# Oracle® Cloud

# Administering Oracle Fusion Analytics Warehouse

**ORACLE**®

# Contents

## Preface

## 1    Get Started with Oracle Fusion Analytics Warehouse

# 2   Set Up Oracle Fusion Analytics Warehouse

# 3   Configure Oracle Fusion Analytics Warehouse Data

# 4    Validate Oracle Fusion Analytics Warehouse Data

# 5 Manage Users, Groups, Application Roles, and Data Access

# 6    Customize Oracle Fusion Analytics Warehouse

# 7    Manage Oracle Fusion Analytics Warehouse

# 8    Troubleshooting

# Preface

Learn how to get started with Oracle Fusion Analytics Warehouse.

**Topics**

- Audience
- Documentation Accessibility
- Diversity and Inclusion
- Related Documentation
- Conventions

## Audience

This document is intended for administrators who implement, configure, and manage Oracle Fusion Analytics Warehouse.

## Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at `https://www.oracle.com/corporate/accessibility/`.

**Access to Oracle Support**

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit `https://support.oracle.com/portal/` or visit `Oracle Accessibility Learning and Support` if you are hearing impaired.

## Diversity and Inclusion

Oracle is fully committed to diversity and inclusion. Oracle respects and values having a diverse workforce that increases thought leadership and innovation. As part of our initiative to build a more inclusive culture that positively impacts our employees, customers, and partners, we are working to remove insensitive terms from our products and documentation. We are also mindful of the necessity to maintain compatibility with our customers' existing technologies and the need to ensure continuity of service as Oracle's offerings and industry standards evolve. Because of these technical constraints, our effort to remove insensitive terms is ongoing and will take time and external cooperation.

# 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 Analytics Warehouse
- 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 |
|---|---|
| **boldface** | Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary. |
| *italic* | 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 Analytics Warehouse

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

**Topics:**

- About Oracle Fusion Analytics Warehouse
- Prerequisites for Oracle Fusion Analytics Warehouse
- Typical Workflow to Administer Oracle Fusion Analytics Warehouse
- Activate Your Oracle Fusion Analytics Warehouse Subscription
- Before You Begin with Oracle Fusion Analytics Warehouse
- Sign In to the Oracle Cloud Infrastructure Console
- Access Your Service
- Add Users with Administrator Permissions
- Add an Oracle Cloud Infrastructure Identity and Access Management Policy
- Create a User in Oracle Fusion Cloud Applications to Extract Data

## About Oracle Fusion Analytics Warehouse

Oracle Fusion Analytics Warehouse is a family of prebuilt, cloud native analytics applications for Oracle Cloud Applications that provides line-of-business users with ready-to-use 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 Performance Indicators (KPIs) and deep analyses to help decision-makers run their business. Oracle Fusion Analytics Warehouse 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 KPIs, dashboards, and reports. Oracle manages the service starting with deployment through performance monitoring, upgrades, and maintenance for the pre-built content. You can customize the pre-built content as defined in the Customize Oracle Fusion Analytics Warehouse 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 Analytics Warehouse. See About Managing Data Connections.

You must configure the included semantic model only with the embedded Oracle Fusion Analytics Warehouse tools and deployed only on the Oracle Fusion Analytics Warehouse service instance. You mustn't configure the included semantic model with non-Oracle Fusion Analytics Warehouse tools including Oracle Analytics Client Tools, Oracle Analytics Administration Tool, or APIs.

Oracle Fusion Analytics Warehouse runs on Oracle Cloud Infrastructure and is integrated with many infrastructure services. Before you begin using Oracle Fusion Analytics Warehouse, you should become familiar with Oracle Cloud Infrastructure. See Welcome to Oracle Cloud Infrastructure.

## Region Availability

Oracle Fusion Analytics Warehouse is available in the following regions currently:

| Region Location | Region Name | Region Key |
|---|---|---|
| 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 |
| Mumbai, India | ap-mumbai-1 | BOM |
| 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 |
| Toronto, Canada | ca-toronto-1 | YYZ |
| UK Gov London, United Kingdom | uk-gov-london-1 | LTN |

## About Oracle Fusion Analytics Warehouse Releases

Updates to Oracle Fusion Analytics Warehouse 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 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.
  - You can expect a major release every quarter, 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 Analytics Warehouse automatically updates your data model and content without extending the predefined date.

- You can expect a major release every quarter 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 Analytics Warehouse Service Level Objective

Oracle Fusion Analytics Warehouse is built on Oracle Cloud Infrastructure and leverages the Oracle PaaS Cloud services.

Oracle Fusion Analytics Warehouse 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 and Oracle PaaS and IaaS SLA.

Oracle Fusion Analytics Warehouse has a service-level objective (SLO) of 99.9%.

# About Oracle Fusion Analytics Warehouse Components

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

It has ready-to-use 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 KPIs, dashboards, 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 KPIs, dashboards, and reports.

## Oracle Fusion Analytics Warehouse Console

You must have the Oracle Fusion Analytics Warehouse 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 Analytics Warehouse Console.

| Task | More information |
| --- | --- |
| Security | Manage users and their access to subject areas and data. See Manage Users, Groups, Application Roles, and Data Access. |
| Release Updates | Decide and apply the application updates except the emergency patches that are deployed automatically. See Manage Application Updates. |
| Virus Scanner | Use the Virus Scanner option on the Console in Oracle Fusion Analytics Warehouse to connect to your virus scanning server. See Configure a Virus Scanner. |
| Advanced Configuration | Advanced data and content configurations will be available in a future release. |
| Data Configuration | Configure connections to source systems Fusion and managed pipelines. Configure pipeline settings, data augmentations and application specific configurations. See Configure Oracle Fusion Analytics Warehouse Data. |
| Semantic Model Extensions | Configure extensions and customizations to the semantic model. Join with custom data objects or import external semantic models. See Customize Oracle Fusion Analytics Warehouse. |
| Data Validation | Validate the data after loading the source data from Oracle Fusion Cloud Applications into your data warehouse. See Validate Oracle Fusion Analytics Warehouse Data. |
| Uploads | Upload and download data related to security and financial categories to your data warehouse using files. See Manage Uploads and Downloads. |

ORACLE®

| Task | More information |
|------|------------------|
| Promote Objects | Promote changes to the semantic model, security configurations, and customized KPIs from non-production to Production environments. See Promote Your Customizations to the Production Environment. |
| Bundles | Manage snapshots of your application artifacts as bundles. See Bundle Your Application Artifacts. |
| Session and Query Cache | See which users are signed in and troubleshoot report queries. This is also accessible from the FAW console. See Monitor Users and Activity Logs. |
| Issue SQL | Test and debug SQL queries. See Run Test SQL Queries. |

# Comparision of Capabilities between Analytics Cloud Associated with Fusion Analytics Warehouse and Standalone Analytics Cloud

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

Service administrators have access to two console user interfaces, and administrative tasks span both the consoles. The Oracle Fusion Analytics Warehouse 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. Oracle Analytics Cloud associated with Oracle Fusion Analytics Warehouse is directly connected to the Oracle Autonomous Data Warehouse and doesn't support connections to external systems through the Analytics Server. For example, connections to social media platforms isn't supported through the Analytics Server of Oracle Analytics Cloud associated with Oracle Fusion Analytics Warehouse. You can use the Oracle Fusion Analytics Warehouse 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 Console that is included with Oracle Fusion Analytics Warehouse. You must have the Oracle Fusion Analytics Warehouse service administrator role to access the Console and perform administration tasks.

| Tasks | More Information |
|-------|------------------|
| Maps | Define how users display their data on maps. See Manage Map Information for Analyses. |
| Extensions | Upload custom visualization types or custom data actions. See Manage Custom Plug-ins. |
| Social | Not available. External connections to social media platforms aren't allowed in Oracle Fusion Analytics Warehouse. |

| Tasks | More Information |
|---|---|
| Search Index | Set up how content is indexed and crawled so users always find the latest information when they search. See Schedule Regular Content Crawls and Monitor Search Crawl Jobs. |
| Safe Domains | Authorize access to safe domains. See Register Safe Domains. |
| Users and Roles | Not available. Use the Security option on the Console in Oracle Fusion Analytics Warehouse to define users and roles. See Manage Users, Groups, Application Roles, and Data Access. |
| Snapshots | Not available. Use the Bundles option on the Console in Oracle Fusion Analytics Warehouse to manage snapshots. See Bundle Your Application Artifacts. |
| 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 Oracle Analytics Cloud are supported, because these don't use the Analytics Server. |
| Virus Scanner | Use the Virus Scanner option on the Console in Oracle Fusion Analytics Warehouse to connect to your virus scanning server. See Configure a Virus Scanner. |
| Session and Query Cache | See which users are signed in and troubleshoot report queries. This is also accessible from the Console in Oracle Fusion Analytics Warehouse. See Monitor Users and Activity Logs. |
| Issue SQL | Test and debug SQL queries. See Run Test SQL Queries. |
| Mail Server | Connect to your email server. See Set Up an Email Server to Deliver Reports. |
| Monitor Deliveries | Track deliveries sent by the email server. See Track the Reports You Distribute by Email or Through Agents. |
| System Settings | Not authorized. Oracle directly manages the system settings for each of the Oracle Fusion Analytics Warehouse instances and tunes the instances to provide an optimized user experience. Oracle Fusion Analytics Warehouse doesn't allow configuration of advanced options for Oracle Analytics Cloud. |
| Remote Data Connectivity | Register one or more Data Gateway agents for remote connectivity to visualization workbooks. See Configure and Register Data Gateway for Visualization. |

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

Oracle Fusion Analytics Warehouse provisions instances of Oracle Autonomous Data Warehouse to store data. As part of the integrated SaaS offering of Oracle Fusion Analytics Warehouse, 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 Analytics Warehouse using the Oracle Cloud Infrastructure Console. The following table outlines the tasks that aren't allowed or recommended.

| Task | More information |
| --- | --- |
| Database life cycle management | You can't stop, delete, pause, or restart the database. Oracle Fusion Analytics Warehouse 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 Analytics Warehouse. |
| 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 Analytics Warehouse. |
| | Auto-scale for OCPUs is turned on by default by Oracle Fusion Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse. Doing so may put the data pipelines and factory content in an inconsistent state. |

The Oracle Autonomous Data Warehouse instance created by Oracle Fusion Analytics Warehouse 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 sacle 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 Scale Up Oracle Autonomous Data Warehouse Storage. |
| 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 Analytics Warehouse 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 will allow upto 300 low sessions. You must avoid Medium or High sessions in all cases, as they block the ETL pipeline. |
| Adding database connections | See Tutorial. Follow these guidelines:<br>• Aim for fewer than 10 concurrent database connections.<br>• When you configure the connections, ensure that you select the service with the "low" prefix in its name. Don't select the service with the "high" prefix since it can lead to performance issues in reports and delays in completion of daily data refreshes in Oracle Fusion Analytics Warehouse.<br>• Close unused sessions in a timely manner to ensure no adverse impact on the performance of Oracle Fusion Analytics Warehouse.<br>• 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. |

## Preview Features

Oracle Fusion Analytics Warehouse 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.

Preview features are intended for evaluation and training purposes. You may evaluate the preview features for production use as-is based on your specific parameters. Contact Oracle support if you've questions on feasibility of rolling out a specific preview feature for production use.

To find out about features currently available for preview, see Features Available for Preview.

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.

## Features Available for Preview

Preview features enable functional administrators to switch functionality on and off. This way, your organization can evaluate and learn how to use new features before they become generally 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 | This feature enables an administrator to connect to data in Amazon Simple Storage Service (AWS S3). |
| | See Load Data from Amazon Simple Storage Service into Oracle Fusion Analytics Warehouse (Preview). |
| | • **On**– Display the **AWS S3** option in the Create Connection dialog. |
| | • **Off** – Hide the **AWS S3** option in the Create Connection dialog. |
| | Default: Off |
| | Restart Required: No |

| Feature | Description |
|---------|-------------|
| Google Analytics | This feature enables connecting to a Google Analytics instance and building a complete managed data pipeline with that data.<br><br>See Load Data from Google Analytics into Fusion Analytics Warehouse (Preview).<br><br>• **On**– Display the **Google Analytics** option in the Create Connection dialog.<br>• **Off** – Hide the **Google Analytics** option in the Create Connection dialog.<br><br>Default: Off<br><br>Restart Required: No |
| Oracle Autonomous Database | This feature enables an administrator to connect to custom data in Oracle Autonomous Data Warehouse. You can create upto five connections to different Oracle Autonomous Data Warehouse instances and they are denoted as **Oracle Autonomous Database 1**, **Oracle Autonomous Database 2**, **Oracle Autonomous Database 3**, **Oracle Autonomous Database 4**, and **Oracle Autonomous Database 5**.<br><br>See Load Data from Oracle Autonomous Database into Oracle Fusion Analytics Warehouse (Preview).<br><br>• **On**– Display the Oracle Autonomous Data Warehouse option such as **Oracle Autonomous Database 1** in the Create Connection dialog.<br>• **Off** – Hide the Oracle Autonomous Data Warehouse option such as **Oracle Autonomous Database 1** in the Create Connection dialog.<br><br>Default: Off<br><br>Restart Required: No |
| Oracle E-Business Suite On-Prem | 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.<br><br>See Load Data from On-premises E-Business Suite into Fusion Analytics Warehouse (Preview).<br><br>• **On**– Display the **Oracle E-Business Suite On-Prem** option in the Create Connection dialog.<br>• **Off** – Hide the **Oracle E-Business Suite On-Prem** option in the Create Connection dialog.<br><br>Default: Off<br><br>Restart Required: No |

| Feature | Description |
|---------|-------------|
| Oracle EPM - Financial Close and Consolidation | This feature enables connecting to Oracle EPM instance and building a complete managed data pipeline with that data. |
| | See Load Data from Enterprise Performance Management into Fusion Analytics Warehouse (Preview). |
| | • **On**– Display the **Oracle EPM - Financial Close and Consolidation** option in the Create Connection dialog.<br>• **Off** – Hide the **Oracle EPM - Financial Close and Consolidation** option in the Create Connection dialog. |
| | Default: Off |
| | Restart Required: No |
| Oracle EPM - Planning and Budgeting | This feature enables connecting to Oracle EPM instance and building a complete managed data pipeline with that data. |
| | See Load Data from Enterprise Performance Management into Fusion Analytics Warehouse (Preview). |
| | • **On**– Display the **Oracle EPM - Planning and Budgeting** option in the Create Connection dialog.<br>• **Off** – Hide the **Oracle EPM - Planning and Budgeting** option in the Create Connection dialog. |
| | Default: Off |
| | Restart Required: No |
| Oracle EPM - Profitability and Cost Management | This feature enables connecting to Oracle EPM instance and building a complete managed data pipeline with that data. |
| | See Load Data from Enterprise Performance Management into Fusion Analytics Warehouse (Preview). |
| | • **On**– Display the **Oracle EPM - Profitability and Cost Management** option in the Create Connection dialog.<br>• **Off** – Hide the **Oracle EPM - Profitability and Cost Management** option in the Create Connection dialog. |
| | Default: Off |
| | Restart Required: No |

| Feature | Description |
|---------|-------------|
| Oracle JD Edwards On-Prem | 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.<br><br>See Load Data from On-premises JD Edwards into Fusion Analytics Warehouse (Preview).<br><br>• **On**– Display the **Oracle JD Edwards On-Prem** option in the Create Connection dialog.<br>• **Off** – Hide the **Oracle JD Edwards On-Prem** option in the Create Connection dialog.<br>Default: Off<br><br>Restart Required: No |
| Oracle Object Storage Service | This managed pipeline connects to Oracle Object Storage to ingest datasets into Oracle Fusion Analytics Warehouse followed by data augmentation.<br><br>See Load Data from Oracle Object Storage into Fusion Analytics Warehouse (Preview).<br><br>• **On**– Display the **Oracle Object Storage Service** option in the Create Connection dialog.<br>• **Off** – Hide the **Oracle Object Storage Service** option in the Create Connection dialog.<br>Default: Off<br><br>Restart Required: No |
| Oracle PeopleSoft On-Prem - Campus Solutions | 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.<br><br>See Load Data from On-premises PeopleSoft into Fusion Analytics Warehouse (Preview).<br><br>• **On**– Display the **Oracle PeopleSoft On-Prem - Campus Solutions** option in the Create Connection dialog.<br>• **Off** – Hide the **Oracle PeopleSoft On-Prem - Campus Solutions** option in the Create Connection dialog.<br>Default: Off<br><br>Restart Required: No |

| Feature | Description |
|---|---|
| Oracle PeopleSoft On-Prem - Financials | 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. |
| | See Load Data from On-premises PeopleSoft into Fusion Analytics Warehouse (Preview). |
| | • **On**– Display the **Oracle PeopleSoft On-Prem - Financials** option in the Create Connection dialog. |
| | • **Off** – Hide the **Oracle PeopleSoft On-Prem - Financials** option in the Create Connection dialog. |
| | Default: Off |
| | Restart Required: No |
| Oracle PeopleSoft On-Prem - Human Resources | 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. |
| | See Load Data from On-premises PeopleSoft into Fusion Analytics Warehouse (Preview). |
| | • **On**– Display the **Oracle PeopleSoft On-Prem - Human Resources** option in the Create Connection dialog. |
| | • **Off** – Hide the **Oracle PeopleSoft On-Prem - Human Resources** option in the Create Connection dialog. |
| | Default: Off |
| | Restart Required: No |
| Oracle PeopleSoft On-Prem - Learning Management | 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. |
| | See Load Data from On-premises PeopleSoft into Fusion Analytics Warehouse (Preview). |
| | • **On** – Display the **Oracle PeopleSoft On-Prem - Learning Management** option in the Create Connection dialog. |
| | • **Off** – Hide the **Oracle PeopleSoft On-Prem - Learning Management** option in the Create Connection dialog. |
| | Default: Off |
| | Restart Required: No |

ORACLE®

| Feature | Description |
|---|---|
| Remote Agent | Remote Agent application helps bring data from the on-premises applications like E-Business Suite and JD Edwards into Oracle Fusion Analytics Warehouse.<br><br>See Load Data from a Remote Agent into Fusion Analytics Warehouse (Preview).<br><br>• **On**– Display the Remote Agent option in the Create Connection dialog.<br>• **Off** – Hide the Remote Agent option in the Create Connection dialog.<br>Default: Off<br><br>Restart Required: No |
| Salesforce REST | This feature enables an administrator to connect to Salesforce SaaS source and build complete managed data pipeline with that data.<br><br>See Load Data from Salesforce into Fusion Analytics Warehouse (Preview).<br><br>• **On**– Display the Salesforce REST option in the Create Connection dialog.<br>• **Off** – Hide the Salesforce REST option in the Create Connection dialog.<br>Default: Off<br><br>Restart Required: No |
| SFTP | This feature enables connecting to a Secure FTP source and building a complete managed data pipeline with that data.<br><br>See Load Data from a Secure FTP Source into Fusion Analytics Warehouse (Preview).<br><br>• **On**– Display the SFTP option in the Create Connection dialog.<br>• **Off** – Hide the SFTP option in the Create Connection dialog.<br>Default: Off<br><br>Restart Required: No |
| Shopify | This feature enables connecting to a Shopify instance and building a complete managed data pipeline with that data.<br><br>See Load Data from Shopify into Fusion Analytics Warehouse (Preview).<br><br>• **On**– Display the Shopify option in the Create Connection dialog.<br>• **Off** – Hide the Shopify option in the Create Connection dialog.<br>Default: Off<br><br>Restart Required: No |

| Feature | Description |
| --- | --- |
| Snowflake | This feature enables connecting to a Snowflake instance and creating augmentations on that data.<br><br>See Load Data from Snowflake into Oracle Fusion Analytics Warehouse (Preview).<br><br>• **On**– Display the Snowflake option in the Create Connection dialog.<br>• **Off** – Hide the Snowflake option in the Create Connection dialog.<br>Default: Off<br><br>Restart Required: No |
| Taleo | This feature enables connecting to a Taleo instance and creating augmentations on that data.<br><br>See Load Data from Taleo into Fusion Analytics Warehouse (Preview).<br><br>• **On**– Display the Taleo option in the Create Connection dialog.<br>• **Off** – Hide the Taleo option in the Create Connection dialog.<br>Default: Off<br><br>Restart Required: No |
| U.S. Bureau of Labor Statistics (BLS) | This feature enables connecting to publicly available datasets from Bureau of Labor Statistics (BLS) datasets and building a complete managed data pipeline with that data.<br><br>See Load the Bureau of Labor Statistics Data into Fusion Analytics Warehouse (Preview).<br><br>• **On**– Display the BLS option in the Create Connection dialog.<br>• **Off** – Hide the BLS option in the Create Connection dialog.<br>Default: Off<br><br>Restart Required: No |

**Pipeline Features**

| Feature | Description |
| --- | --- |
| Frequent Data Refresh | This feature enables certain pipeline refresh schedules to be set to a frequency of 4 hours or higher.<br><br>See Schedule Frequent Refreshes of Functional Area Data (Preview).<br><br>• **On** – Display the **Frequent Data Refresh Schedule** option on the Pipeline Settings page.<br>• **Off** – Hide the **Frequent Data Refresh Schedule** option on the Pipeline Settings page.<br>Default: Off<br><br>Restart Required: No |

| Feature | Description |
|---|---|
| Scheduled Full Data Reload | For specific functional areas, an administrator can schedule full refreshes on a weekly, monthly, or quarterly basis. |
| | See Schedule Periodic Full Reload of Functional Area Data (Preview). |
| | • **On** – Display the **Scheduled Full Data Reload** on the Pipeline Settings page.<br>• **Off** – Hide the **Scheduled Full Data Reload** on the Pipeline Settings page. |
| | Default: Off |
| | Restart Required: No |

# Prerequisites for Oracle Fusion Analytics Warehouse

You must have an Oracle Cloud account with Universal Credits to provision Oracle Fusion Analytics Warehouse.

