroll Management	Dim - Date Gregorian Calendar
Payroll Management	Dim - Department
Payroll Management	Dim - Job
Payroll Management	Dim - Legal Employer
Payroll Management	Dim - Reporting Establishment
Payroll Management	Dim - Worker
Performance Management and Check-ins	Dim - Date Enterprise Calendar
Performance Management and Check-ins	Dim - Date Gregorian Calendar
Performance Management and Check-ins	Dim - Department
Performance Management and Check-ins	Dim - Job
Performance Management and Check-ins	Dim - Legal Employer
Performance Management and Check-ins	Dim - Reporting Establishment
Performance Management and Check-ins	Dim - Worker
Procurement Spend	Dim - Balancing Segment
Procurement Spend	Dim - Balancing Segment
Procurement Spend	Dim - Balancing Segment Hierarchy
Procurement Spend	Dim - Balancing Segment Hierarchy
Procurement Spend	Dim - Business Unit
Procurement Spend	Dim - Business Unit
Procurement Spend	Dim - Cost Center
Procurement Spend	Dim - Cost Center
Procurement Spend	Dim - Cost Center Hierarchy
Procurement Spend	Dim - Cost Center Hierarchy
Procurement Spend	Dim - Currency
Procurement Spend	Dim - Currency
Procurement Spend	Dim - Date Fiscal Calendar
Procurement Spend	Dim - Date Fiscal Calendar
Procurement Spend	Dim - Date Gregorian Calendar
Procurement Spend	Dim - Date Gregorian Calendar
Procurement Spend	Dim - Expenditure Type
Procurement Spend	Dim - Expenditure Type
Procurement Spend	Dim - GL Account
Procurement Spend	Dim - GL Account
Procurement Spend	Dim - GL Segment1
Procurement Spend	Dim - GL Segment1
Procurement Spend	Dim - GL Segment1 Hierarchy
Procurement Spend	Dim - GL Segment1 Hierarchy
Procurement Spend	Dim - GL Segment10
Procurement Spend	Dim - GL Segment10
Procurement Spend	Dim - GL Segment10 Hierarchy

<b>Module</b>	<b>Dimension</b>
Procurement Spend	Dim - GL Segment10 Hierarchy
Procurement Spend	Dim - GL Segment2
Procurement Spend	Dim - GL Segment2
Procurement Spend	Dim - GL Segment2 Hierarchy
Procurement Spend	Dim - GL Segment2 Hierarchy
Procurement Spend	Dim - GL Segment3
Procurement Spend	Dim - GL Segment3
Procurement Spend	Dim - GL Segment3 Hierarchy
Procurement Spend	Dim - GL Segment3 Hierarchy
Procurement Spend	Dim - GL Segment4
Procurement Spend	Dim - GL Segment4
Procurement Spend	Dim - GL Segment4 Hierarchy
Procurement Spend	Dim - GL Segment4 Hierarchy
Procurement Spend	Dim - GL Segment5
Procurement Spend	Dim - GL Segment5
Procurement Spend	Dim - GL Segment5 Hierarchy
Procurement Spend	Dim - GL Segment5 Hierarchy
Procurement Spend	Dim - GL Segment6
Procurement Spend	Dim - GL Segment6
Procurement Spend	Dim - GL Segment6 Hierarchy
Procurement Spend	Dim - GL Segment6 Hierarchy
Procurement Spend	Dim - GL Segment7
Procurement Spend	Dim - GL Segment7
Procurement Spend	Dim - GL Segment7 Hierarchy
Procurement Spend	Dim - GL Segment7 Hierarchy
Procurement Spend	Dim - GL Segment8
Procurement Spend	Dim - GL Segment8
Procurement Spend	Dim - GL Segment8 Hierarchy
Procurement Spend	Dim - GL Segment8 Hierarchy
Procurement Spend	Dim - GL Segment9
Procurement Spend	Dim - GL Segment9
Procurement Spend	Dim - GL Segment9 Hierarchy
Procurement Spend	Dim - GL Segment9 Hierarchy
Procurement Spend	Dim - Inventory Organization
Procurement Spend	Dim - Inventory Organization
Procurement Spend	Dim - Item Category Hierarchy
Procurement Spend	Dim - Item Category Hierarchy
Procurement Spend	Dim - Ledger
Procurement Spend	Dim - Ledger
Procurement Spend	Dim - Legal Entity
Procurement Spend	Dim - Legal Entity
Procurement Spend	Dim - Natural Account
Procurement Spend	Dim - Natural Account
Procurement Spend	Dim - Natural Account Hierarchy
Procurement Spend	Dim - Natural Account Hierarchy