You can provision Oracle Fusion Analytics Warehouse in one of the regions where the product is available. You must activate the Oracle Cloud account with Universal Credits from your Welcome email before you start using it and before you activate the Fusion Analytics Warehouse order. See Activate Your Order.

# Typical Workflow to Administer Oracle Fusion Analytics Warehouse

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

| Task | Description | More Information |
|---|---|---|
| Activate your Oracle Fusion Analytics Warehouse subscription. | After your order for the Oracle Fusion Analytics Warehouse subscription has been processed, you receive a Welcome email asking you to activate your Oracle Fusion Analytics Warehouse 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. | Activate Your Oracle Fusion Analytics Warehouse Subscription |

| Task | Description | More Information |
|---|---|---|
| Sign into the Oracle Cloud Infrastructure Console. | After you activate the service, use the cloud account credentials to access your services.<br>If you are planning to use single sign-on to access Oracle Fusion Analytics Warehouse, then Set Up Provisioning with Single Sign-On before proceeding with this and the subsequent tasks. | Sign In to the Oracle Cloud Infrastructure Console |
| 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. | Access Your Service |
| (Optional) Add a user with administrator permissions for the service. | Add a user with full administrator permissions of the default administrator of the service. | Add Users with Administrator Permissions |
| 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 Analytics Warehouse. | Create a User in Oracle Fusion Cloud Applications to Extract Data |
| Set up user access to Oracle Fusion Analytics Warehouse using single sign-on. | You can set up how users from Oracle Fusion Cloud Applications access Oracle Fusion Analytics Warehouse 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 Analytics Warehouse. | Set Up User Access to Oracle Fusion Analytics Warehouse Using Single Sign-On |

| Task | Description | More Information |
|------|-------------|-----------------|
| Create an instance for Oracle Fusion Analytics Warehouse. | Use the Console to create an instance.<br>If you've set up provisioning with single sign-on, which federates your tenancy with Oracle Identity Cloud Service, then you create the Fusion Analytics Warehouse instance in the federated Oracle Identity Cloud Service instance. If your tenancy isn't federated with an identity provider, then you create the Fusion Analytics Warehouse instance in the default Oracle Identity Cloud Service instance that is available with your Oracle Fusion Analytics Warehouse subscription. | Create an Oracle Fusion Analytics Warehouse Subscription Instance |
| Verify the Oracle Fusion Analytics Warehouse instance. | You receive an email when your instance is ready. Check that you can sign in and that your instance is up and running. | Verify Your Instance and Sign In |

| Task | Description | More Information |
|------|-------------|-----------------|
| 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 Set Up Provisioning with Single Sign-On. You can also add additional users in your federated Oracle Identity Cloud Service instance through Oracle Fusion Analytics Warehouse using the User Management option in the Console. When you set up provisioning without single sign-on, to access Oracle Fusion Analytics Warehouse, 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 in | Assign Users to a Group and Assign Groups to Users. |
| Configure data security. | Ensure that users have appropriate access to use Oracle Fusion Analytics Warehouse. Access to subject areas and data depends on the roles assigned to the users. | Manage Users, Groups, Application Roles, and Data Access |
| Configure Oracle Fusion Analytics Warehouse 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. | Configure Oracle Fusion Analytics Warehouse Data |

# Activate Your Oracle Fusion Analytics Warehouse Subscription

You must activate the Oracle Fusion Analytics Warehouse subscription to start using the service.

**Topics:**

- About Activating Your Oracle Fusion Analytics Warehouse Subscription
- Activate the Universal Credits Subscription
- Activate the Oracle Fusion Analytics Warehouse Subscription

## About Activating Your Oracle Fusion Analytics Warehouse Subscription

After your order for the Oracle Fusion Analytics Warehouse subscription has been processed, you receive a Welcome email asking you to activate your Oracle Fusion Analytics Warehouse subscription. If your sales representative also included a Universal Credits (UCC) subscription as part of your order, you receive a separate Welcome email asking you to activate that as well.

A prerequisite for successful activation of an Oracle Fusion Analytics Warehouse subscription is an Oracle Cloud account with a UCC subscription already activated into it.

> **Note:**
>
> The best practice is to have the UCC subscription in your existing Oracle Fusion Cloud Applications account.

The UCC subscription is required because Oracle Fusion Analytics Warehouse has dependencies on Oracle Analytics Cloud and Oracle Autonomous Data Warehouse services and these services are only available with an UCC subscription.

You must activate the UCC subscription first followed by the Oracle Fusion Analytics Warehouse subscription into the same Oracle Cloud account. If you try to activate Oracle Fusion Analytics Warehouse into an Oracle Cloud account that doesn't have UCC activated into it, a warning message will tell you to activate into an Oracle Cloud account with an UCC subscription.

Activation will also not be successful if you aren't a cloud administrator with the OCI_Administrator role (available with the OCI_Administrators group) for the Oracle Cloud account that you're trying to activate your subscriptions into. This applies to both UCC and Oracle Fusion Analytics Warehouse subscriptions. If you aren't a cloud administrator with this role, then either:

- Ask the current cloud administrator of the cloud account to add you as a cloud administrator and assign the OCI_Administrators group before you try to activate.

- Or forward the activation emails to a person who has the OCI_Administrator role 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_Administrators 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_Administrators group. 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?

UCC PAYG subscriptions typically expire within 30 days of receiving your Welcome email unless activated. It's important that you activate the UCC PAYG subscription before it expires; otherwise, the activation will fail.

If you were sold a new UCC subscription that you'll be using for Oracle Fusion Analytics Warehouse, then as previously noted, the highly recommended best practice is to activate your new UCC subscription into your Oracle Fusion Cloud Applications account. Then follow this by activating your Oracle Fusion Analytics Warehouse subscription into the same Oracle Cloud account as your Oracle Fusion Cloud Applications. This enables you to easily synchronize your Oracle Fusion Cloud Applications users, groups, and application roles required by Oracle Fusion Analytics Warehouse.

If your organization has an existing UCC subscription that you'll be using for Oracle Fusion Analytics Warehouse, and this UCC subscription isn't in your Oracle Fusion Cloud Applications cloud account, then stop the activation process. Ask your sales representative to order a new UCC PAYG subscription. You can share credits from your existing UCC subscription with the new UCC PAYG subscription using the Organization Management functionality in Oracle Cloud Infrastructure. See Organization Management.

After you receive the activation email for the UCC PAYG subscription, activate it into the Oracle Cloud account that has Oracle Fusion Cloud Applications. Then activate your Oracle Fusion Analytics Warehouse subscription into the same Oracle Cloud account that has Oracle Fusion Cloud Applications. .

## 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.

1. Locate your UCC Welcome email.

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

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

**ORACLE**

Add subscriptions to a cloud account

Hi

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) 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 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:**

- Oracle PaaS and IaaS Universal Credits (        )

Add to existing cloud account

Create new cloud account

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

**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

Please do not reply directly to this email.

Copyright © 2020 Oracle. All rights reserved.
Contact Us | Legal Notices and Terms of Use | Privacy Statement

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 Analytics Warehouse Subscription

Activate your Oracle Fusion Analytics Warehouse 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 are taken to the Add Subscription page in the Oracle Cloud Infrastructure Console where you'll add the Oracle Fusion Analytics Warehouse subscription to the Cloud account.

After you add the Oracle Fusion Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse 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 <                                              >
Thu 9/15/2022 7:10 AM
To:                                                        >

ORACLE

### Add subscriptions to a cloud account

Hi

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) 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:**

- Oracle Fusion HCM Analytics - Hosted Employee (        )

Add to existing cloud account

Create new cloud account

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

**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

Please do not reply directly to this email.
Copyright © 2020 Oracle. All rights reserved.
Contact Us | Legal Notices and Terms of Use | Privacy Statement

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

**ORACLE** Cloud

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**.



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.



   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.

- 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**.

> **✎ 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 assigned to you. You must contact your cloud account administrator.
>
> - If you've been assigned the OCI_Administrator role, then enter a service request against "Fusion Analytics Warehouse" 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.

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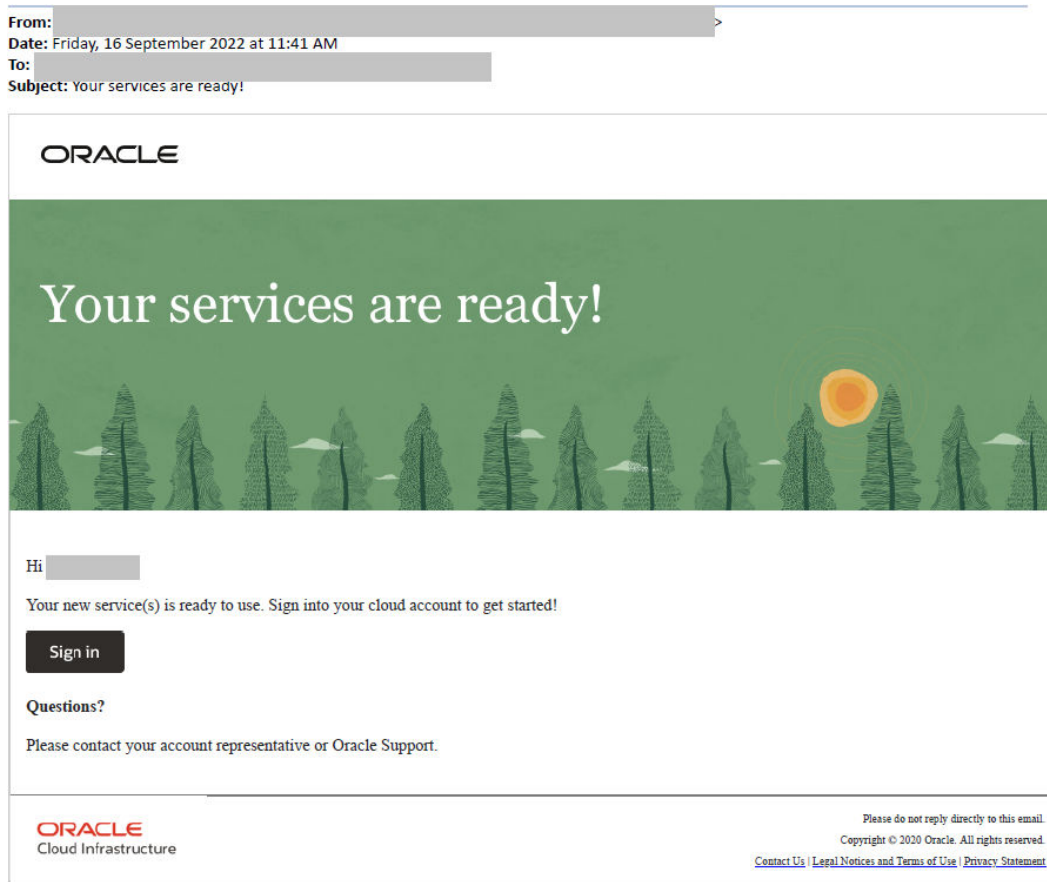
9. In Oracle Cloud Infrastructure Console, click the Navigator menu icon, click **Analytics & AI**, and then under Analytics & AI, click **Fusion Analytics Warehouse**.
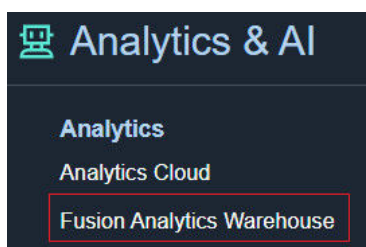


10. On the Fusion Analytics Warehouse Instances page, verify that the subscriptions listed in the Compartment banner match your Oracle Fusion Analytics Warehouse order and the **Create Instance** button is enabled.

   To create an instance, see Create an Oracle Fusion Analytics Warehouse Subscription Instance .
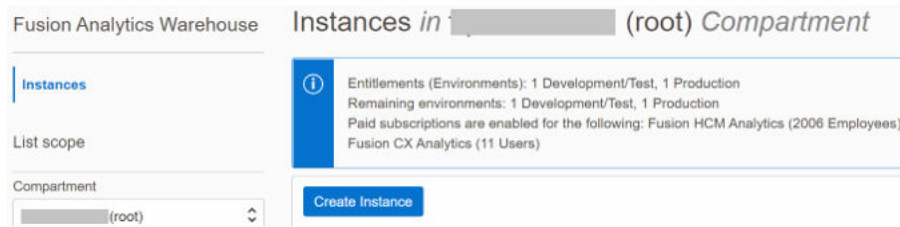
11. If you run into issues, then enter a service request against "Fusion Analytics Warehouse" in My Oracle Support so that it gets routed to the correct team. For this service request, select **Significant Impairment** as **Issue Type** and in **Problem Type**, click **Activate, Create, Delete, Manage 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.

# Before You Begin with Oracle Fusion Analytics Warehouse

Oracle Fusion Analytics Warehouse is available on Oracle Cloud Infrastructure and uses few other Oracle Cloud Infrastructure services.

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

When you activate your Oracle Fusion Analytics Warehouse 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 Analytics Warehouse setup and create other users. There's no need to delegate this responsibility, but if you want someone else to set up Oracle Fusion Analytics Warehouse, you can add more users and assign them to the required roles.

Here's the information about how Oracle Fusion Analytics Warehouse uses other Oracle Cloud Infrastructure services and what you need to do if you're setting up Oracle Fusion Analytics Warehouse 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 Analytics Warehouse, you automatically receive Oracle Identity Cloud Service Foundation that provides the core identity and access management capabilities. Oracle Fusion Analytics Warehouse uses Oracle Identity Cloud Service to manage users and groups. | Create and associate users and groups. See Assign Users to a Group and Assign Groups to Users. |
| Oracle Autonomous Data Warehouse | Oracle Fusion Analytics Warehouse 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 Analytics Warehouse. See Create an Oracle Fusion Analytics Warehouse Subscription Instance |

| Service | What is it for? | Do I need to do anything? |
|---|---|---|
| Oracle Analytics Cloud | Oracle Fusion Analytics Warehouse 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 |

# 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 Analytics Warehouse 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 Analytics Warehouse instances. Name the policy, for example, `FAWAdmin.pl`. Add a policy statement such as:

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

Add another policy to grant the non-administrator user permission to create an autonomous data warehouse (ADW) in the compartment that you created, for example, `FAWServicesCompartment`. Ensure that the compartment in which you grant the manage ADW permissions is the same as the compartment in which the non-administrator user has a manage permission for Oracle Fusion Analytics Warehouse instances. Name the policy, for example, `FAWADWAdmin.pl` Add a policy statement such as:

```
ALLOW GROUP FAWAdmin.grp TO MANAGE autonomous-data-warehouse-
family 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.

# Add an Oracle Cloud Infrastructure Identity and Access Management Policy

Create a policy to enable Oracle to manage your resources without your active intervention.

Use the Oracle Cloud Infrastructure Console to create a policy with the following three statements:

- Allow service faw to manage autonomous-database-family in compartment.

- Allow service faw to manage analytics-instances in compartment.

- Allow service faw to manage analytics-warehouses in compartment.

> **Note:**
>
> In the three statements, specify the compartment name for your Oracle Fusion Analytics Warehouse service.

See "To create a policy" in Managing Policies.

# 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 Analytics Warehouse.

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

Analytics Warehouse. 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 Analytics Warehouse 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 ready-to-use `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 Analytics Warehouse instance, see Enter Details for an Oracle Fusion Analytics Warehouse 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 Analytics Warehouse; 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**.

# 2

# Set Up Oracle Fusion Analytics Warehouse

As the cloud account administrator, create the service instance for Oracle Fusion Analytics Warehouse.

**Topics:**

- Typical Workflow to Set Up Oracle Fusion Analytics Warehouse
- Set Up User Access to Oracle Fusion Analytics Warehouse Using Single Sign-On
- Create an Oracle Fusion Analytics Warehouse Subscription Instance
- Make Preview Features Available
- View Work Requests
- Update the Data Source Connection Details
- Update Your Subscriptions
- Update the Administrator Password for Oracle Autonomous Data Warehouse
- Reset the Password for OAX_USER and Custom Schemas
- Terminate Instances
- Move the Oracle Fusion Analytics Warehouse Instance to Another Compartment
- Update the Notification Email
- Scale Up Oracle Autonomous Data Warehouse Storage
- Scale Up Oracle Analytics Cloud Capacity

## Typical Workflow to Set Up Oracle Fusion Analytics Warehouse

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

| Task | Description | More Information |
|------|-------------|-----------------|
| Set up user access to Oracle Fusion Analytics Warehouse using single sign-on. | You can set up how users from Oracle Fusion Cloud Applications access Oracle Fusion Analytics Warehouse 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 Analytics Warehouse. | Set Up User Access to Oracle Fusion Analytics Warehouse Using Single Sign-On |

| Task | Description | More Information |
|------|-------------|-----------------|
| Create an Oracle Fusion Analytics Warehouse instance. | Create a service instance to manage your cloud resources. | Create an Oracle Fusion Analytics Warehouse Subscription Instance |
| Verify your instance and sign in. | Verify your service instance when you receive an email from Oracle that your Oracle Fusion Analytics Warehouse service instance is ready. | Verify Your Instance and Sign In |

# Set Up User Access to Oracle Fusion Analytics Warehouse Using Single Sign-On

You can set up how users from Oracle Fusion Cloud Applications access Oracle Fusion Analytics Warehouse 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 Analytics Warehouse instances except as indicated in scenarios #5 and #6 that require further setup after you create the Oracle Fusion Analytics Warehouse instance.

**Topics:**

- About Setting Up User Access to Oracle Fusion Analytics Warehouse Using Single Sign-On
- Set Up User Access to Oracle Fusion Analytics Warehouse Using Single Sign-On in Scenario #1
- Set Up User Access to Oracle Fusion Analytics Warehouse Using Single Sign-On in Scenario #2
- Set Up User Access to Oracle Fusion Analytics Warehouse Using Single Sign-On in Scenario #3
- Set Up User Access to Oracle Fusion Analytics Warehouse Using Single Sign-On in Scenario #4
- Set Up User Access to Oracle Fusion Analytics Warehouse Using Single Sign-On in Scenario #5
- Set Up User Access to Oracle Fusion Analytics Warehouse Using Single Sign-On in Scenario #6

## About Setting Up User Access to Oracle Fusion Analytics Warehouse Using Single Sign-On

Using single sign-on simplifies managing user access to Oracle Fusion Analytics Warehouse.

Users of Oracle Fusion Analytics Warehouse are mostly Oracle Fusion Cloud Applications users and those whom you create specifically in Oracle Fusion Analytics Warehouse. Setting up access to Oracle Fusion Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse.

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

- Scenario 1 - Existing Oracle Fusion Cloud Applications in a cloud account that doesn't offer identity domains and Oracle Fusion Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse activated in a different new cloud account that offers identity domains.

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

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

If you're an existing user of Oracle Fusion Cloud Applications with Oracle Fusion Analytics Warehouse 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 Analytics Warehouse 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 **Fusion Analytics Warehouse** to create the Oracle Fusion Analytics Warehouse instance.

   See Create an Oracle Fusion Analytics Warehouse Subscription Instance.

## Set Up Provisioning with Single Sign-On

Provisioning Oracle Fusion Analytics Warehouse 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 Analytics Warehouse.

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

1. 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.

2. 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.

3. 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 Analytics Warehouse is provisioned.

4. Sign in to the Oracle Cloud Infrastructure tenancy where Fusion Analytics Warehouse 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 Analytics Warehouse.

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 Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse instance.

1. Sign in to the Oracle Cloud Infrastructure by selecting the tenancy where Oracle Fusion Analytics Warehouse 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 Analytics Warehouse Using Single Sign-On in Scenario #2

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

If you're a new user of Oracle Fusion Cloud Applications with Oracle Fusion Analytics Warehouse activated in the same cloud account as Oracle Fusion Cloud Applications and your cloud account 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 Analytics Warehouse instance.

2. In Oracle Cloud Infrastructure, sign in to the cloud account where both Oracle Fusion Cloud Applications and Oracle Fusion Analytics Warehouse services have been activated using your cloud account administrator credentials.

3. 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 Analytics Warehouse instance.

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

   See Create an Oracle Fusion Analytics Warehouse Subscription Instance.

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

Scenario #3 applies to separate cloud accounts for Oracle Fusion Cloud Applications and Oracle Fusion Analytics Warehouse 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 Analytics Warehouse 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 **Fusion Analytics Warehouse** to create the Oracle Fusion Analytics Warehouse instance.

   See Create an Oracle Fusion Analytics Warehouse Subscription Instance.

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

Scenario #4 applies to separate cloud accounts for Oracle Fusion Cloud Applications and Oracle Fusion Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse 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 **Fusion Analytics Warehouse** to create the Oracle Fusion Analytics Warehouse instance.

   See Create an Oracle Fusion Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse is provisioned. This federation enables users to sign in to Oracle Fusion Analytics Warehouse using their Oracle Fusion Cloud Applications credentials.

1. Sign in to your Oracle Cloud account that contains the tenancy where Oracle Fusion Analytics Warehouse 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 Analytics Warehouse instance.

1. Sign in to the Oracle Cloud Infrastructure by selecting the tenancy where Oracle Fusion Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse Using Single Sign-On in Scenario #5

Scenario #5 applies to separate cloud accounts for Oracle Fusion Cloud Applications and Oracle Fusion Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse to control the authentication and authorization of the users who can sign in to Oracle Fusion Analytics Warehouse.

   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 Analytics Warehouse. 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 Analytics Warehouse 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 Analytics Warehouse.

   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 Analytics Warehouse instance.

   While creating the policy, select the identity domain in which you plan to create the Oracle Fusion Analytics Warehouse 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 **Fusion Analytics Warehouse** and create the Oracle Fusion Analytics Warehouse instance.

   See Create an Oracle Fusion Analytics Warehouse Subscription Instance.

7. Create an identity provider policy for single sign-on to ensure that the Oracle Fusion Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse to ensure that users can sign into Oracle Fusion Analytics Warehouse 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 Analytics Warehouse, 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 Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse.

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 Analytics Warehouse identity domain and its signing certificate.

9. Open the metadata XML file of the Oracle Fusion Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse Using Single Sign-On in Scenario #6

Scenario #6 applies to separate cloud accounts for Oracle Fusion Cloud Applications and Oracle Fusion Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse instance.

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

   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 Analytics Warehouse. 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 Analytics Warehouse 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 Analytics Warehouse.

   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 Analytics Warehouse instance.

   While creating the policy, select the identity domain in which you plan to create the Oracle Fusion Analytics Warehouse 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 **Fusion Analytics Warehouse** and create the Oracle Fusion Analytics Warehouse instance.

   See Create an Oracle Fusion Analytics Warehouse Subscription Instance.

7. Create an identity provider policy for single sign-on to ensure that the Oracle Fusion Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse to ensure that users can sign into Oracle Fusion Analytics Warehouse 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 Analytics Warehouse, 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 Analytics Warehouse 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 Analytics Warehouse identity domain.

## Copy Details from the Identity Domain Metadata File

Copy details from the metadata XML file of the Oracle Fusion Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse identity domain and its signing certificate.

9. Open the metadata XML file of the Oracle Fusion Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse 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.

1. Sign in to the Oracle Cloud Infrastructure Console.

   If you've provisioned Oracle Fusion Analytics Warehouse 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.
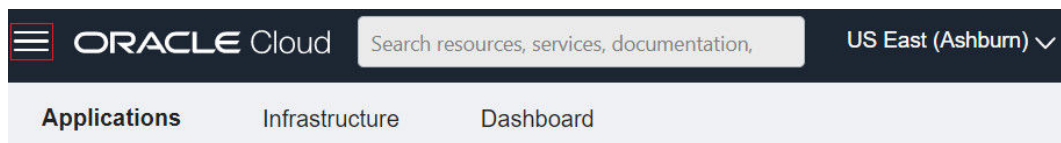
**3.** In the Navigation menu, click **Analytics & AI**.
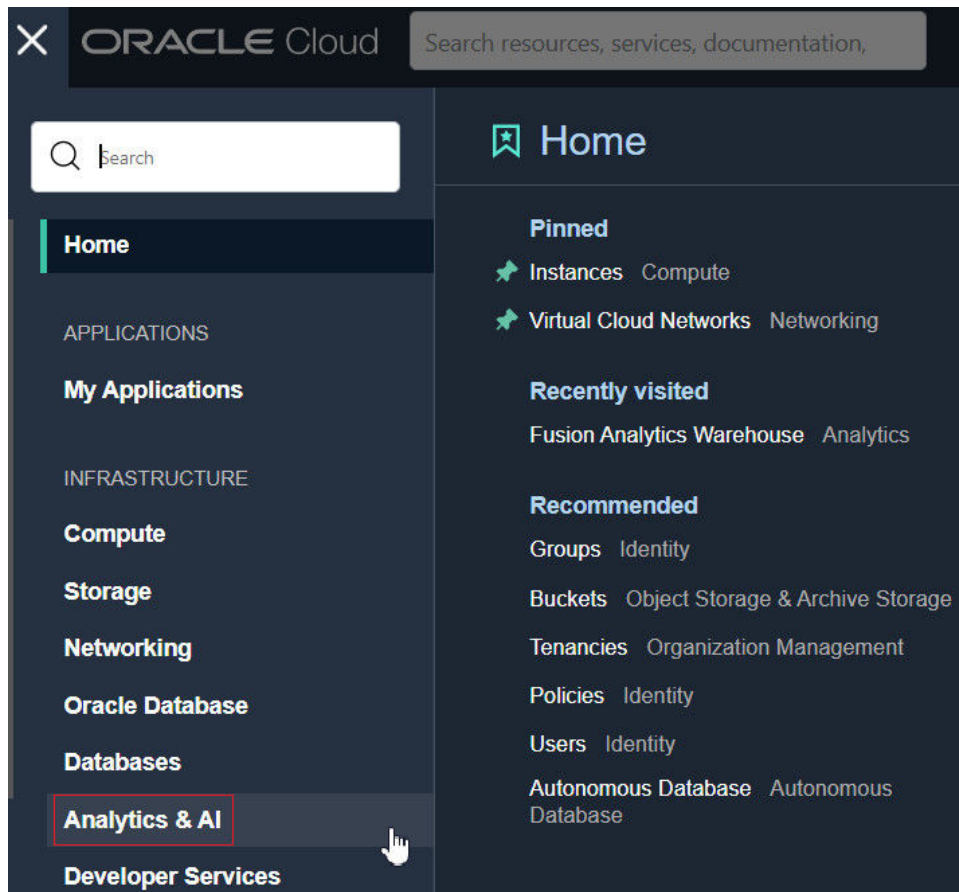


**4.** Under Analytics & AI, click **Fusion Analytics Warehouse**.
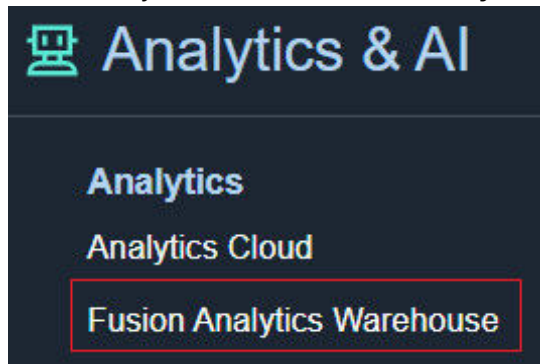


**5.** On the Instances page, in **Compartment**, select a compartment if you want to place the service instance in a compartment other than the default root compartment that Oracle created for you.
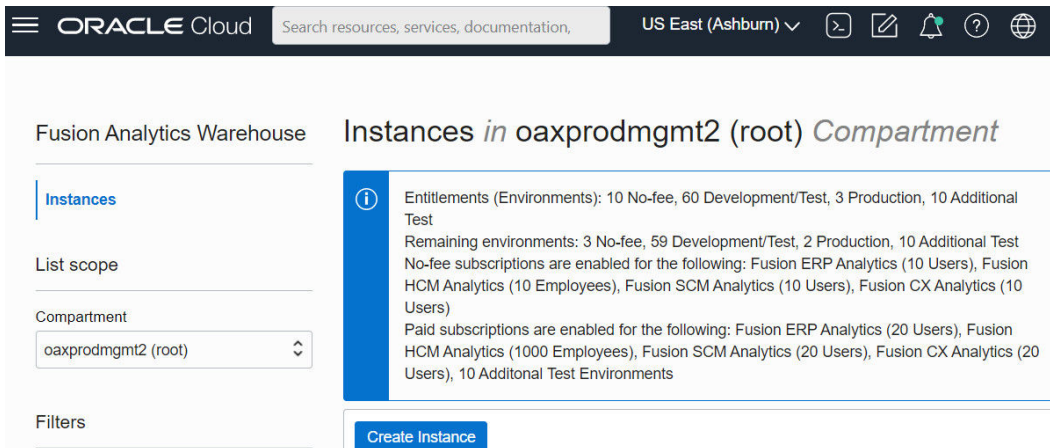
> **Note:**
>
> Ensure that you have created a compartment before you select it here. See Managing Compartments.

**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.



8. Enter a **Name** for the instance that is 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.

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

# Enter Details for an Oracle Fusion Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse order.

2.  Select **Development/Test** as your first instance.

    Offerings ⓘ

    Intended Use ⓘ

    Development/Test

    **Number of Fusion ERP Analytics Users:** 20
    **Number of Fusion HCM Analytics Employees:** 1000
    **Number of Fusion SCM Analytics Users:** 20
    **Number of Fusion CX Analytics Users:** 20
    **Number of Development/Test Environments:** 60
    **Number of Remaining Development/Test Environments:** 59

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

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 `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.** Optional: 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 Administrator Credentials

Username *Read-only*

ADMIN

Password

Create a new 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 "admin".

Confirm Password

Confirm the new password.

**7.** In **Notification Email**, enter a valid email address if the field doesn't have a value.

Notification Email

Add tags to organize your resources. What can I do with tagging?

Tag namespace

None (add a free-form tag)

Tag key

Tag value

Add tag

Create Instance   Cancel

**8.** Click **Create Instance**.

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 Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse, 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 Analytics Warehouse 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 Analytics Warehouse 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 **Fusion Analytics Warehouse**.

4. Navigate to your service instances page.

5. Navigate to the **Analytics Application URL** to verify that your Oracle Fusion Analytics Warehouse service instance is up and running.

# 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.

To find out about features currently available for preview, see Features Available for Preview.

1. Sign in to your service.

2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Enable Features** under **Application Administration**.
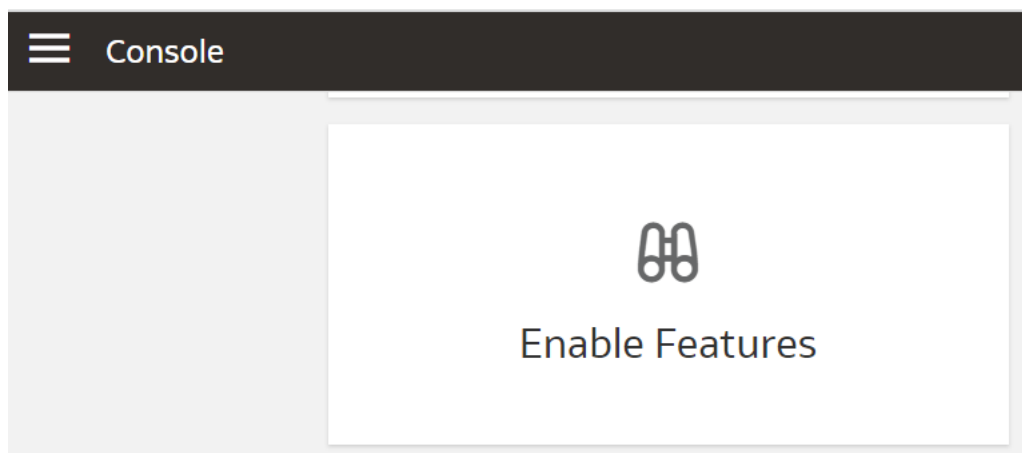


3. On the Enable Features page, under the Preview Features tab, expand the categories such as **Functional Areas** and select the features that you want to make available for your organization.
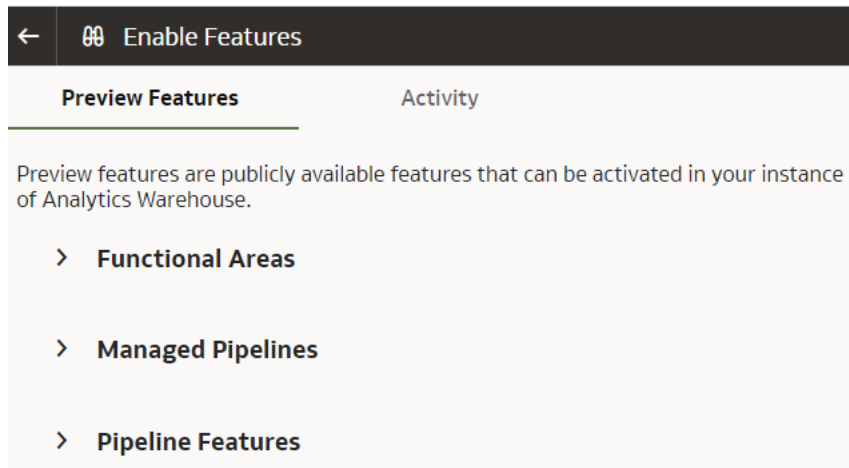
4. Navigate to the location of the preview feature and you can use it. For example, if you've enabled **AWS S3** in the **Managed Pipeline** category, then navigate to the Create Connections dialog from the Manage Connections page to use this feature.

# 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.

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 view the list of actions that have been performed.

6. On the instance details page, under Resources, click **Work Requests**.



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

# 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

Analytics Warehouse instance and the credentials of an applicable user, such as `MyFAWExtractUser`.

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 **Fusion Analytics Warehouse**.

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**.

## Update Fusion Application Credentials

> ⚠ After saving changes, you must schedule an initial run for each data pipeline load plan on the Data Configuration page.

Fusion Application URL

https://example-fa-url.oracle.com

### Authentication

Choose how to authenticate to Fusion Applications ⓘ

| JWT Based | Password Based |
|---|---|
| JSON Web Token (Recommended) | ✓ |

Username

Password

Test Connection

**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 Analytics Warehouse subscription or add a new subscription to your existing Oracle Fusion Analytics Warehouse subscription by contacting your sales representative.

For example, you can add the Oracle Fusion HCM Analytics service to your existing Oracle Fusion Analytics Warehouse 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 **Fusion Analytics Warehouse**.

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

Current Configuration

Total Number of Users: 40

New Configuration

Number of Fusion ERP Analytics Users: 20

Number of Fusion HCM Analytics Employees: 1000

Number of Fusion SCM Analytics Users: 20

Number of Fusion CX Analytics Users: 20

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

Save Changes    Cancel

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 is provisioned in your tenancy if the password for that `ADMIN` schema has changed.

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. On the Instances page, click the instance for which you want to update the administrator password for the Oracle Autonomous Data Warehouse that is provisioned in your tenancy.

5. On the instance details page, click **Update Admin Password**.

6. In the Update Autonomous Data Warehouse Credentials dialog, enter and confirm the new password, and then click **Save Changes**.

**Update Autonomous Data Warehouse Credentials**

Username *Read-only*

ADMIN

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 "admin".

Confirm Password

**Save Changes**    Cancel

# Reset the Password for OAX_USER and Custom Schemas

Oracle Fusion Analytics Warehouse 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 `ADMIN` schema enables you to access the Oracle Autonomous Data Warehouse instance associated with your Oracle Fusion Analytics Warehouse 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. Initially, the password for these default schemas is the same. However, because of the Oracle Autonomous Data Warehouse security policy, the passwords for the default schemas and custom schemas expire every 365 days. You must change the password every year.

> **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.

You can change the password for the `OAX_USER` and other 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 is suggested to use while changing the password from the Oracle Cloud Infrastructure Console.

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 Analytics Warehouse 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 OAX_USER:

```
Alter user OAX_USER identified by <Password>;
```
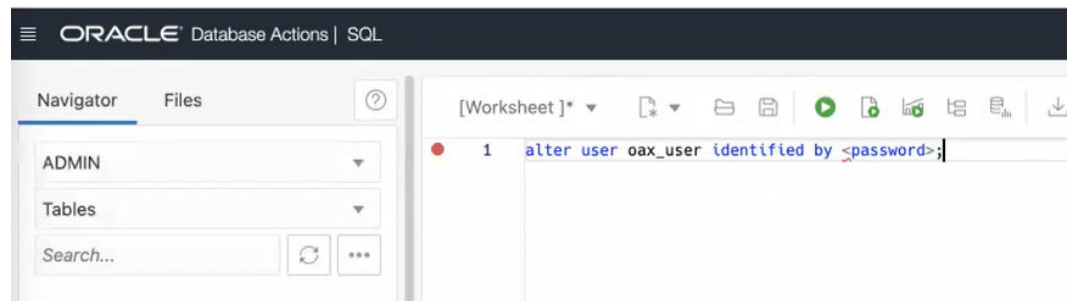


To change the password for a custom schema, run this command:

```
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.

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.  On the Instances page, use either of the options:

    •   Click the **Actions** icon for an instance with **Failed** status, and then from the **Actions** menu, 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 **"prodmgmtfawdev101"**? 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.**

**Terminate Instance**   Cancel

# Move the Oracle Fusion Analytics Warehouse Instance to Another Compartment
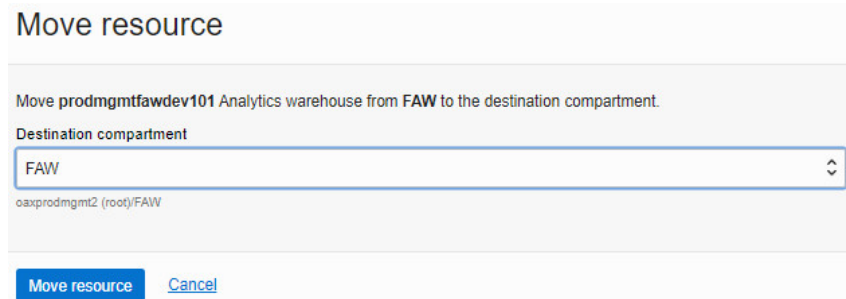
As the cloud account administrator, you can move your Oracle Fusion Analytics Warehouse instance to another Oracle Cloud Infrastructure compartment after you've created the instance.

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 Analytics Warehouse instance to another compartment, the Oracle Analytics Cloud and Oracle Autonomous Data Warehouse instances associated with your Oracle Fusion Analytics Warehouse instance automatically move to the new compartment of your Oracle Fusion Analytics Warehouse 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 **Fusion Analytics Warehouse**.

4. On the Instances page, use either of the options:

   - Click the **Actions** icon for an instance whose compartment you want to move, and then from the **Actions** menu, 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**.
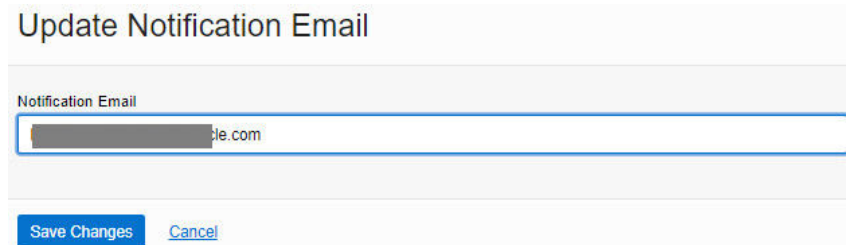


# Update the Notification Email

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

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. 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**.



# Scale Up Oracle Autonomous Data Warehouse Storage

Oracle Fusion Analytics Warehouse provides the associated Oracle Autonomous Data Warehouse with certain capacities that are within its service limits. If you require additional storage, then you can scale up the storage capacity of Oracle Autonomous Data Warehouse associated with Oracle Fusion Analytics Warehouse.

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 Analytics Warehouse 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 **Fusion Analytics Warehouse**.

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, for **Storage (TB)** enter a value or click the up arrow to select a value and then click **Apply**.

# Scale Up Oracle Analytics Cloud Capacity

Oracle Fusion Analytics Warehouse 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 Analytics Warehouse 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 **Fusion Analytics Warehouse**.

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

# 3

# Configure Oracle Fusion Analytics Warehouse 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 Analytics Warehouse stores the values for the **Warehouse Refresh Date Time** and **Scheduled Date** in the Coordinated Universal Time (UTC) in the autonomous data warehouse.

**Topics:**

- Typical Workflow to Configure Data
- About Data Pipelines for Functional Areas
- About Data Refresh Performance
- About Pipeline Parameters
- Set Up the Pipeline Parameters
- 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
- Create a Data Pipeline for a Functional Area
- Edit a Data Pipeline for a Functional Area
- Activate a Data Pipeline for a Functional Area
- Deactivate a Data Pipeline for a Functional Area
- Delete a Data Pipeline for a Functional Area
- Refresh a Data Pipeline for a Functional Area
- Reset a Data Pipeline for a Functional Area
- Reset the Data Warehouse

- Reset the Cache

- View Load Request History

- View the Audit Log

- About Augmenting Your Data

- Create a Dimension Alias

- About Managing Data Connections

- Disable Data Pipeline

- Schedule Frequent Refreshes of Functional Area Data (Preview)

- Schedule Periodic Full Reload of Functional Area Data (Preview)

- Extend Data with Custom Applications

# Typical Workflow to Configure Data

Follow these tasks as a guide to configure Oracle Fusion Analytics Warehouse 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. | Set Up the Pipeline Parameters |
| Specify the global report parameters | Specify the report parameter that you want to use across your Oracle Fusion Analytics Warehouse offerings. | Set Up the Global Report Parameters |
| Specify the report parameters | Set up the report parameters for your data model file before running your data pipelines for the functional areas. | Set Up the Reporting Configurations for Enterprise Resource Planning<br><br>Set Up the Reporting Configurations for Human Capital Management |
| 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. | Create a Data Pipeline for a Functional Area |
| 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. | Edit a Data Pipeline for a Functional Area |
| 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. | Activate a Data Pipeline for a Functional Area |
| 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. | Deactivate a Data Pipeline for a Functional Area |
| Delete a data pipeline for a functional area | You can delete data pipelines for the functional areas prior to activating them. | Delete a Data Pipeline for a Functional Area |

| Task | Description | More Information |
|---|---|---|
| Reload a data pipeline for a functional area | Perform this action to refresh the data for the selected functional area. | Refresh a Data Pipeline for a Functional Area |
| 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. | Reset a Data Pipeline for a Functional Area |
| View request history | View the load request history by functional area, load type, and status. | View Load Request History |
| Augment your data | Augment your reports by using datasets that you create with specific columns from various data stores. | Augment Your Data |

# 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 plan using the Edit wizard or can delete the plan. |
| InActive | Edit, Activate, and Delete | You can activate a plan using the Edit wizard or can delete the plan. |
| Activation Scheduled | Edit and Delete | If you edit a scheduled plan, then the previous plan is unscheduled and a new plan is scheduled. |
| Activation in Progress | View | You can view the plan in Read only mode. |

| Pipeline status | Available actions | Additional information |
| --- | --- | --- |
| Activation Complete | Edit, Delete, Soft Reset, Deactivate, and Refresh Data | You can perform these actions:<br>• Edit only the Attribute Selection, Column Options, Entity Options, Dimension Keys, Schedule, and Save steps.<br>• After the Edit action is completed, the data pipeline is ready for Refresh Data or AdHoc run. View the information icon that is displayed.<br>• Perform soft reset that marks the plan for data reset and view the displayed information icon. The next incremental job peforms the actual action or you can peform the Refresh Data action to immediately reset the data.<br>• 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 peforms a full refresh if you had edited the data pipeline or performed a soft reset earlier.<br>• Deactivate the data pipeline to change its state to InActive. |

## 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 the 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.

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.