<b>Module</b>	<b>Dimension</b>
Procurement Spend	Dim - PRC - Customer Ship To Location
Procurement Spend	Dim - PRC - Customer Ship To Location
Procurement Spend	Dim - PRC - Purchase Buyer
Procurement Spend	Dim - PRC - Purchase Buyer
Procurement Spend	Dim - PRC - Ship To Location
Procurement Spend	Dim - PRC - Ship To Location
Procurement Spend	Dim - Project
Procurement Spend	Dim - Project
Procurement Spend	Dim - Supplier
Procurement Spend	Dim - Supplier
Procurement Spend	Dim - Supplier Sites
Procurement Spend	Dim - Supplier Sites
Procurement Spend	Dim - Task
Procurement Spend	Dim - Task
Procurement Spend	Dim - Unit of Measure
Procurement Spend	Dim - Unit of Measure
Project Control	Dim - Business Unit
Project Control	Dim - Currency
Project Control	Dim - Date Fiscal Calendar
Project Control	Dim - Expenditure Organization
Project Control	Dim - Expenditure Type
Project Control	Dim - Inventory Item
Project Control	Dim - Job
Project Control	Dim - Legal Entity
Project Control	Dim - Project
Project Control	Dim - Project Unit
Project Control	Dim - Supplier
Project Control	Dim - Task
Project Control	Dim - Worker
Project Costing	Dim - Balancing Segment
Project Costing	Dim - Balancing Segment Hierarchy
Project Costing	Dim - Business Unit
Project Costing	Dim - Cost Center
Project Costing	Dim - Cost Center Hierarchy
Project Costing	Dim - Currency
Project Costing	Dim - Date Fiscal Calendar
Project Costing	Dim - Expenditure Organization
Project Costing	Dim - Expenditure Type
Project Costing	Dim - GL Account
Project Costing	Dim - GL Segment1
Project Costing	Dim - GL Segment1 Hierarchy
Project Costing	Dim - GL Segment10
Project Costing	Dim - GL Segment10 Hierarchy
Project Costing	Dim - GL Segment2
Project Costing	Dim - GL Segment2 Hierarchy