# 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 doesn'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 Analytics Warehouse 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 to convert the amounts to the analytics currency. 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 data, 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.

Oracle Fusion Analytics Warehouse 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Data Configuration** under **Application Administration**.

3. On the Data Configuration page, under **Global Configuration**, click **Pipeline Settings**.
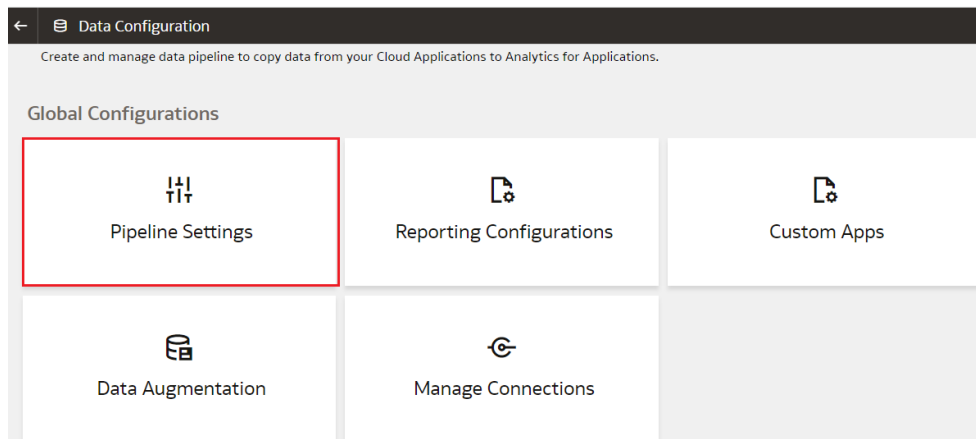


4. On the Pipeline Settings page, from the **Analytics Language** list, select the language in which you want to extract the data.

5. From the **Analytics Currency** list, select the currency of the transaction data.

6. 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.

7. In **Initial Extract Date**, select the date from which to load the transaction data.

8. 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.

9. Click **Save**.

# About Global Parameters

You specify a value for the Enterprise Calendar parameter to configure the reporting calendar used in Oracle Fusion Analytics Warehouse. All time options seen in the reporting layer are based off the calendar that you select as the parameter value.

# Set Up the Global Report Parameters

Specify the report parameter that you want to use across your Oracle Fusion Analytics Warehouse offerings.

1. Sign in to your service.

2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse.

5. Click **Save**.

# About Reporting Configurations

Set up the reporting configurations to specify how data is presented on the KPI decks, visualizations, dashboards, and reports in Oracle Fusion Analytics Warehouse.

## 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 Analytics Warehouse 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 Analytics Warehouse 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:

- 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. KPIs 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. KPIs 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."
  - Performance Band: This parameter specifies the grouping of the performance ratings of workers by certain ranges. For example, high, medium, and low. KPIs 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.

- Succession Management parameter specifies the grouping of readiness levels of worker for their change in career under various headers.

- Workforce Management parameter specifies the reason for reorganization to compute the headcount gain or losses based on the reorganization factor.

# 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 KPI decks, visualizations, dashboards, and reports.

1. Sign in to your service.

2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Reporting Configuration** under **Application Administration**.

3. On the Reporting Configuration page, click **Enterprise Resource Planning**.
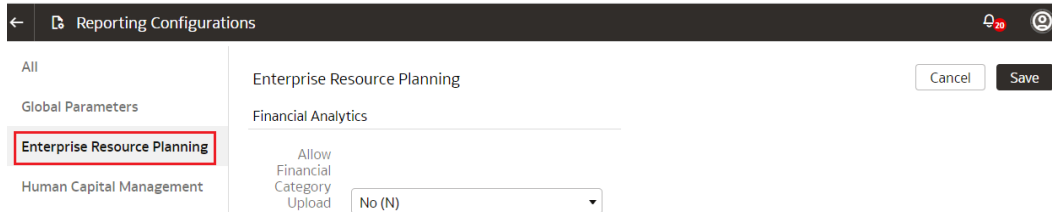


4. Optional: On the Enterprise Resource Planning page, in **Allow Financial Category Upload**, select **Yes** to enable the upload of financial categories to the applicable environment.

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 KPI decks, visualizations, dashboards, and reports.

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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 **Performance Band**, specify the range of worker performance ratings.

7. For **Potential Band**, specify the range of potential ratings for the workers.

8. For **Compa-Ratio Band**, specify the range of compa-ratio values for the workers.

9. For **Risk of Loss Band**, specify the range of risk of loss ratings for the workers.

10. For **Impact of Loss Band**, specify the range of impact of loss ratings for the workers.

11. For **Custom Performance Band**, specify the custom band names and the range of worker performance ratings.

12. For **Custom Potential Band**, specify the custom band names and the range of worker potential ratings.

13. In the Succession Management region, select the readiness value for each of the readiness levels of the workers.

14. In the Workforce Management region, select one or more reasons for reorganization to compute the headcount gain or losses based on the reorganization factor.

15. 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 Analytics Warehouse, click the **Navigator**.
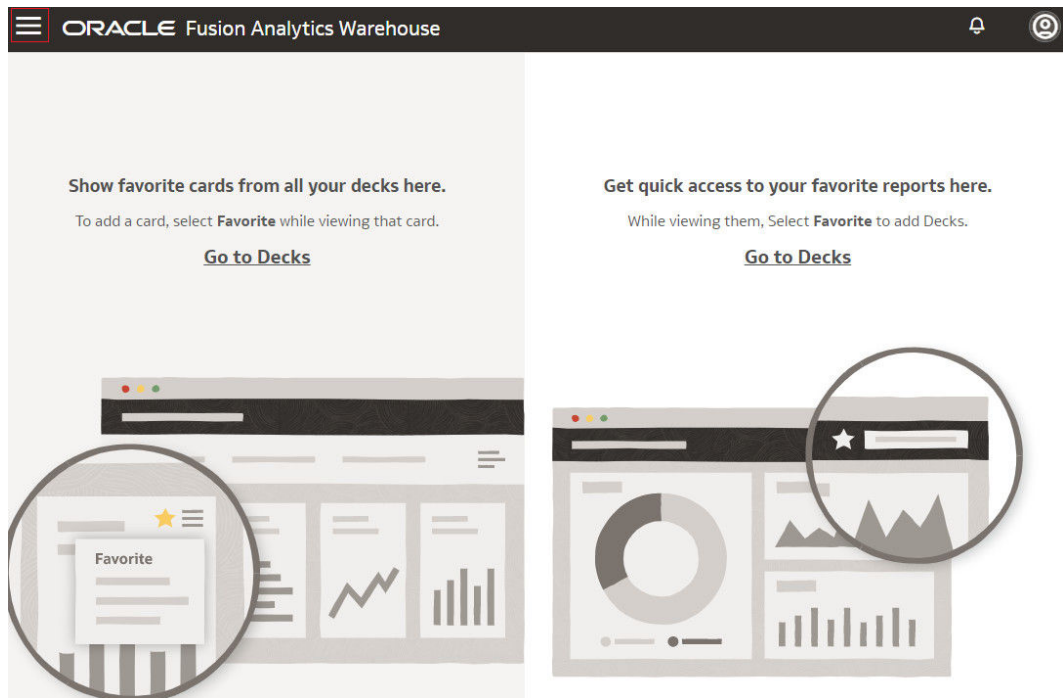


3. In the Navigator menu, click **Console**.
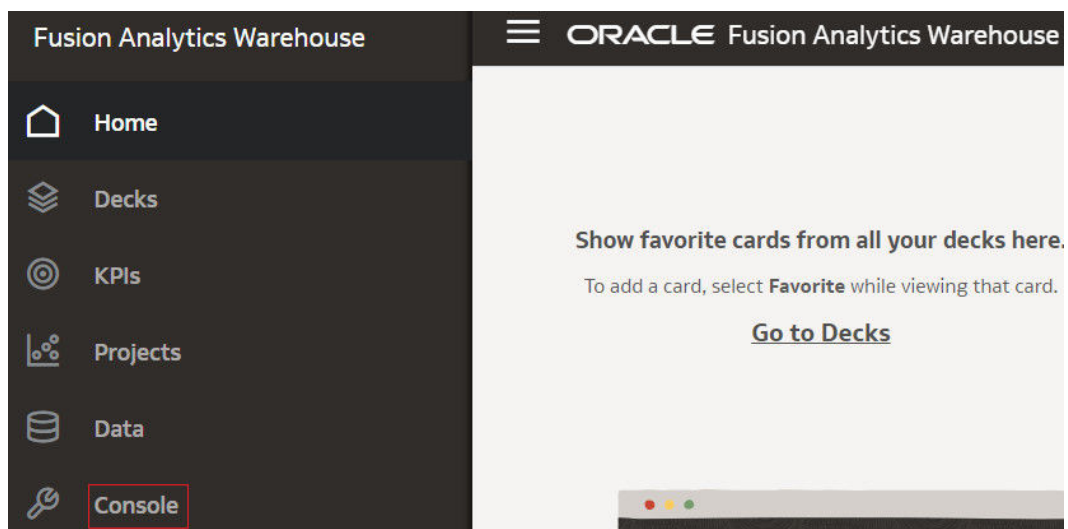
4. On the Console, click **Data Configuration** under **Application Administration**.

5. On the Data Configuration page, click your service. For example, under Applications, click **Enterprise Resource Planning**.



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



7. 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**.
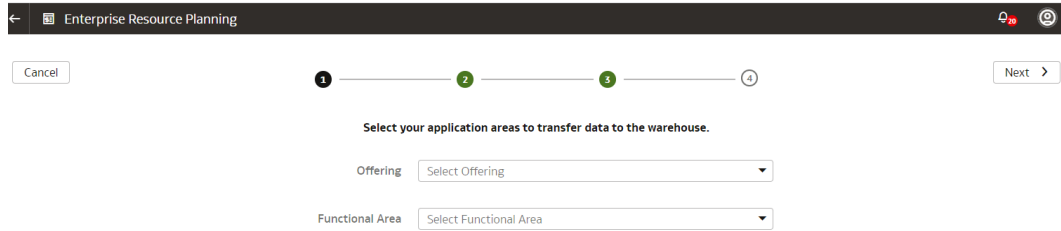
8. Review the parameters and click one of the options:

   • **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 Analytics Warehouse 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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**.



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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 saved data pipeline for the functional area that you want to activate, and click **Edit**.

5. Review the details of the data pipeline for the functional area and then click **Activate**.



6. 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**.



Oracle Fusion Analytics Warehouse 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**.

# 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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**.



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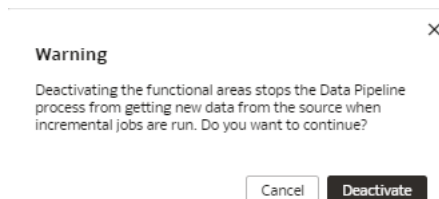


# Delete a Data Pipeline for a Functional Area

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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Data Configuration** under **Application Administration**.

   You see the Data Configuration page.

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**.



5. Review the warning message and then click **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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 whose data you want to refresh, and then click **Refresh Data**.

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



# Reset a Data Pipeline for a Functional Area

When you reset a data pipeline for a functional area, you start the process of completely refreshing the data in the data warehouse for the functional area. After you reset the data pipeline for a functional area, the data still exists in the data warehouse related to the functional area.

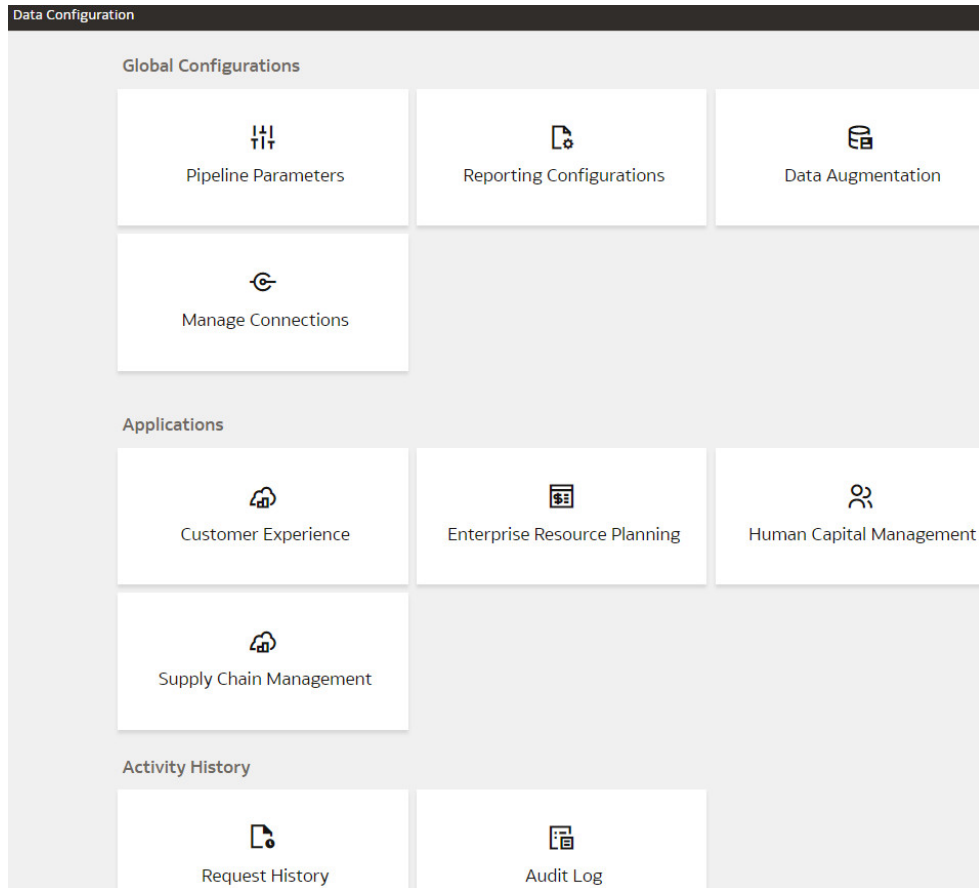After resetting the data pipeline, you see the data pipeline for the functional area on the Data Configuration page with **Reset Completed** status.

1. Sign in to your service.

2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 reset, and click **Reset**.



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

**Warning**

Performing this action will reload the data for the selected functional area. The next scheduled run may take additional time to complete. Do you want to continue?

Cancel    **Reset**

# 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.

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 Analytics Warehouse completes all the activations after resetting the data warehouse.

1. Sign in to your service.

2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Data Configuration** under **Application Administration**.

3. On the Data Configuration page, under **Global Configuration**, click **Pipeline Parameters**.

4. On the Pipeline Parameters page, click the **Actions** icon and then click **Reset Data Warehouse**.
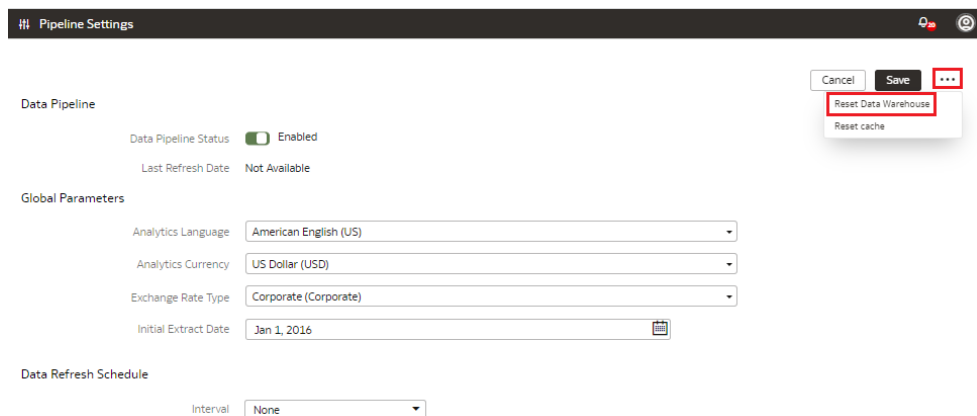


5. Review the warning message, provide the details, and then click **Reset**.

# 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Data Configuration** under **Application Administration**.

3. On the Data Configuration page, under **Global Configuration**, click **Pipeline Parameters**.

4. On the Pipeline Parameters page, click the **Reset Cache** menu option.



You see a message that cache has been cleared successfully.
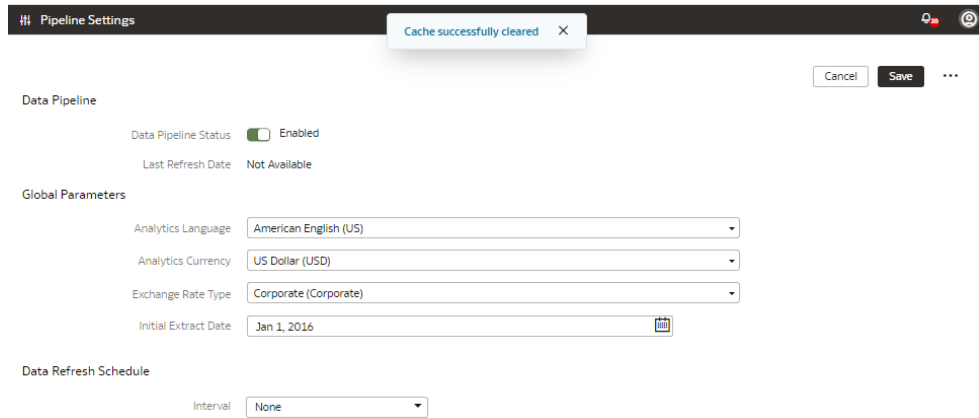
# View Load Request History

You can view the data pipeline load request history by functional area, load type, and status along with other details. The request history doesn't display the incremental loads.

1.  Sign in to your service.

2.  In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Data Configuration** under **Application Administration**.

3.  On the Data Configuration page, under **Activity History**, click **Request History**.
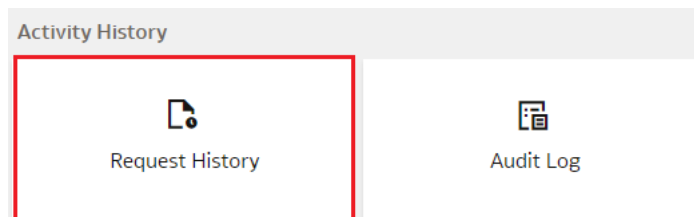


4.  On the Request History page, view the history of loads that have been performed.

## 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. |

| Request Type | Description |
|---|---|
| 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 | • The job is running.<br>• The job is resolving. |
| Activation Scheduled | • Job is scheduled to run within one minute.<br>• Job is scheduled to run at the specified date and time. |
| 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. |

# 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.

1. Sign in to your service.

2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Data Configuration** under **Application Administration**.

3. On the Data Configuration page, under **Activity History**, click **Audit Log**.
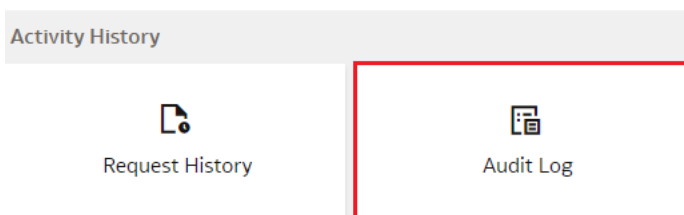


4. On the Audit Log page, view the list of all the performed actions.

# 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.

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 Analytics Warehouse connectors. See the *Connectors* section in Features Available for Preview. 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.

You can use the system provided or customer provided source tables. The system provided tables are pre-validated by Oracle Fusion Analytics Warehouse. The customer provided tables are other source tables that are available for extraction but aren't validated by Oracle Fusion Analytics Warehouse. 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 Analytics Warehouse. 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.

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:**
>
> 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, cards, and decks.
>
> When you edit an augmentation, Oracle Fusion Analytics Warehouse submits a request to refresh the data immediately. During this time, you can't perform another edit action.

1. Sign in to your service.
2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Data Configuration** under **Application Administration**.
3. On the Data Configuration page, under Global Configurations, click **Data Augmentation**.
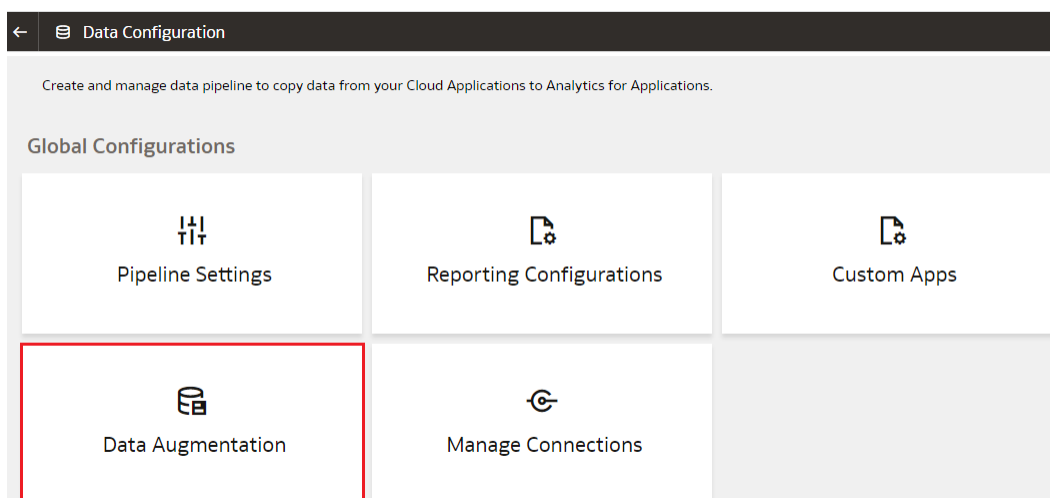


4. On the Data Augmentation page, click **Create**.



You can create the following augmentation types:

- Create a dimension.

- Create a fact.
- Extend an entity.

## Create 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.

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.

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.

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 **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 ready-to-use **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 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 is 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 Analytics Warehouse 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Data Configuration** under **Application Administration**.

3. On the Data Configuration page, under **Global 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.

6. In **Dimension Alias**, enter a name such as Employee Dim.

   In **Table Name**, Oracle Fusion Analytics Warehouse 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 ready-to-use datasets to enhance business analysis.

Oracle Fusion Analytics Warehouse 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'll need to create a data connection type before you create a data connection using that type.

You can view the usage of capacity for custom data that is loaded into Oracle Fusion Analytics Warehouse 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**

- 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
- Load Data from On-premises E-Business Suite into Fusion Analytics Warehouse (Preview)
- Load Data from Enterprise Performance Management into Fusion Analytics Warehouse (Preview)
- Load Data from Google Analytics into Fusion Analytics Warehouse (Preview)
- Load Data from On-premises PeopleSoft into Fusion Analytics Warehouse (Preview)
- Connect with Your Oracle Eloqua Data Source
- Load Data from Salesforce into Fusion Analytics Warehouse (Preview)
- Load the Bureau of Labor Statistics Data into Fusion Analytics Warehouse (Preview)
- Load Data from a Secure FTP Source into Fusion Analytics Warehouse (Preview)
- Load Data from Amazon Simple Storage Service into Oracle Fusion Analytics Warehouse (Preview)

- [Load Data from Oracle Autonomous Database into Oracle Fusion Analytics Warehouse (Preview)](#)
- [Load Data from On-premises JD Edwards into Fusion Analytics Warehouse (Preview)](#)
- [Load Data from Oracle Object Storage into Fusion Analytics Warehouse (Preview)](#)
- [Load Data from Shopify into Fusion Analytics Warehouse (Preview)](#)
- [Load Data from Snowflake into Oracle Fusion Analytics Warehouse (Preview)](#)
- [Load Data from Taleo into Fusion Analytics Warehouse (Preview)](#)

# Create a Data Connection Type

Connection Type specifies the source to which you are connecting. A connection type can have multiple connections.

You can create a custom data source type for any remote data connection. Be sure to create the data connection type before using it to [Create a Data Connection](#).

1. Sign in to your service.

2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Data Configuration** under **Application Administration**.

3. On the Data Configuration page, click **Manage Connections** under Global Configurations.
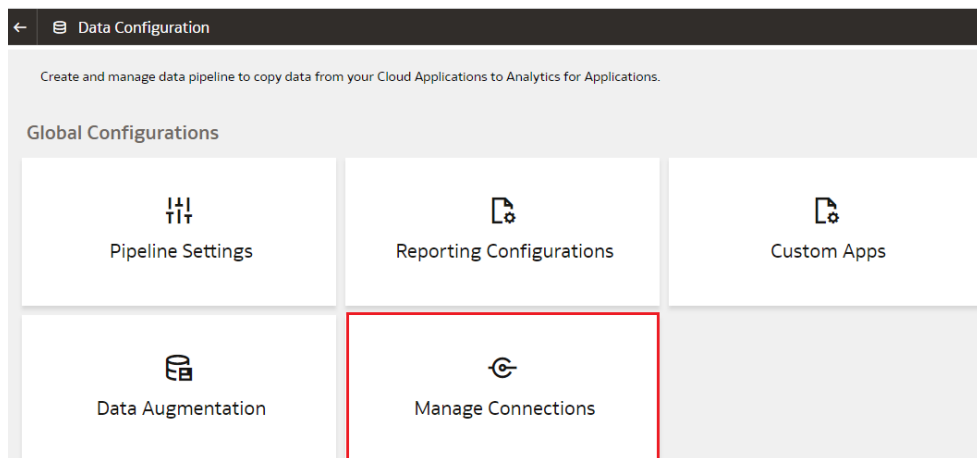


4. On the Manage Connections page, click **Create** and then click **Connection Type**.



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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Data Configuration** under **Application Administration**.

   You see the Data Configuration page.

3. On the Data Configuration page, click **Manage Connections** under Global 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Data Configuration** under **Application Administration**.

   You see the Data Configuration page.

3. On the Data Configuration page, click **Manage Connections** under Global 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**.

# Create a Data Connection

You can create a data connection for any available connection type.

You need a connection type to create a data connection. You can either use a ready-to-use data connection type or Create a Data Connection Type that meets your business requirements.

1. Sign in to your service.

2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Data Configuration** under **Application Administration**.

3. On the Data Configuration page, click **Manage Connections** under Global 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Data Configuration** under **Application Administration**.

3. On the Data Configuration page, click **Manage Connections** under Global 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 **NetSuite 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 connections if you don't need it anymore.

> **Note:**
>
> You can't update or load data from deleted data connections to the warehouse.

1. Sign in to your service.

2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Data Configuration** under **Application Administration**.

You see the Data Configuration page.

3. On the Data Configuration page, click **Manage Connections** under Global
   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**.

# Load Data from a Remote Agent into Fusion Analytics Warehouse (Preview)

As a service administrator, you can use an extract service remote agent to connect to
your on-premises systems and 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
Analytics Warehouse 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
Analytics Warehouse only once in 24 hours.
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 JD Edwards
   > 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 –permanentsudo
    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 Analytics Warehouse 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`.

    c. Configure the JD Edwards data source outbound proxy in the remote agent user interface. You see the extract service URL. For example, you see `http://<server` `IP>/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 Analytics Warehouse.

10. Configure the remote agent on the Data Configuration page in Oracle Fusion Analytics Warehouse using these instructions:

a. Open the **Navigator** menu, click **Console**, and then 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.

# Load Data from On-premises E-Business Suite into Fusion Analytics Warehouse (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 Analytics Warehouse 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 Analytics Warehouse only once a day.
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. 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 E-Business Suite 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 is not 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. Verify that the container has started successfully using this script:

```
run '$ docker ps'
```

6. 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.

   c. Configure the E-Business Suite data source outbound proxy in the remote agent user interface. You see the extract service URL. For example, you see `http://<server IP>/extractservice`.

7. In the remote agent user interface, click **Configure** to configure the agent.

8. Copy the configuration details from the text box or download the configuration details.

You use it to set up the agent on the Data Configuration page in Oracle Fusion Analytics Warehouse.

9. Configure the remote agent and E-Business Suite data source on the Data Configuration page in Oracle Fusion Analytics Warehouse using these instructions:

   a. Open the **Navigator** menu, click **Console**, and then 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 ready-to-use.

   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.
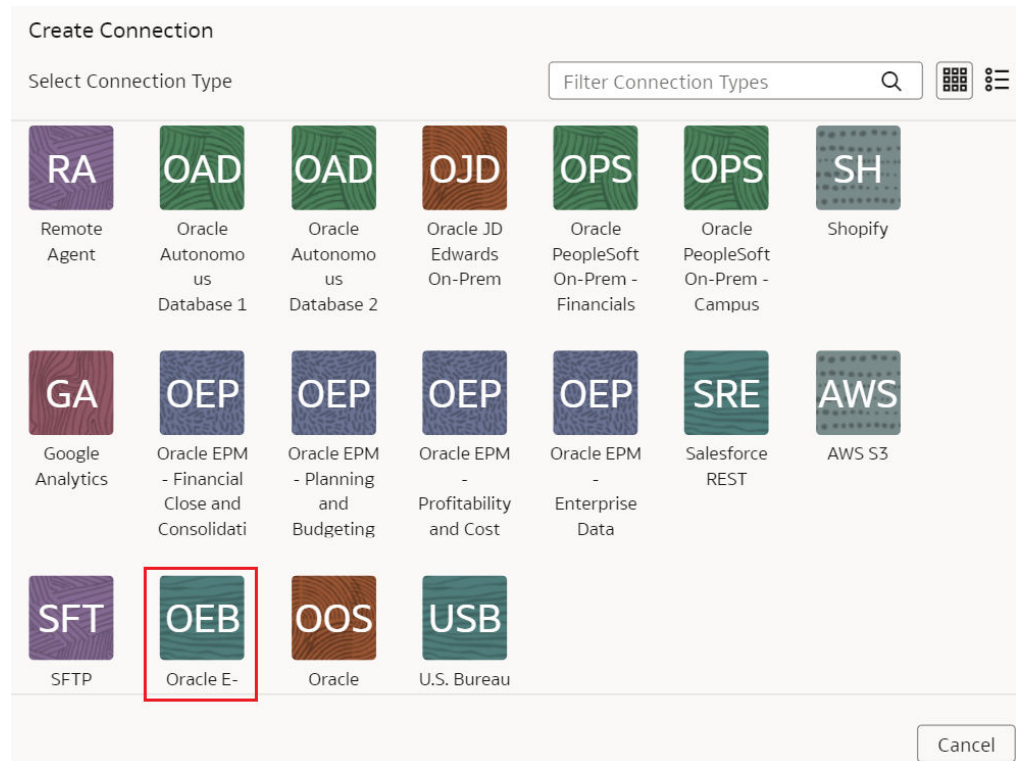


   g. In Create Connection for Oracle E-Business Suite On-Prem, select **Remote** as connectivity type.

h. In the **Remote Agent** field, select the remote agent connection that you created, for example, **Remote Agent**. Enter an email address to receive notifications in **Notification Email**, provide the credentials and E-Business Suite connection URL, and select the E-Business Suite offerings that you want to load data from.

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 the **Actions** menu 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 the **Actions** menu. You can check the statuses of all these requests on the Data Configuration Request History page.

10. 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.

## 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 Analytics Warehouse, then create a connection using the *Eloqua* connection type.

The Oracle Eloqua data that you load into Fusion Analytics Warehouse 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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**.

6. In **URL**, enter the URL for your Eloqua server in this sample format: `https://<your eloqua server>/api/odata/1.0`.

   ← Create Connection

   ELO

   ELOQUA

   | | |
   |---|---|
   | Connection Name | ELOQUA |
   | * Connectivity Type | Standard ▼ |
   | Notification Email | Enter Notification Email |
   | * User Name | 123sampleuser |
   | * Password | |
   | * URL | https://r█████████h/api/odata/1.0 |

   Cancel   Paste from clipboard   Upload File or Drop Above   Save
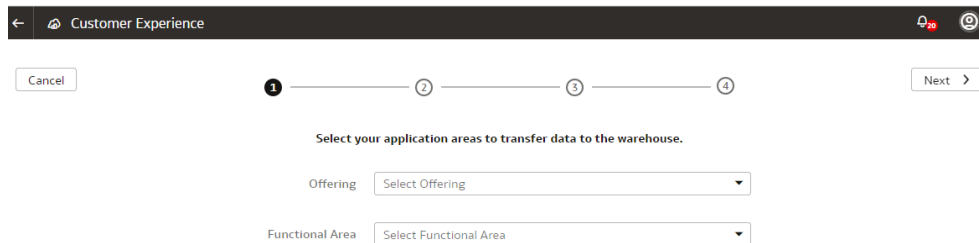
7. Click **Save**.

## 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 Analytics Warehouse.

1. Sign in to your service.

2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Data Configuration** under **Application Administration**.

3. On the Data Configuration page, click your service. For example, under Applications, click **Customer Experience**.

4. On the Customer Experience page, click **Create**.

5. 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 Performance Management into Fusion Analytics Warehouse (Preview)

As a service administrator, you can use the Fusion Analytics Warehouse 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)

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 Analytics Warehouse.

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 Analytics Warehouse to extract the data.



2. In Fusion Analytics Warehouse, create the EPM data connection using these instructions:

   a. In Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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.
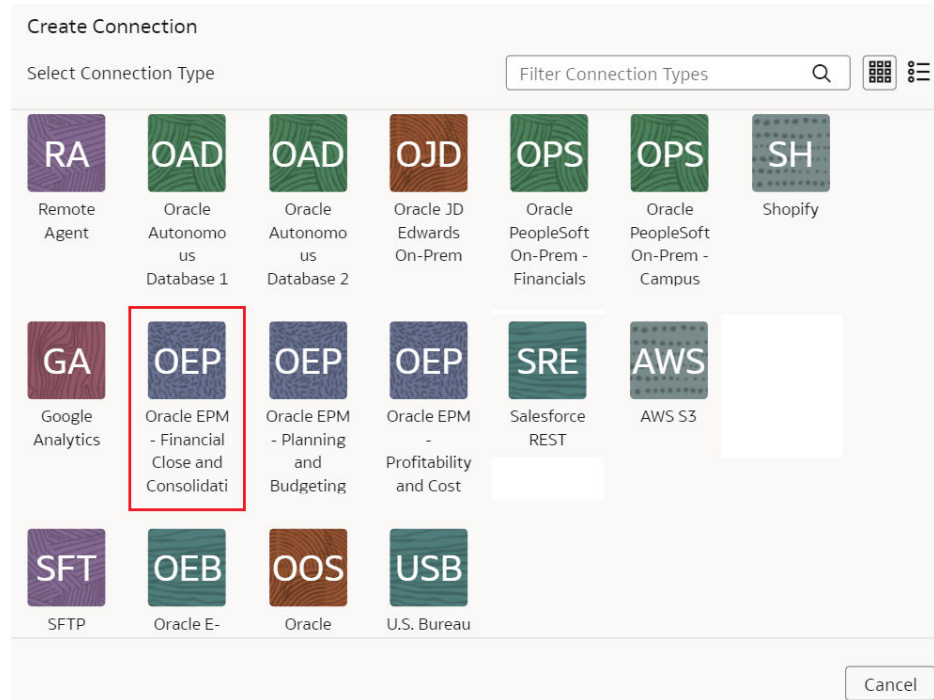
e.  In Create Connection for the EPM source, enter these details and click **Save**:

*   **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 API URL of your EPM source with version number of EPM. For example, if EPM version is 22.10.73, then the API url would be something like `https://epm7-test-a123456.epm.us6.oraclecloud.com/interop/rest/22.10.73.`

*   **List of Data Files**: Specify the file name that you had entered in **Download File Name** while creating an integration in EPM.

3. On the Manage Connections page, select the **Actions** menu for the EPM connection and then select **Refresh Metadata**.

> **Note:**
>
> You can't create augmentations for EPM unless you perform a metadata extract.

4. On the Manage Connections page, select the **Actions** menu for the EPM connection and then select **Test Connection**.

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 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 On-premises PeopleSoft into Fusion Analytics Warehouse (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 Analytics Warehouse 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 Analytics Warehouse 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. 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 PeopleSoft 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 is not 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 is preventing you from accessing the remote agent, then ensure that you complete these steps before starting the docker container for the first time:

   a. Disable 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 –permanentsudo
   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.

   c. Configure the PeopleSoft data source outbound proxy in the remote agent user interface. You see the extract service URL. For example, you see `http://<server IP>/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 Analytics Warehouse.

10. Configure the remote agent and PeopleSoft data source on the Data Configuration page in Oracle Fusion Analytics Warehouse using these instructions:

    a. Open the **Navigator** menu, click **Console**, and then 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.
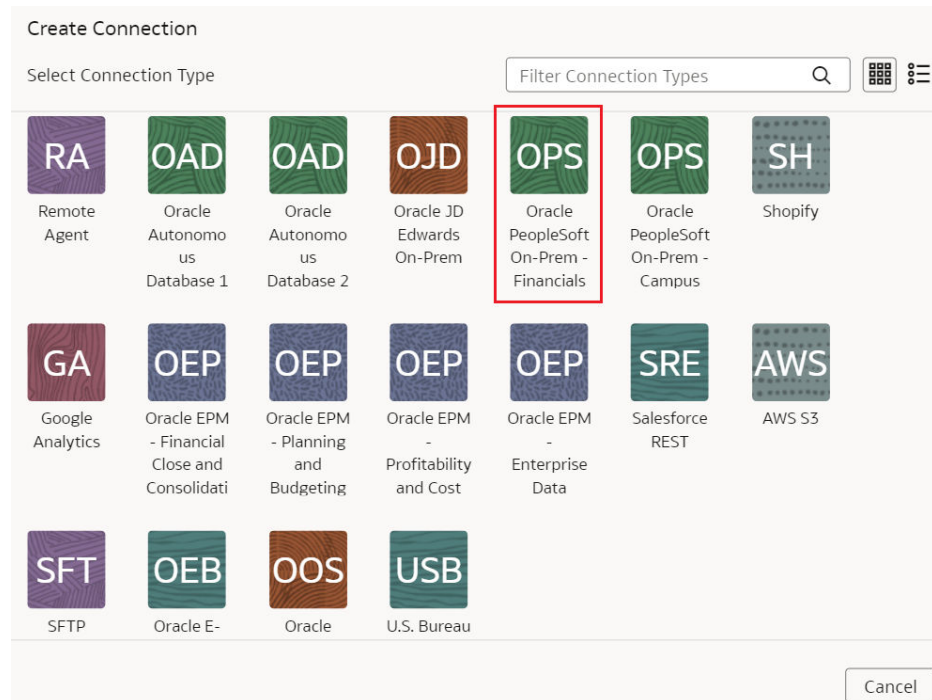


**i.** In Create Connection for Oracle PeopleSoft On-Prem - Financials dialog, in **Connectivity Type**, verify that **Remote** is selected automatically.
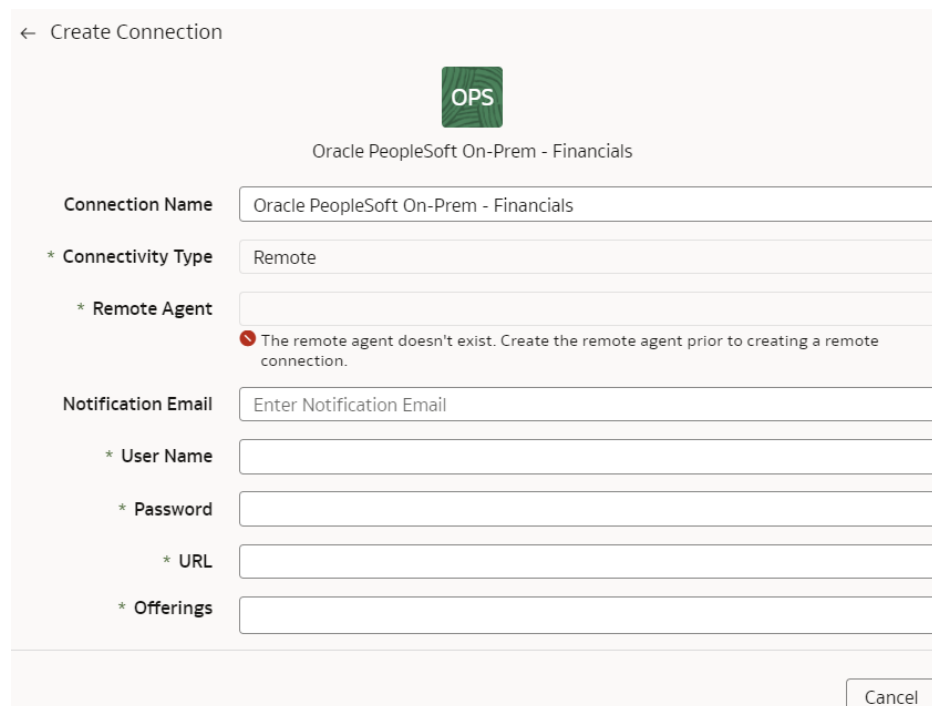
    **j.** In **Remote Agent**, select the remote agent connection that you created earlier, for example, **Remote Agent**.

    **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 the **Actions** menu 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 the **Actions** menu. You can check the statuses of all these requests on the Data Configuration Request History page.

**11.** 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 Google Analytics into Fusion Analytics Warehouse (Preview)

As a service administrator, you can use the Fusion Analytics Warehouse 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 Analytics Warehouse 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).