<b>Module</b>	<b>Dimension</b>
Project Costing	Dim - GL Segment3
Project Costing	Dim - GL Segment3 Hierarchy
Project Costing	Dim - GL Segment4
Project Costing	Dim - GL Segment4 Hierarchy
Project Costing	Dim - GL Segment5
Project Costing	Dim - GL Segment5 Hierarchy
Project Costing	Dim - GL Segment6
Project Costing	Dim - GL Segment6 Hierarchy
Project Costing	Dim - GL Segment7
Project Costing	Dim - GL Segment7 Hierarchy
Project Costing	Dim - GL Segment8
Project Costing	Dim - GL Segment8 Hierarchy
Project Costing	Dim - GL Segment9
Project Costing	Dim - GL Segment9 Hierarchy
Project Costing	Dim - Inventory Item
Project Costing	Dim - Inventory Organization
Project Costing	Dim - Job
Project Costing	Dim - Ledger
Project Costing	Dim - Legal Entity
Project Costing	Dim - Natural Account
Project Costing	Dim - Natural Account Hierarchy
Project Costing	Dim - Project
Project Costing	Dim - Project Unit
Project Costing	Dim - Supplier
Project Costing	Dim - Task
Project Costing	Dim - Worker
Purchase Agreement	Dim - Business Unit
Purchase Agreement	Dim - Business Unit
Purchase Agreement	Dim - Currency
Purchase Agreement	Dim - Currency
Purchase Agreement	Dim - Date Gregorian Calendar
Purchase Agreement	Dim - Date Gregorian Calendar
Purchase Agreement	Dim - Item Category Hierarchy
Purchase Agreement	Dim - Item Category Hierarchy
Purchase Agreement	Dim - Ledger
Purchase Agreement	Dim - Ledger
Purchase Agreement	Dim - Legal Entity
Purchase Agreement	Dim - Legal Entity
Purchase Agreement	Dim - PRC - Purchase Buyer
Purchase Agreement	Dim - PRC - Purchase Buyer
Purchase Agreement	Dim - Supplier
Purchase Agreement	Dim - Supplier
Purchase Agreement	Dim - Supplier Sites
Purchase Agreement	Dim - Supplier Sites
Purchase Agreement	Dim - Unit of Measure

<b>Module</b>	<b>Dimension</b>
Purchase Agreement	Dim - Unit of Measure
Purchase Order	Dim - Balancing Segment
Purchase Order	Dim - Balancing Segment
Purchase Order	Dim - Balancing Segment Hierarchy
Purchase Order	Dim - Balancing Segment Hierarchy
Purchase Order	Dim - Business Unit
Purchase Order	Dim - Business Unit
Purchase Order	Dim - Cost Center
Purchase Order	Dim - Cost Center
Purchase Order	Dim - Cost Center Hierarchy
Purchase Order	Dim - Cost Center Hierarchy
Purchase Order	Dim - Currency
Purchase Order	Dim - Currency
Purchase Order	Dim - Date Fiscal Calendar
Purchase Order	Dim - Date Fiscal Calendar
Purchase Order	Dim - Date Gregorian Calendar
Purchase Order	Dim - Date Gregorian Calendar
Purchase Order	Dim - Expenditure Type
Purchase Order	Dim - Expenditure Type
Purchase Order	Dim - GL Account
Purchase Order	Dim - GL Account
Purchase Order	Dim - GL Segment1
Purchase Order	Dim - GL Segment1
Purchase Order	Dim - GL Segment1 Hierarchy
Purchase Order	Dim - GL Segment1 Hierarchy
Purchase Order	Dim - GL Segment10
Purchase Order	Dim - GL Segment10
Purchase Order	Dim - GL Segment10 Hierarchy
Purchase Order	Dim - GL Segment10 Hierarchy
Purchase Order	Dim - GL Segment2
Purchase Order	Dim - GL Segment2
Purchase Order	Dim - GL Segment2 Hierarchy
Purchase Order	Dim - GL Segment2 Hierarchy
Purchase Order	Dim - GL Segment3
Purchase Order	Dim - GL Segment3
Purchase Order	Dim - GL Segment3 Hierarchy
Purchase Order	Dim - GL Segment3 Hierarchy
Purchase Order	Dim - GL Segment4
Purchase Order	Dim - GL Segment4
Purchase Order	Dim - GL Segment4 Hierarchy
Purchase Order	Dim - GL Segment4 Hierarchy
Purchase Order	Dim - GL Segment5
Purchase Order	Dim - GL Segment5
Purchase Order	Dim - GL Segment5 Hierarchy
Purchase Order	Dim - GL Segment5 Hierarchy