Ensure that **Google Analytics** is enabled on the Enable Features page prior to creating this connection. See Make Preview Features 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.
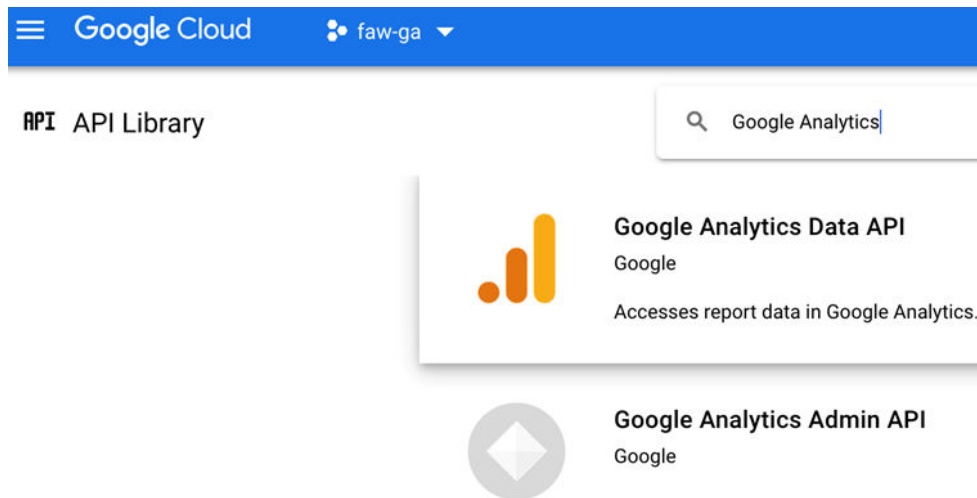
3. Enable Google Analytics APIs using these instructions:

   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 Analytics Warehouse, create the Google Analytics data connection using these instructions:

   a. In Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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.
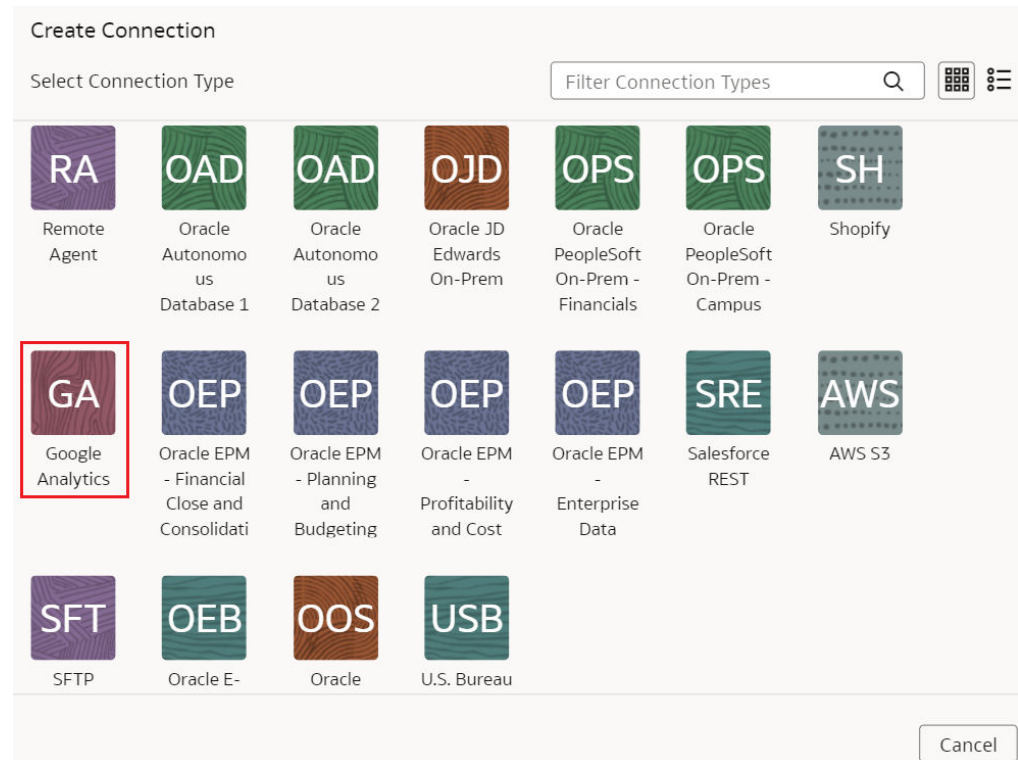
e. In the dialog for the Google Analytics connection, select **Standard** as the connectivity type and enter these details:

- **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.

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 the **Actions** menu 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 the **Actions** menu 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 Analytics Warehouse 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. 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 Commited option can have multiple date ranges. For each configured GA_LIST_OF_N_DAYS_AGO, StartDate=ExtractDate - NdaysAgo, EndDate=RunDate - NdaysAgo.

# Load Data from Salesforce into Fusion Analytics Warehouse (Preview)

As a service administrator, you can use the Fusion Analytics Warehouse 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.

Ensure that **Salesforce REST** is enabled on the Enable Features page prior to creating this connection. See Make Preview Features Available.

1. In Fusion Analytics Warehouse, create the Salesforce data connection using these instructions:

   a. In Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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.
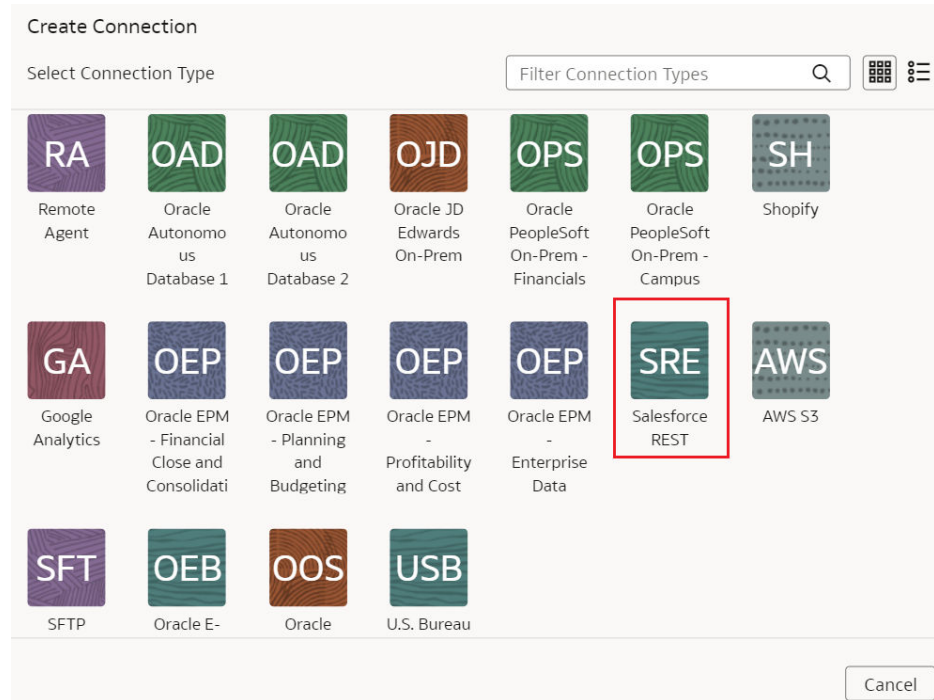
e. In the dialog box for the Salesforce connection, select **Standard** in **Connectivity Type** and enter an email address to receive notifications in **Notification Email**.

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, since 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 is 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 ….

l.  : Copy and paste the security token from your Salesforce account in **Security Token**.

This is an alpha-numeric code and may contain special characters, however, it isn't visible. It is encrypted and shown as ….

m. Copy and paste the private key from your Salesforce account in **Private Key**.

n. Click **Save**.

2. On the Manage Connections page, select the **Actions** menu for the EPM connection and then select **Refresh Metadata**.

> **Note:**
>
> You can't create augmentations for Salesforce unless you perform a metadata extract.

3. On the Manage Connections page, select the **Actions** menu for the EPM 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 Salesforce data. Ensure that you select **Regular** as the source dataset type and **Salesforce** as the pillar. Select the applicable Salesforce source tables. See Augment Your Data.

# Load the Bureau of Labor Statistics Data into Fusion Analytics Warehouse (Preview)

As a service administrator, you can use the Fusion Analytics Warehouse extract service to acquire data from the Bureau of Labor Statistics (BLS) and use it to create data augmentations for various Enterprise Resource Planning, Human Capital Management and Supply Chain Management use cases.

BLS is a repository of many datasets created by the government of United States. It includes almost 100 public datasets such as Consumer Price Index, Producer Price Indexes, Import and Export Price Indexes, Consumer Price Index, Pay and Benefits, Unemployment, Employment, and Labor Productivity.

Since the government datasets don't have timestamp for partial changes to datasets and the government publishes the entire datasets including changes entirely, you must perform a full extract each time.

Ensure that **U.S. Bureau of Labor Statistics (BLS)** is enabled on the Enable Features page prior to creating this connection. See Make Preview Features Available.

1. In Fusion Analytics Warehouse, create the BLS data connection using these instructions:

   a. In Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 **U.S. Bureau of Labor Statistics** as the connection type.
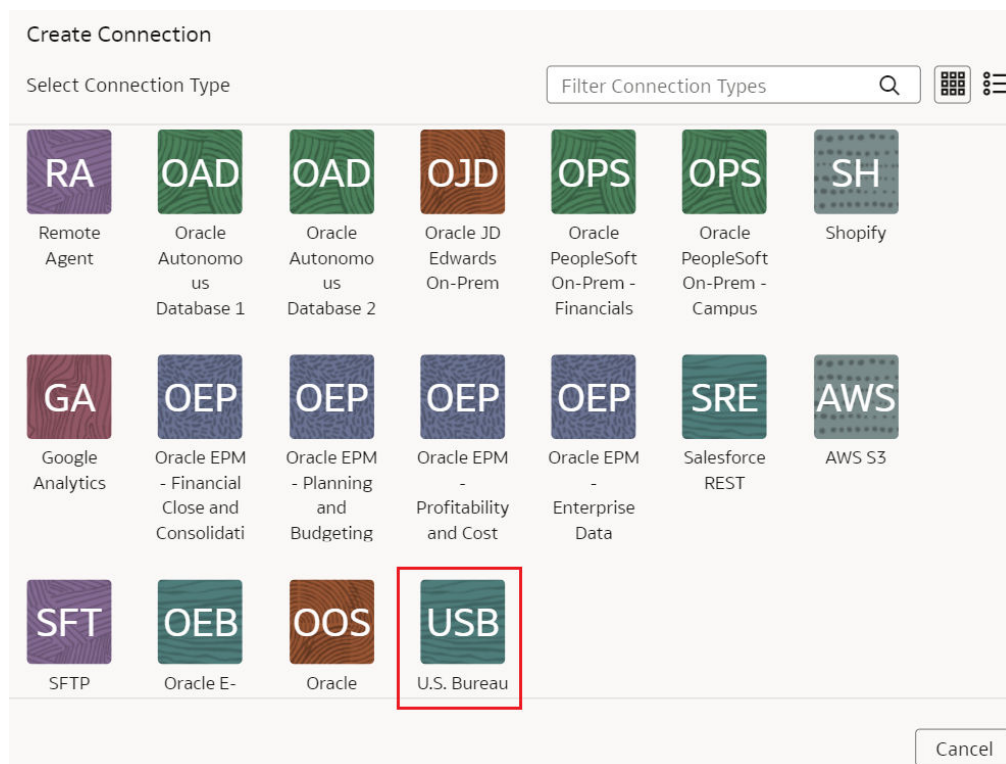
e. In the dialog for the BLS connection, select **Standard** in **Connectivity Type**, enter an email address to receive notifications in **Notification Email**, and provide the URL for the BLS data in **URL**.
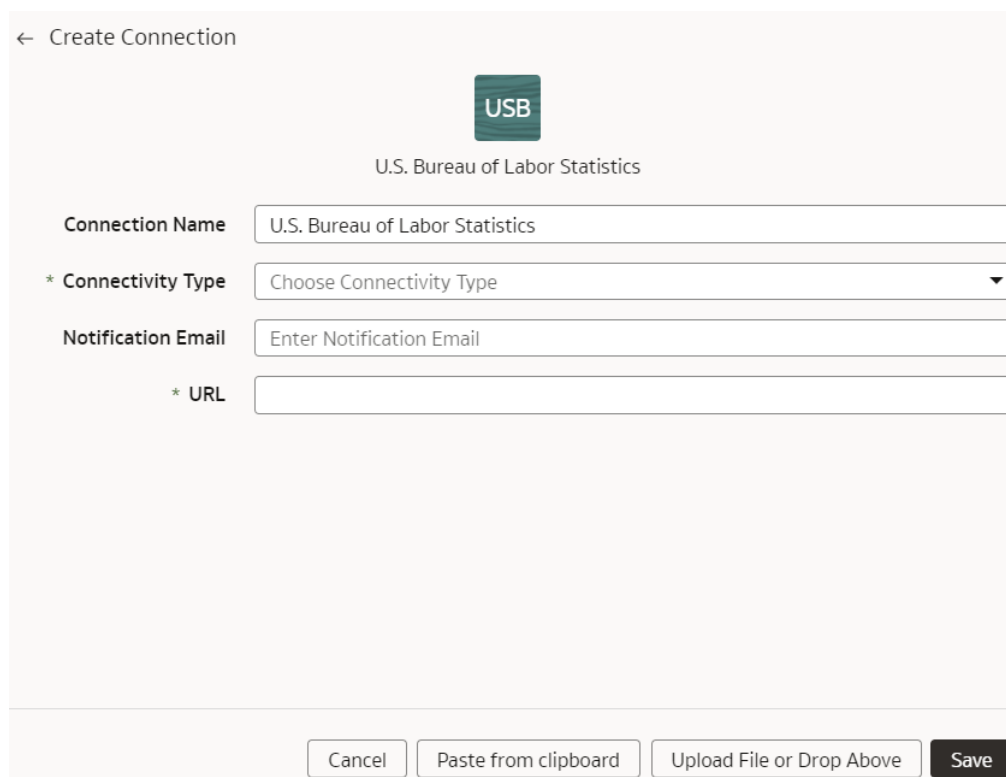


f. Click **Save**.

2. On the Manage Connections page, select the **Actions** menu for the BLS connection and then select **Refresh Metadata**.

> **Note:**
>
> You can't create augmentations for BLS unless you perform a metadata extract.

3. On the Manage Connections page, select the **Actions** menu for the BLS 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 BLS data. Ensure that you select **Regular** as the source dataset type and **BLS** as the pillar. Select the applicable BLS source tables. See Augment Your Data.

# Load Data from Shopify into Fusion Analytics Warehouse (Preview)

As a service administrator, you can use the Fusion Analytics Warehouse extract service to acquire data from the Shopify SaaS instance and use it to create data augmentations for various Enterprise Resource Planning and Supply Chain Management use cases.
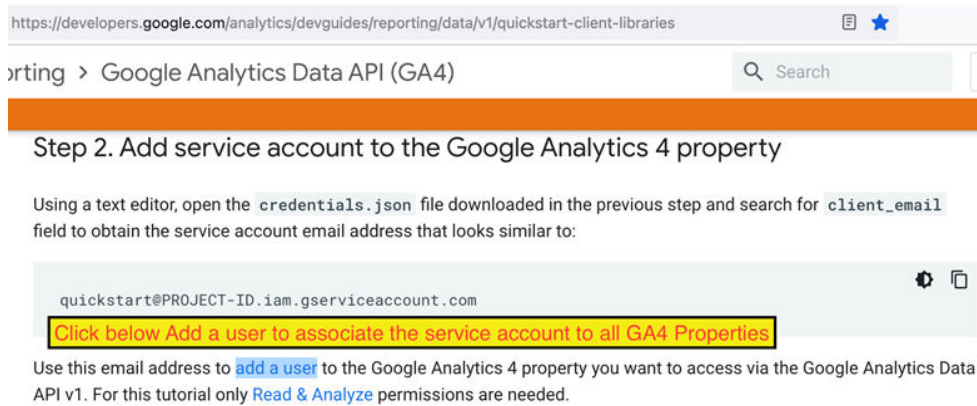
Ensure that **Shopify** is enabled on the Enable Features page prior to creating this connection. See Make Preview Features Available.

1. In Fusion Analytics Warehouse, create the Shopify data connection using these instructions:

    a. In Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 **Shopify** as the connection type.
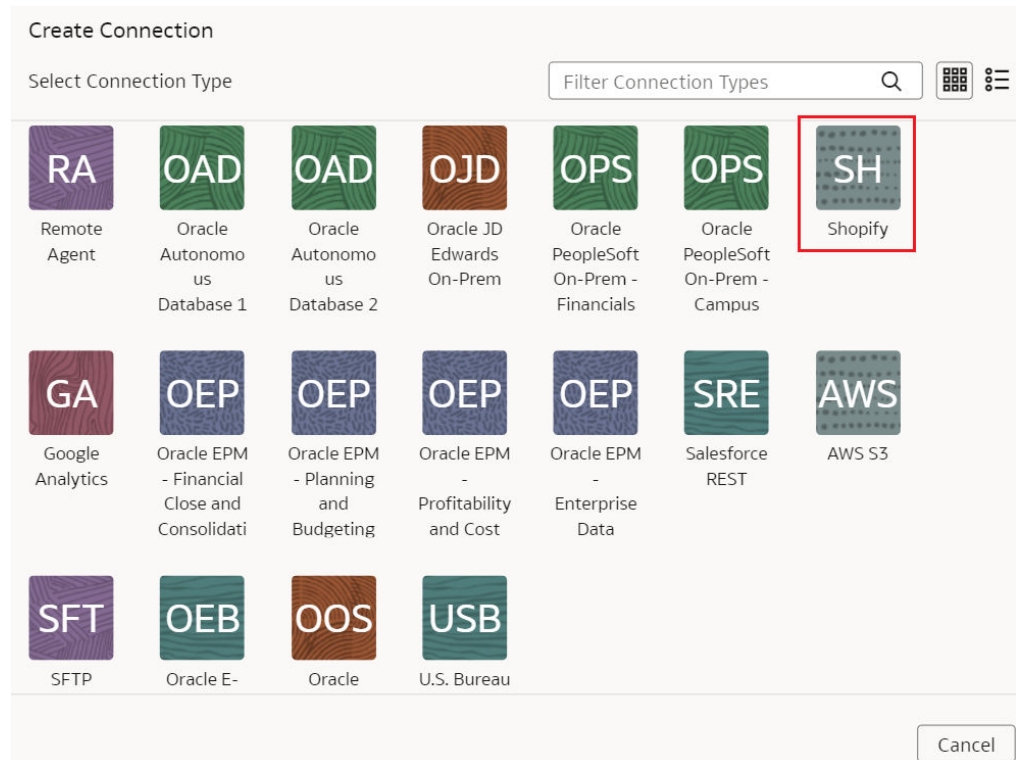
e. In the dialog for the Shopify connection, select **Standard** in **Connectivity Type**, enter an email address to receive notifications in **Notification Email**, applicable token value in **Access Token**, **Store Name** such as myfawteststore.myshopify.com, and `True` in **Bulk Extract**.

      **f.** Click **Save**.

2. On the Manage Connections page, select the **Actions** menu for the Shopify connection and then select **Test Connection**.

3. On the Manage Connections page, select the **Actions** menu 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 a Secure FTP Source into Fusion Analytics Warehouse (Preview)

As a service administrator, you can use the Fusion Analytics Warehouse 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. In Fusion Analytics Warehouse, create the SFTP data connection using these instructions:

    **a.** In Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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.
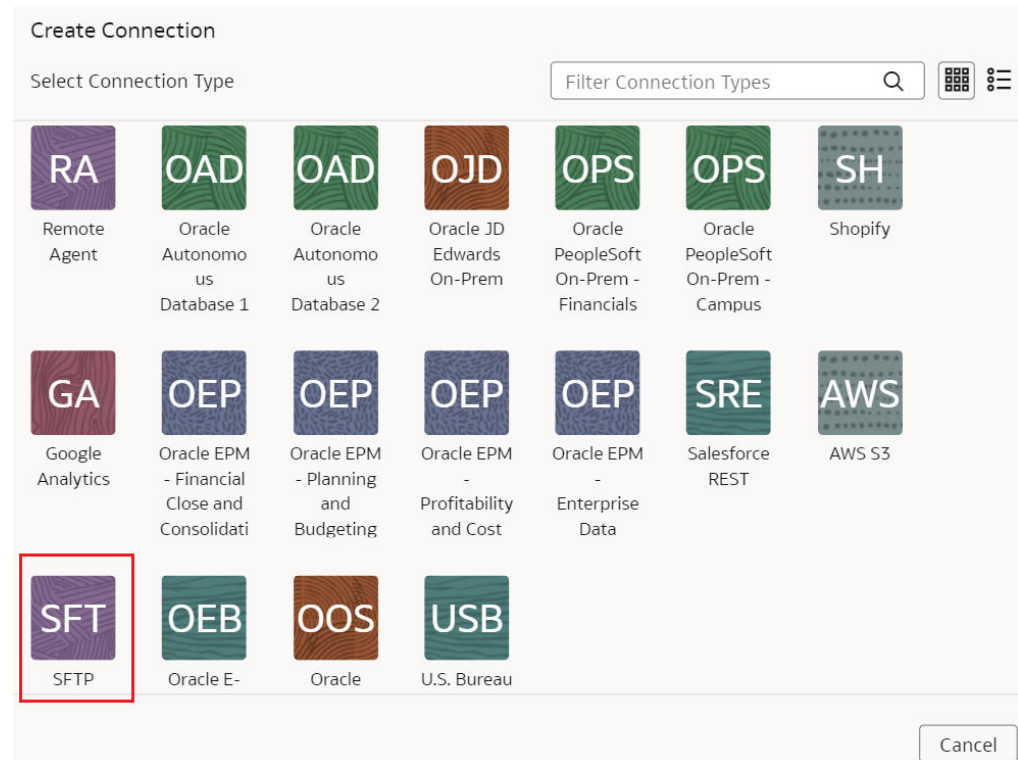
e.  In the dialog for the SFTP connection, select **Standard** in **Connectivity Type**, enter an email address to receive notifications in **Notification Email**, and provide applicable values in **Remote Host**, **User Name**, **Private Key**, **Remote Host Extract Files Directory**, **File Type**, **CSV Delimiter**, **CSV Date Format**, and **CSV Timestamp Format**.

Ensure that the private key you provide is in the valid OpenSSH format.

f. Click **Save**.

2. On the Manage Connections page, select the **Actions** menu for the SFTP connection and then select **Test Connection**.

3. On the Manage Connections page, select the **Actions** menu for the SFTP connection and then select **Refresh Metadata**.

> **Note:**
>
> You can't create augmentations for SFTP 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 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 Oracle Autonomous Database into Oracle Fusion Analytics Warehouse (Preview)

As a service administrator, you can use the Oracle Fusion Analytics Warehouse 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 Analytics Warehouse, create the autonomous database connection using these instructions:

   a. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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.
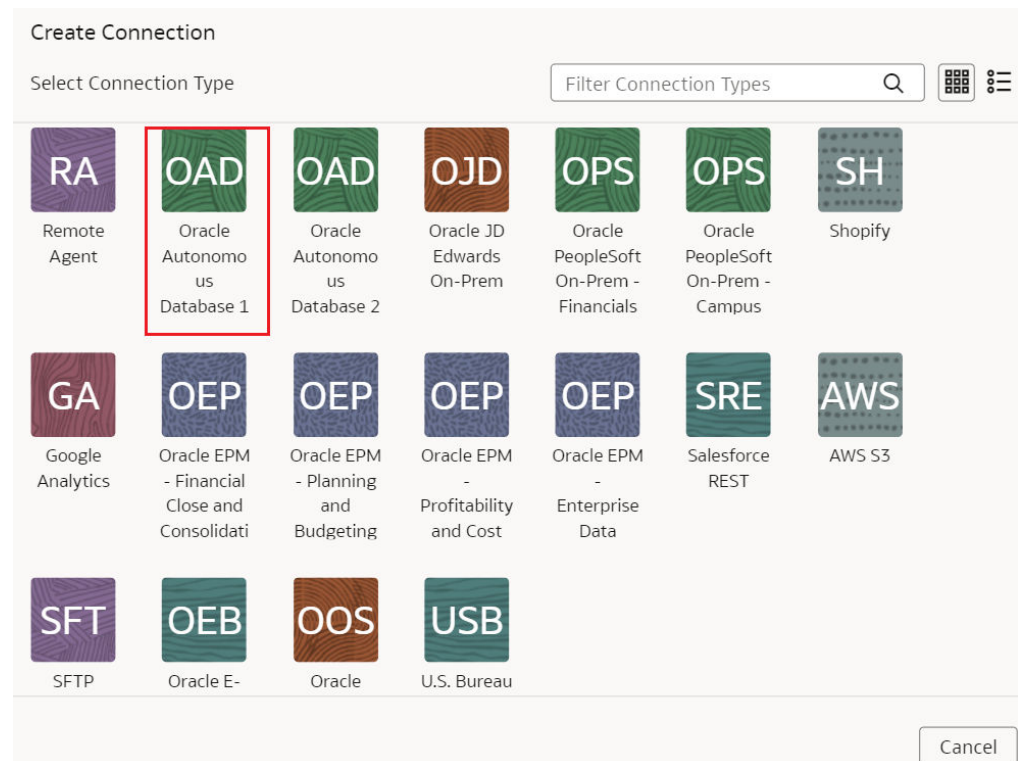
   

   e. In the dialog for the Oracle Autonomous Database connection, select **Standard** in **Connectivity Type**, enter an email address to receive notifications in **Notification Email**, credentials to access the database in **User Name** and **Password**, and the database service details in **Service**. In **Wallet**, drag and drop the database wallet details.

f. Click **Save**.

2. On the Manage Connections page, select the **Actions** menu for the autonomous database connection and then select **Test Connection**.

3. On the Manage Connections page, select the **Actions** menu 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 Oracle Object Storage into Fusion Analytics Warehouse (Preview)

As a service administrator, you can use the Fusion Analytics Warehouse 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 Analytics Warehouse 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.

Ensure that **Oracle Object Storage Service** is enabled on the Enable Features page prior to creating this connection. See Make Preview Features Available.

1. Store the following details in a text file to use while creating the connection to Oracle Object Storage Service in Fusion Analytics Warehouse:

   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 Analytics Warehouse, create the Oracle Object Storage connection using these instructions:

   a. In Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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.
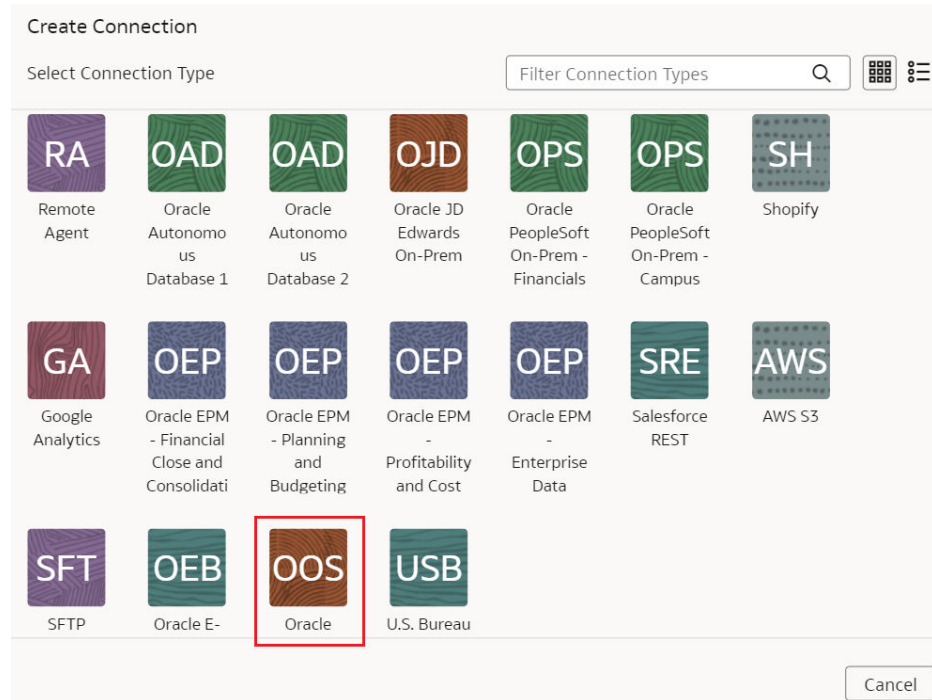
e. In the dialog for the Oracle Object Storage Service connection, select **Standard** in **Connectivity Type** and enter these details:

- **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

- **CSV Date Format**: Date format for the data files

- **CSV Timestamp Format**: Timestamp format for the data files

f. Click **Save**.

3. In Oracle Object Storage Service:

a. Create the folder structure in the Bucket using these guidelines:
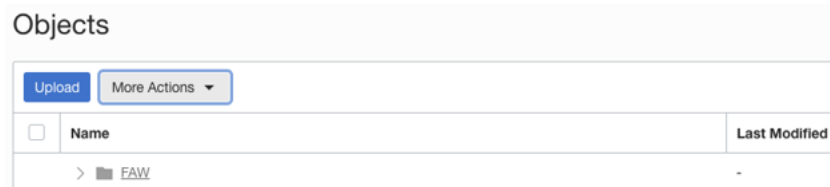


- The base folder in the bucket must match with the details provided in the connection.

- 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.

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 Oracle Fusion Analytics Warehouse. 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 ▼

| | **Name** |
|---|---|
| | ↰ ⁝⁝ |
| ☐ | ☐ ACTIVITY_TYPES.xlsx |
| ☐ | ☐ 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 Analytics Warehouse, on the Manage Connections page, select the **Actions** menu for the Oracle Object Storage Service connection and then select **Test Connection**.