<b>Module</b>	<b>Dimension</b>
Purchase Order	Dim - GL Segment6
Purchase Order	Dim - GL Segment6
Purchase Order	Dim - GL Segment6 Hierarchy
Purchase Order	Dim - GL Segment6 Hierarchy
Purchase Order	Dim - GL Segment7
Purchase Order	Dim - GL Segment7
Purchase Order	Dim - GL Segment7 Hierarchy
Purchase Order	Dim - GL Segment7 Hierarchy
Purchase Order	Dim - GL Segment8
Purchase Order	Dim - GL Segment8
Purchase Order	Dim - GL Segment8 Hierarchy
Purchase Order	Dim - GL Segment8 Hierarchy
Purchase Order	Dim - GL Segment9
Purchase Order	Dim - GL Segment9
Purchase Order	Dim - GL Segment9 Hierarchy
Purchase Order	Dim - GL Segment9 Hierarchy
Purchase Order	Dim - Inventory Organization
Purchase Order	Dim - Inventory Organization
Purchase Order	Dim - Item Category Hierarchy
Purchase Order	Dim - Item Category Hierarchy
Purchase Order	Dim - Ledger
Purchase Order	Dim - Ledger
Purchase Order	Dim - Legal Entity
Purchase Order	Dim - Legal Entity
Purchase Order	Dim - Natural Account
Purchase Order	Dim - Natural Account
Purchase Order	Dim - Natural Account Hierarchy
Purchase Order	Dim - Natural Account Hierarchy
Purchase Order	Dim - PRC - Bill To Location
Purchase Order	Dim - PRC - Bill To Location
Purchase Order	Dim - PRC - Customer Deliver To Location
Purchase Order	Dim - PRC - Customer Deliver To Location
Purchase Order	Dim - PRC - Customer Ship To Location
Purchase Order	Dim - PRC - Customer Ship To Location
Purchase Order	Dim - PRC - Deliver To Location
Purchase Order	Dim - PRC - Deliver To Location
Purchase Order	Dim - PRC - Purchase Buyer
Purchase Order	Dim - PRC - Purchase Buyer
Purchase Order	Dim - PRC - Ship To Location
Purchase Order	Dim - PRC - Ship To Location
Purchase Order	Dim - Project
Purchase Order	Dim - Project
Purchase Order	Dim - Supplier
Purchase Order	Dim - Supplier
Purchase Order	Dim - Supplier Sites

<b>Module</b>	<b>Dimension</b>
Purchase Order	Dim - Supplier Sites
Purchase Order	Dim - Task
Purchase Order	Dim - Task
Purchase Order	Dim - Unit of Measure
Purchase Order	Dim - Unit of Measure
Purchase Receipt	Dim - Business Unit
Purchase Receipt	Dim - Business Unit
Purchase Receipt	Dim - Currency
Purchase Receipt	Dim - Currency
Purchase Receipt	Dim - Date Fiscal Calendar
Purchase Receipt	Dim - Date Fiscal Calendar
Purchase Receipt	Dim - Date Gregorian Calendar
Purchase Receipt	Dim - Date Gregorian Calendar
Purchase Receipt	Dim - Inventory Organization
Purchase Receipt	Dim - Inventory Organization
Purchase Receipt	Dim - Item Category Hierarchy
Purchase Receipt	Dim - Item Category Hierarchy
Purchase Receipt	Dim - Ledger
Purchase Receipt	Dim - Ledger
Purchase Receipt	Dim - PRC - Customer Ship To Location
Purchase Receipt	Dim - PRC - Customer Ship To Location
Purchase Receipt	Dim - PRC - Purchase Buyer
Purchase Receipt	Dim - PRC - Purchase Buyer
Purchase Receipt	Dim - PRC - Ship To Location
Purchase Receipt	Dim - PRC - Ship To Location
Purchase Receipt	Dim - Supplier
Purchase Receipt	Dim - Supplier
Purchase Receipt	Dim - Supplier Sites
Purchase Receipt	Dim - Supplier Sites
Purchase Receipt	Dim - Unit of Measure
Purchase Receipt	Dim - Unit of Measure
Requisition	Dim - Balancing Segment
Requisition	Dim - Balancing Segment
Requisition	Dim - Balancing Segment Hierarchy
Requisition	Dim - Balancing Segment Hierarchy
Requisition	Dim - Business Unit
Requisition	Dim - Business Unit
Requisition	Dim - Cost Center
Requisition	Dim - Cost Center
Requisition	Dim - Cost Center Hierarchy
Requisition	Dim - Cost Center Hierarchy
Requisition	Dim - Currency
Requisition	Dim - Currency
Requisition	Dim - Date Fiscal Calendar
Requisition	Dim - Date Fiscal Calendar

<b>Module</b>	<b>Dimension</b>
Requisition	Dim - Date Gregorian Calendar
Requisition	Dim - Date Gregorian Calendar
Requisition	Dim - Expenditure Type
Requisition	Dim - Expenditure Type
Requisition	Dim - GL Account
Requisition	Dim - GL Account
Requisition	Dim - GL Segment1
Requisition	Dim - GL Segment1
Requisition	Dim - GL Segment1 Hierarchy
Requisition	Dim - GL Segment1 Hierarchy
Requisition	Dim - GL Segment10
Requisition	Dim - GL Segment10
Requisition	Dim - GL Segment10 Hierarchy
Requisition	Dim - GL Segment10 Hierarchy
Requisition	Dim - GL Segment2
Requisition	Dim - GL Segment2
Requisition	Dim - GL Segment2 Hierarchy
Requisition	Dim - GL Segment2 Hierarchy
Requisition	Dim - GL Segment3
Requisition	Dim - GL Segment3
Requisition	Dim - GL Segment3 Hierarchy
Requisition	Dim - GL Segment3 Hierarchy
Requisition	Dim - GL Segment4
Requisition	Dim - GL Segment4
Requisition	Dim - GL Segment4 Hierarchy
Requisition	Dim - GL Segment4 Hierarchy
Requisition	Dim - GL Segment5
Requisition	Dim - GL Segment5
Requisition	Dim - GL Segment5 Hierarchy
Requisition	Dim - GL Segment5 Hierarchy
Requisition	Dim - GL Segment6
Requisition	Dim - GL Segment6
Requisition	Dim - GL Segment6 Hierarchy
Requisition	Dim - GL Segment6 Hierarchy
Requisition	Dim - GL Segment7
Requisition	Dim - GL Segment7
Requisition	Dim - GL Segment7 Hierarchy
Requisition	Dim - GL Segment7 Hierarchy
Requisition	Dim - GL Segment8
Requisition	Dim - GL Segment8
Requisition	Dim - GL Segment8 Hierarchy
Requisition	Dim - GL Segment8 Hierarchy
Requisition	Dim - GL Segment9
Requisition	Dim - GL Segment9
Requisition	Dim - GL Segment9 Hierarchy



<b>Module</b>	<b>Dimension</b>
Requisition	Dim - GL Segment9 Hierarchy
Requisition	Dim - Inventory Organization
Requisition	Dim - Inventory Organization
Requisition	Dim - Item Category Hierarchy
Requisition	Dim - Item Category Hierarchy
Requisition	Dim - Ledger
Requisition	Dim - Ledger
Requisition	Dim - Natural Account
Requisition	Dim - Natural Account
Requisition	Dim - Natural Account Hierarchy
Requisition	Dim - Natural Account Hierarchy
Requisition	Dim - PRC - Customer Deliver To Location
Requisition	Dim - PRC - Customer Deliver To Location
Requisition	Dim - PRC - Deliver To Location
Requisition	Dim - PRC - Deliver To Location
Requisition	Dim - PRC - Purchase Buyer
Requisition	Dim - PRC - Purchase Buyer
Requisition	Dim - Project
Requisition	Dim - Project
Requisition	Dim - Supplier
Requisition	Dim - Supplier
Requisition	Dim - Supplier Sites
Requisition	Dim - Supplier Sites
Requisition	Dim - Task
Requisition	Dim - Task
Requisition	Dim - Unit of Measure
Requisition	Dim - Unit of Measure
Salary Basis	Dim - Currency
Salary Basis	Dim - Date Enterprise Calendar
Salary Basis	Dim - Date Gregorian Calendar
Salary Basis	Dim - Department
Salary Basis	Dim - Job
Salary Basis	Dim - Legal Employer
Salary Basis	Dim - Reporting Establishment
Salary Basis	Dim - Worker
Sales CPQ Integrated Analytics	Dim - Business Unit
Sales CPQ Integrated Analytics	Dim - Currency
Sales CPQ Integrated Analytics	Dim - Customer Sold To
Sales Pipeline	Dim - Business Unit
Sales Pipeline	Dim - Currency
Sales Pipeline	Dim - Customer Sold To
Sales Pipeline Snapshot	Dim - Business Unit
Sales Pipeline Snapshot	Dim - Currency
Sales Pipeline Snapshot	Dim - Customer Sold To
Subscription Management Analytics	Dim - Business Unit

<b>Module</b>	<b>Dimension</b>
Subscription Management Analytics	Dim - Currency
Subscription Management Analytics	Dim - Customer Sold To
Succession Management	Dim - Date Enterprise Calendar
Succession Management	Dim - Date Gregorian Calendar
Succession Management	Dim - Department
Succession Management	Dim - Job
Succession Management	Dim - Legal Employer
Succession Management	Dim - Reporting Establishment
Succession Management	Dim - Worker
Talent Acquisition	Dim - Date Enterprise Calendar
Talent Acquisition	Dim - Date Gregorian Calendar
Talent Acquisition	Dim - Department
Talent Acquisition	Dim - Job
Talent Acquisition	Dim - Legal Employer
Talent Acquisition	Dim - Reporting Establishment
Talent Acquisition	Dim - Worker
Talent Profile	Dim - Date Enterprise Calendar
Talent Profile	Dim - Date Gregorian Calendar
Talent Profile	Dim - Department
Talent Profile	Dim - Job
Talent Profile	Dim - Legal Employer
Talent Profile	Dim - Reporting Establishment
Talent Profile	Dim - Worker
Talent Review	Dim - Date Enterprise Calendar
Talent Review	Dim - Date Gregorian Calendar
Talent Review	Dim - Department
Talent Review	Dim - Job
Talent Review	Dim - Legal Employer
Talent Review	Dim - Reporting Establishment
Talent Review	Dim - Worker
Time and Labor	Dim - Date Enterprise Calendar
Time and Labor	Dim - Date Gregorian Calendar
Time and Labor	Dim - Department
Time and Labor	Dim - Expenditure Type
Time and Labor	Dim - Job
Time and Labor	Dim - Legal Employer
Time and Labor	Dim - Project
Time and Labor	Dim - Project Unit
Time and Labor	Dim - Reporting Establishment
Time and Labor	Dim - Task
Time and Labor	Dim - Worker
Workforce Compensation	Dim - Currency
Workforce Compensation	Dim - Date Enterprise Calendar
Workforce Compensation	Dim - Date Gregorian Calendar
Workforce Compensation	Dim - Department

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<b>Module</b>	<b>Dimension</b>
Workforce Compensation	Dim - Job
Workforce Compensation	Dim - Legal Employer
Workforce Compensation	Dim - Reporting Establishment
Workforce Compensation	Dim - Worker
Workforce Management	Dim - Date Enterprise Calendar
Workforce Management	Dim - Date Gregorian Calendar
Workforce Management	Dim - Department
Workforce Management	Dim - Job
Workforce Management	Dim - Legal Employer
Workforce Management	Dim - Reporting Establishment
Workforce Management	Dim - Worker

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