5. On the Manage Connections page, select the **Actions** menu 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 On-premises JD Edwards into Fusion Analytics Warehouse (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 Analytics Warehouse 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 Analytics Warehouse 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. 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 JD Edwards 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 is not 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>
   ```

ORACLE

> **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 is preventing you from accessing the remote agent, then ensure that you complete these steps before starting the docker container for the first time:

    a. Disable 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.

    c. Configure the JD Edwards data source outbound proxy in the remote agent user interface. You see the extract service URL. For example, you see `http://<server IP>/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 Analytics Warehouse.

10. Configure the remote agent and JD Edwards data source on the Data Configuration page in Oracle Fusion Analytics Warehouse using these instructions:

    a. Open the **Navigator** menu, click **Console**, and then 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.
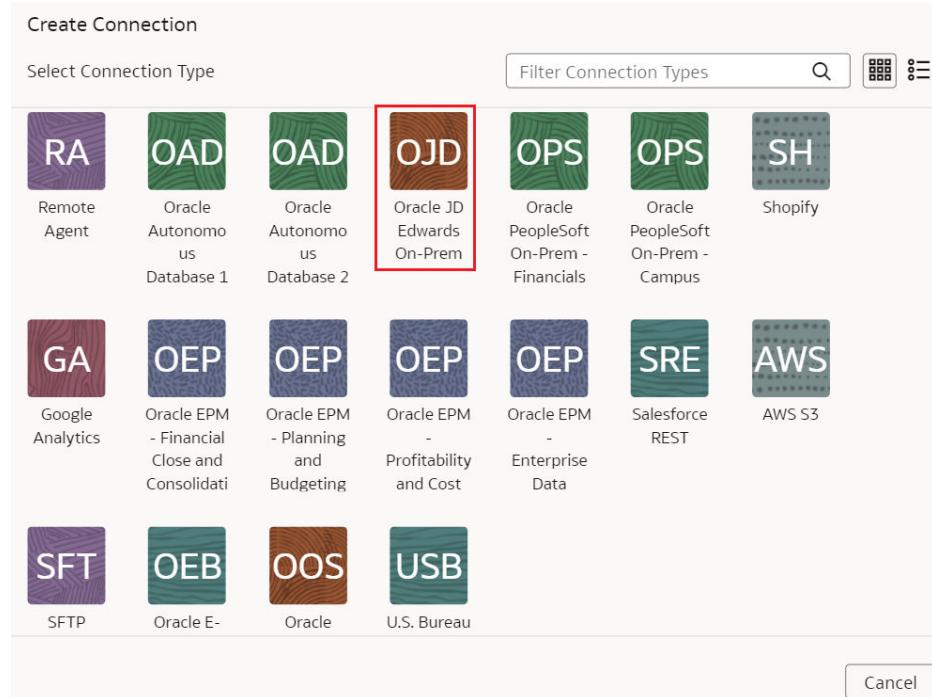


i. In Create Connection for Oracle JD Edwards On-Prem, in **Connectivity Type**, verify that **Remote** is selected automatically.

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 the **Actions** menu 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 the **Actions** menu. You can check the statuses of all these requests on the Data Configuration Request History page.

11. 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 Amazon Simple Storage Service into Oracle Fusion Analytics Warehouse (Preview)

As a service administrator, you can use the Oracle Fusion Analytics Warehouse 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 Analytics Warehouse, create the AWS S3 data connection using these instructions:

    a. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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.
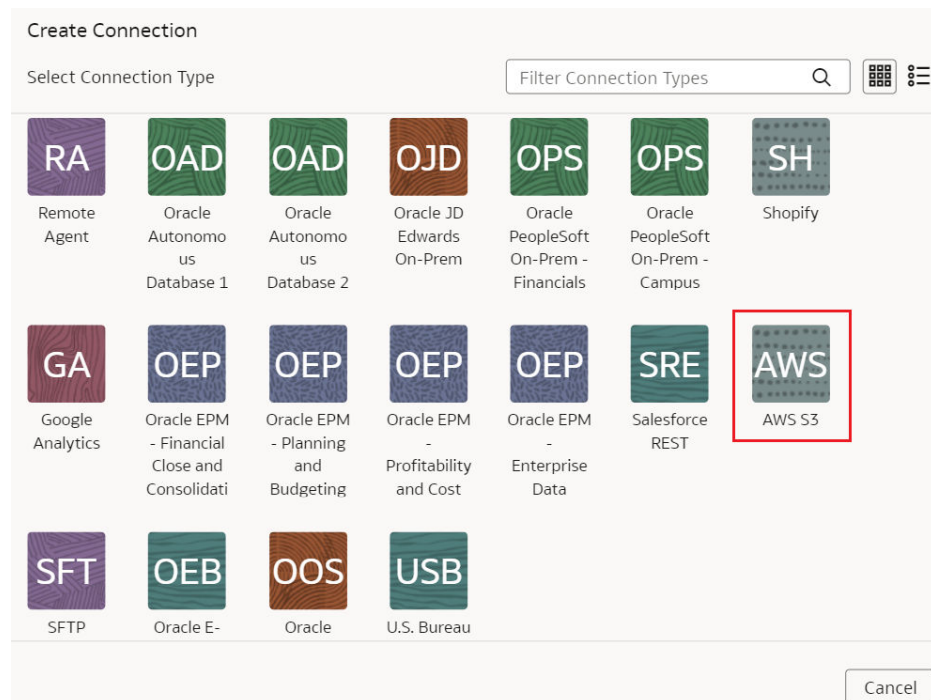


    e. In the dialog for the AWS S3 connection, select **Standard** in **Connectivity Type**, enter an email address to receive notifications in **Notification Email**, and provide applicable details of your AWS S3.

f. Click **Save**.

2. On the Manage Connections page, select the **Actions** menu for the AWS S3 connection and then select **Test Connection**.

3. On the Manage Connections page, select the **Actions** menu 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 Snowflake into Oracle Fusion Analytics Warehouse (Preview)

As a service administrator, you can use the Oracle Fusion Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse, create the Snowflake data connection:

   a. In Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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.
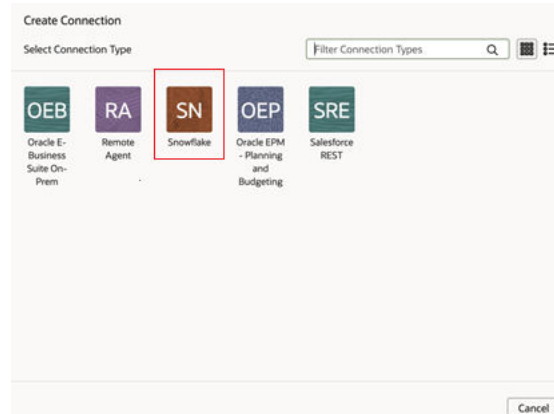
   

   e. In **Create Connection**, enter these details and then click **Save**:

      • **Connectivity Type**: Standard.

      • **Notification Email**: An email address to receive notifications.

      • **Host Name**: Complete host name of your Snowflake instance.

      • **Table Schema**: Your Snowflake table schema such as TPCH_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.

2. On the Manage Connections page, select the **Actions** menu 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 the **Actions** menu 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 Analytics Warehouse (Preview)

As a service administrator, you can use the Fusion Analytics Warehouse 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 Analytics Warehouse, create the Taleo data connection using these instructions:

a. In Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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.
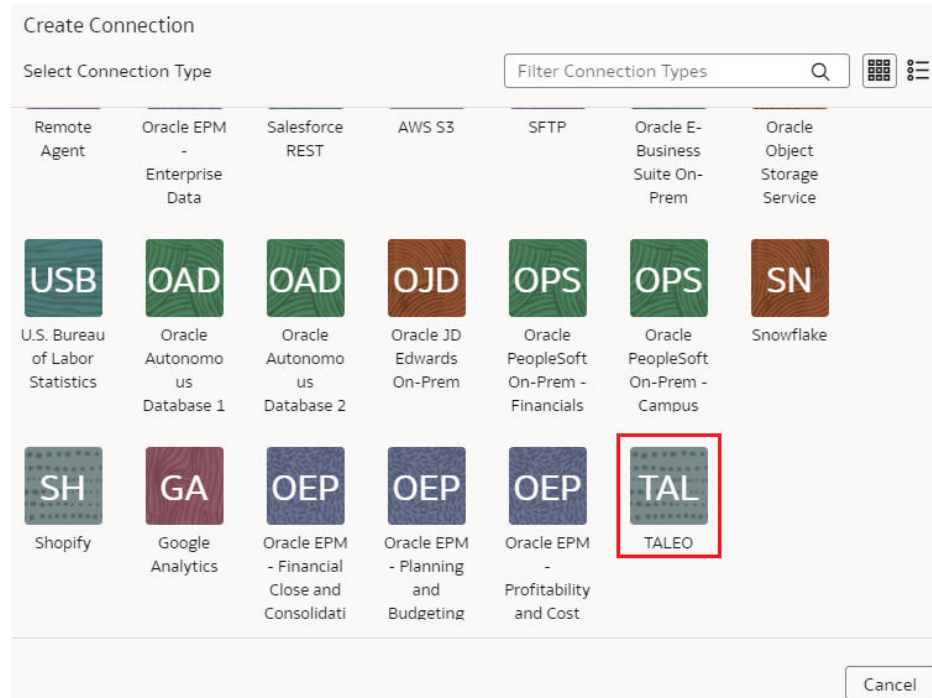


e. In **Connectivity Type**, select **Standard**, enter an email address to receive notifications in **Notification Email**, host name of your Taleo instance in **Host Name**, and credentials for your Taleo source in **User Name** and **Password**.

    **f.** Click **Save**.

**2.** On the Manage Connections page, select the **Actions** menu 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 the **Actions** menu 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.

# 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.

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 quite time in your business activities.
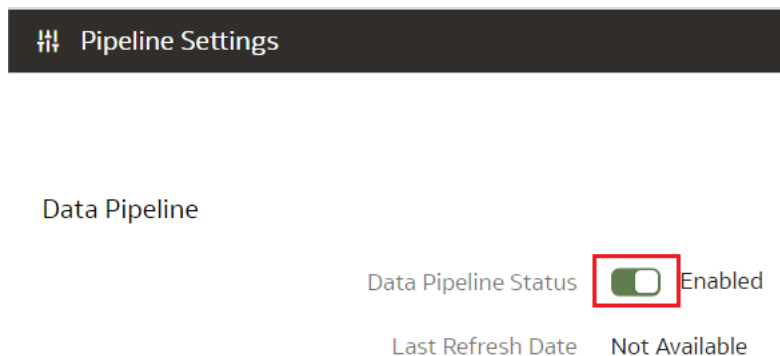
In cases where the pipeline jobs are failing due to issues, Oracle disables the data pipeline from the backend to investigate and resolve. On the Pipeline Parameters page, Oracle provides a reason and action for you, if the resolution needs to be done from your side. You can resolve the issue and as 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Data Configuration** under **Application Administration**.

3. On the Data Configuration page, under Global 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.

# Schedule Frequent Refreshes of Functional Area Data (Preview)

You can schedule frequent refreshes of the applicable functional areas such as General Ledger and Order Management to ensure that the incremental data in these functional areas is the latest.

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. 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 fast 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. Since, 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, needs to take most recent order data into 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 Data Refresh** is enabled under Pipeline Features on the Enable Features page prior to scheduling frequent data refreshes. See <xref to Make Preview Features Available>

1. Sign in to your service.

2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Data Configuration** under **Application Administration**.

3. On the Data Configuration page, under **Global Configurations**, click **Pipeline Settings**.

4. On the Pipeline Settings page, click **Frequent Data Refresh Schedule**.

5. In the Frequent Data Refresh Schedule tab, in **Frequent Data Refresh Interval (in Hours)**, select the number of hours after which you want the data refresh to happen.

6. Enter a start time.

7. Select the check boxes for the functional areas whose data you want refreshed at the specified interval.

8. Click **Save**.

# Schedule Periodic Full Reload of Functional Area Data (Preview)

You can schedule periodic full reload of the applicable functional areas such as General Ledger and Order Management to ensure that all the data in these functional areas is completely reloaded. You can schedule a full reload of maximum three functional areas.

> ⚠ **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.

Ensure that **Scheduled Full Data Reload** is enabled under Pipeline Features on the Enable Features page prior to scheduling periodic full reload. See <xref to Make Preview Features Available>

1. Sign in to your service.

2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Data Configuration** under **Application Administration**.

3. On the Data Configuration page, under **Global Configurations**, click **Pipeline Settings**.

4. On the Pipeline Settings page, click **Warehouse Full Relaod Schedule**.



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**.

# Extend Data with Custom Applications

As a functional administrator, you can use the available custom applications to extend your data for detailed and varied analytics.

**Topics:**

- About Extending Data with Custom Applications
- Select Descriptive Flex Fields and Map Attributes
- Activate the Descriptive Flex Fields
- Deactivate the Descriptive Flex Fields

# About Extending Data with Custom Applications

Custom applications are ready-to-use 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 application for the first time and deploy it, Oracle Fusion Analytics Warehouse assigns the custom application 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 application is the Descriptive Flex Fields (DFF) Attribute Mapper.

# About Extending Data with the Descriptive Flex Fields Attribute Mapper Custom Application

You can use the Descriptive Flex Fields (DFF) Attribute Mapper custom application to select the ready-to-use 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 ready-to-use functional areas.

The DFF Attribute Mapper custom application 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 application, 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 Analytics Warehouse automatically copies the DFFs based on the functional areas that are activated. For existing tenant instances, Oracle Fusion Analytics Warehouse 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 the ready-to-use descriptive flex fields (DFFs) and their attributes to your Autonomous Data Warehouse using the DFF Attribute Mapper.

While selecting and adding the ready-to-use 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 ready-to-use 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Data Configuration** under **Application Administration**.

3. On the Data Configuration page, under **Global Configurations**, click **Custom Data Applications**.

4. On the Custom Data Applications page, click **Create**, and then select **Descriptive Flex Fields**.
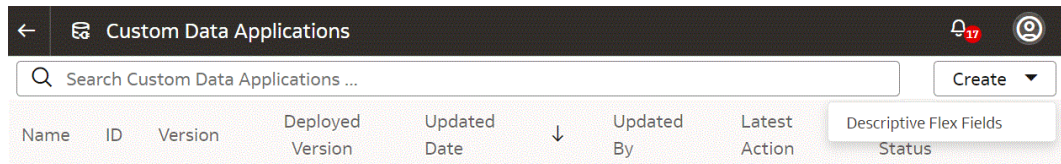


5. On the Descriptive Flex Fields page, click the **Actions** icon for a descriptive flex field that you want to add attributes.
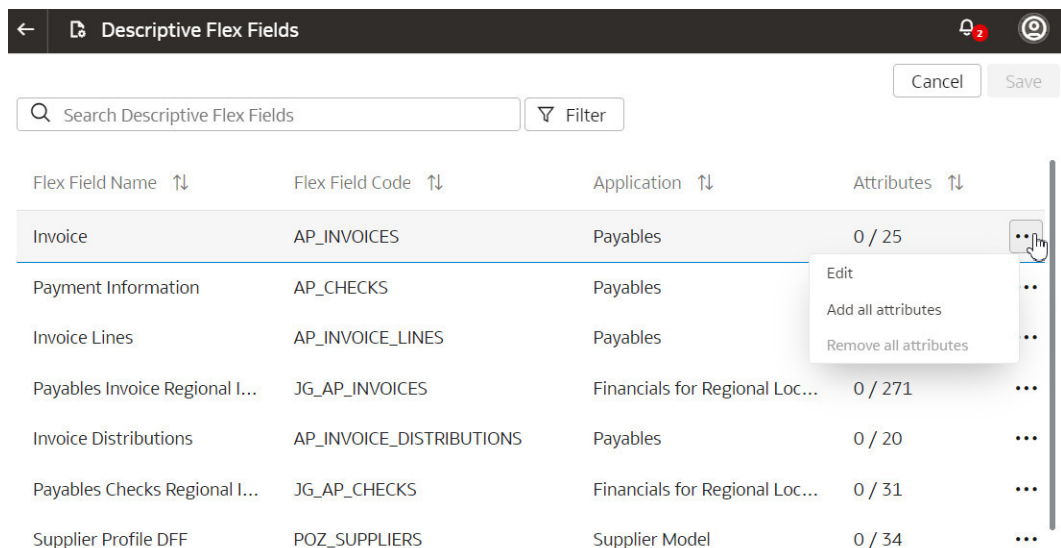


6. In the **Actions** menu, click **Edit** to select attributes

7. In the descriptive flex field dialog, select the check box for the attributes that you want to add and then click **Done**.

8.  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 Analytics Warehouse 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.

1. Sign in to your service.

2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Data Configuration** under **Application Administration**.

3. On the Data Configuration page, under **Global Configurations**, click **Custom Data Applications**.

4. On the Custom Data Applications page, click the **Actions** icon for a descriptive flex field that you want to activate.

5. In the **Actions** menu, click **Generate**.
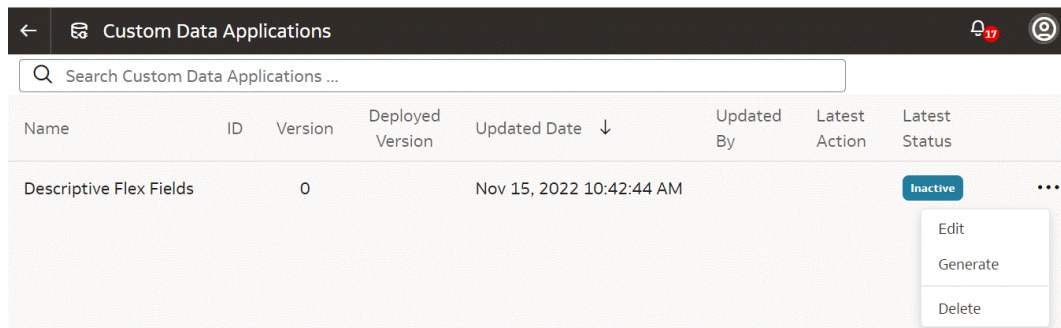


6. On the Custom Data Applications page, when the status changes to **Completed**, click the **Actions** icon for the applicable descriptive flex field and in the **Actions** menu, select **Deploy**.
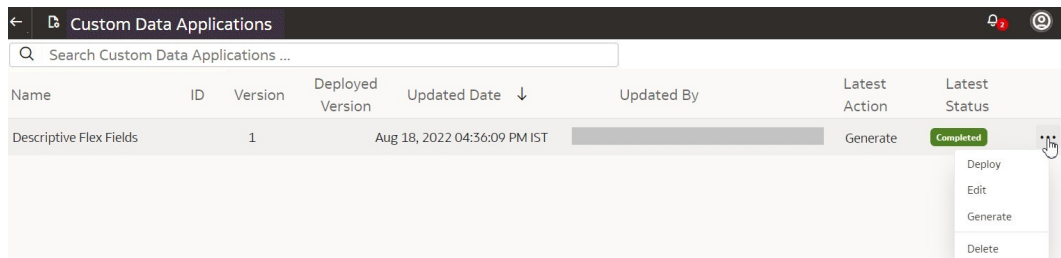


## Deactivate the Descriptive Flex Fields

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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Data Configuration** under **Application Administration**.

3. On the Data Configuration page, under **Global Configurations**, click **Custom Data Applications**.

4. On the Custom Data Applications page, click the **Actions** icon for a descriptive flex field that you want to deactivate.

5. In the pop up, click **Deactivate**.

# 4
# Validate Oracle Fusion Analytics Warehouse Data

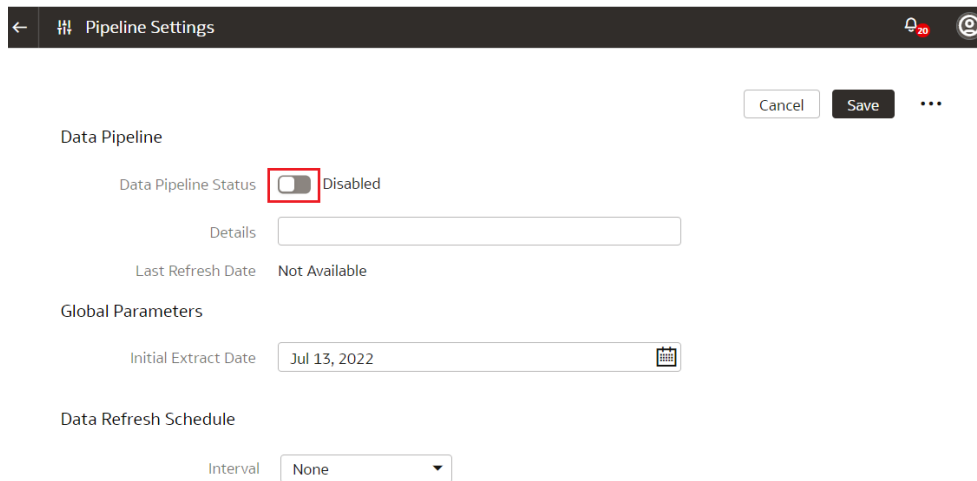As the cloud account administrator with the Functional Administrator or System Administrator application role, you validate the data after loading the source data from Oracle Fusion Cloud Applications into your data warehouse.

**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 an administrator, you can validate a library of metrics between your Oracle Fusion Analytics Warehouse instance and the Oracle Transactional Business Intelligence instance. The library of metrics is part of Oracle Fusion Analytics Warehouse.
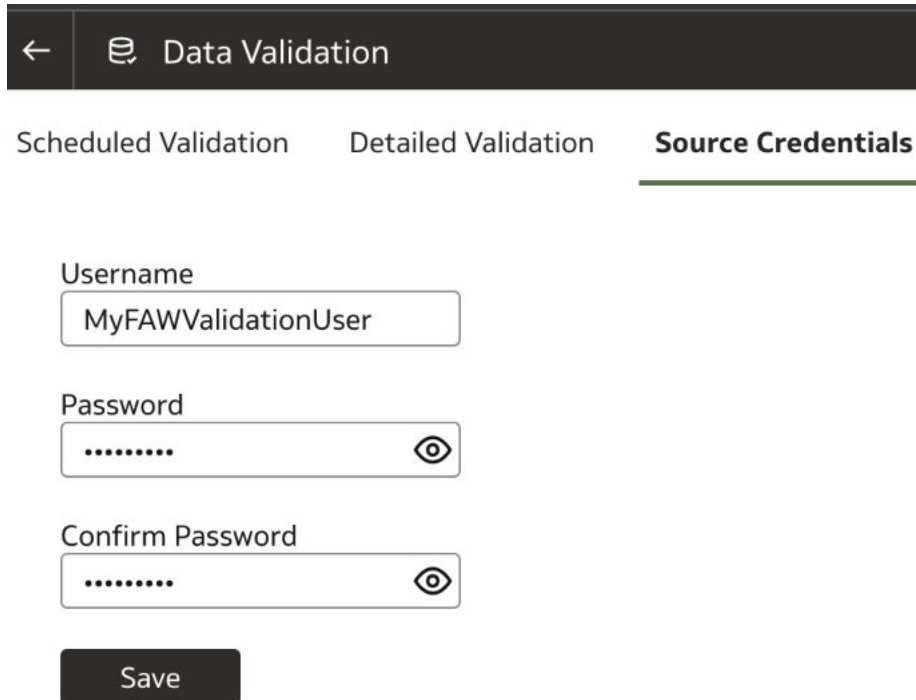
## Prerequisites for Data Validation

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 Analytics Warehouse instance and the Oracle Transactional Business Intelligence instance.
- Ensure that you're assigned the Integration Specialist Group in Oracle Fusion Analytics Warehouse 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 Analytics Warehouse, 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. 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.



## Create a User to Validate the Extracted Data

Data validation in Oracle Fusion Analytics Warehouse 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 Analytics Warehouse, you must provide this user's credentials in Oracle Fusion Analytics Warehouse for data validation. See Prerequisites for Data Validation.

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 ready-to-use 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.

Based on the schedule and the validation set, Oracle Fusion Analytics Warehouse 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Data Validation** under **Application Administration**.
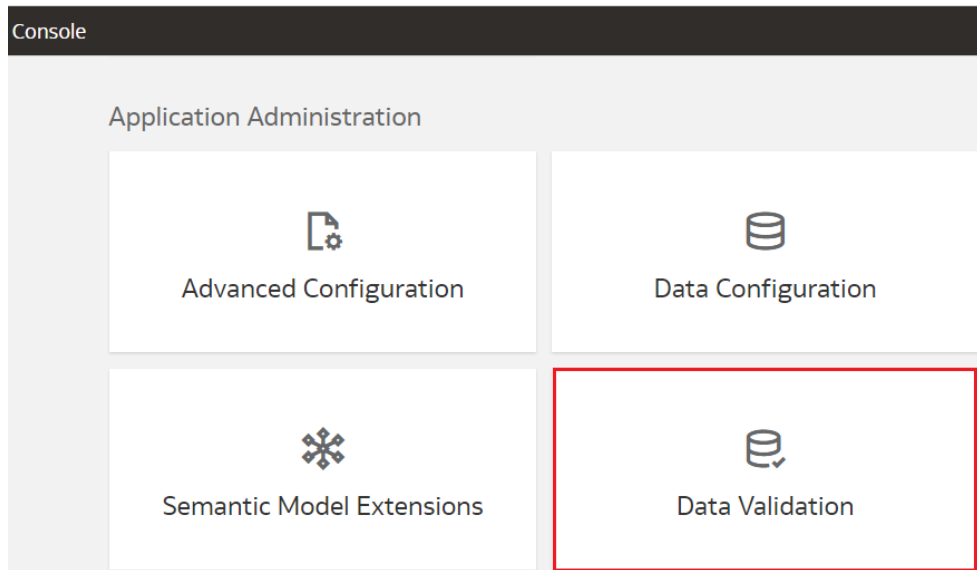
3. On the Data Validation page, in the Scheduled Validation tab, ensure that the **Run automated Data Validation Reports** toggle is "on" if you want to validate your data using the ready-to-use validation sets or your custom validation sets. Select the check box for the specific validation sets.
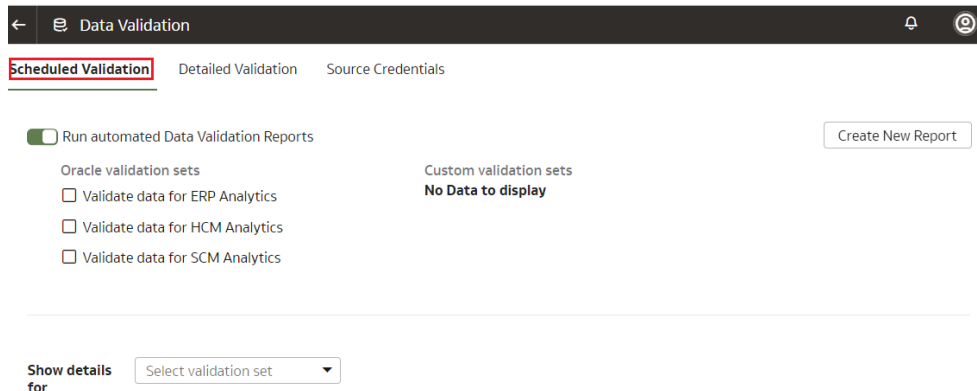


4. To create a custom validation set, click **Create New Report**.
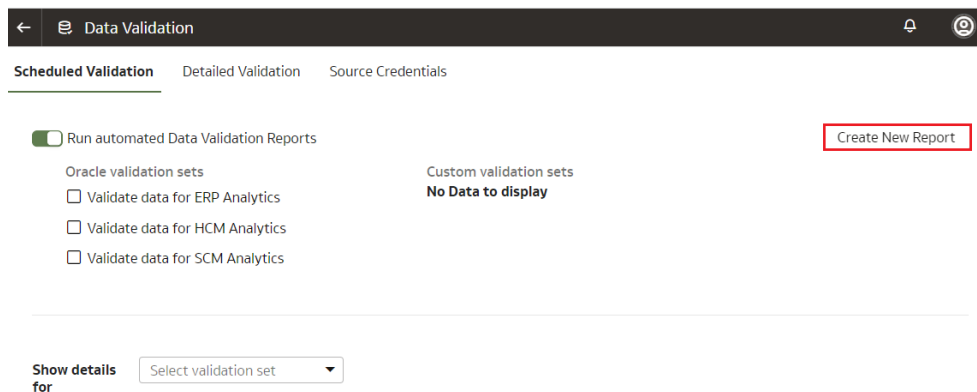
5. In Create Validation Set:

   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**.



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.



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 Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse 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.

# 5

# 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 Analytics Warehouse.

Users need access to objects and data. Access to objects include subject areas or elements of subject areas such as folders and attributes, front-end decks, cards, KPIs, 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 and duty roles mapped to them. You can merge your security setup only with the main semantic model.

### About Users

Users accessing Oracle Fusion Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse based on the Oracle Fusion Analytics Warehouse-specific system groups assigned to them. They gain access to different functionality, objects, and data in Oracle Fusion Analytics Warehouse 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 Analytics Warehouse instance, and custom groups that you create in Oracle Fusion Analytics Warehouse. See Associate Users and Groups.

## About Groups

Oracle Fusion Analytics Warehouse uses groups to provide users access to subject areas, objects, and data.

Oracle Fusion Analytics Warehouse uses the following three types of groups:

- System groups created in Oracle Identity Cloud Service specifically for Oracle Fusion Analytics Warehouse. 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 Analytics Warehouse, 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 Analytics Warehouse, such as IDCS_Administrators and All_Tenant_Users.

## System Groups

Oracle Fusion Analytics Warehouse creates the system groups in Oracle Identity Cloud Service while provisioning your Oracle Fusion Analytics Warehouse instance.

System groups are associated with system roles that provide a set of privileges to users. The system roles serve two purposes:

- Authenticate a user to Oracle Fusion Analytics Warehouse.

- License a user to use Oracle Fusion Analytics Warehouse based on the system group they are assigned.

See System Roles.

You must add the users to the corresponding system groups based on the tasks they perform in Oracle Fusion Analytics Warehouse. See Assign Users to a Group and Assign Groups to Users. Use the Users or Groups tabs on the Security page to add users to these system groups:

| System Group Code | System Group Name | Description | Associated Oracle Fusion Analytics Warehouse System Role* |
|---|---|---|---|
| FAW_FUNCTIONAL_A DMINISTRATORS | FAW Functional Administrator | Fusion Analytics Warehouse Functional Administrators | FunctionalAdmin |
| FAW_SECURITY_ADMI NISTRATORS | FAW Security Administrator | Fusion Analytics Warehouse Security Administrators | SecurityAdmin |
| FAW_MODELERS | FAW Modeler | Fusion Analytics Warehouse Modelers | Modeler |
| FAW_MODELER_ADMI NISTRATORS | FAW Modeler Administrator | Fusion Analytics Warehouse Modeler Administrators | ModelerAdmin |
| FAW_SERVICE_ADMIN ISTRATORS | FAW Service Administrator | Fusion Analytics Warehouse Service Administrators | ServiceAdmin |
| FAW_LICENSED_ERP_ AUTHORS | FAW Licensed ERP Authors | Fusion Analytics Warehouse ERP Licensed Authors | Author |
| FAW_LICENSED_ERP_ CONSUMERS | FAW Licensed ERP Consumers | Fusion Analytics Warehouse ERP Licensed Consumers | Consumer |
| FAW_LICENSED_HCM _AUTHORS | FAW Licensed HCM Authors | Fusion Analytics Warehouse HCM Licensed Authors | Author |
| FAW_LICENSED_HCM _CONSUMERS | FAW Licensed HCM Consumers | Fusion Analytics Warehouse HCM Licensed Consumers | Consumer |

*See System Roles.

# Job-Specific Groups

Job-specific groups are job roles synchronized from Oracle Fusion Cloud Applications into Oracle Identity Cloud Service.

Oracle Fusion Analytics Warehouse 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 Analytics Warehouse 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_IN TEGRATION_ SPECIALIST_ 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_COMM ON_DATA_AD MIN_ANALYSI S_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 are not necessarily Oracle Fusion Analytics Warehouse-specific but you can use them in Oracle Fusion Analytics Warehouse. 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 Oracle Fusion Analytics Warehouse such as 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_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<br>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

## System Roles

The system roles for Oracle Fusion Analytics Warehouse available in Oracle Identity Cloud Service through provisioning of Oracle Fusion Analytics Warehouse are:

| Role Name | Role Description | Purpose | Permissions |
|---|---|---|---|
| Administrator | Tenant administrator for service instances | Creates and manages Oracle Fusion Analytics Warehouse instances and administers Oracle Identity Cloud Service users and roles. | • Creates and manages Oracle Fusion Analytics Warehouse instances<br>• Administers Oracle Identity Cloud Service users and roles<br>• Has no access to the Data Pipeline user interface<br>• Has no access to the Data Security user interface<br>• Has no access to the Job Monitoring Console user interface<br>• Has no access to the Console menu<br>• Has no access to user and group administration<br>• Has no access to decks, cards, KPIs, visualizations, projects, and content |

| Role Name | Role Description | Purpose | Permissions |
|---|---|---|---|
| Service Administrator | Oracle Fusion Analytics Warehouse service administrator | Customer facing (Snapshots, Connections, System Settings) administrator access to Oracle Fusion Analytics Warehouse. | • Can't create snapshots or modify the data model file (RPD)<br>• Can access the Data Pipeline user interface<br>• Can access the Data Security user interface<br>• Has no access to the Job Monitoring console<br>• Can access the Console menu<br>• Can access the user and group administration pages<br>• Can access the Semantic Model Extensions user interface<br>• Has read-only access to the ready-to-use Oracle Analytics Cloud objects (visualization projects, dashboards, and analyses)<br>• Requests from Oracle Fusion Analytics Warehouse to Oracle Analytics Cloud are routed through the Service Administrator user<br>• Can create, update, and delete the Oracle Analytics Cloud content<br>• Has read-only access to the ready-to-use KPIs<br>• Can create, update, and delete KPIs<br>• Can create, update, and |

| Role Name | Role Description | Purpose | Permissions |
|---|---|---|---|
| | | | delete decks and cards |
| | | | • Can share decks and cards |
| | | | • Can create Oracle Analytics Publisher reports |
| | | | • Has no access to data modeling |
| | | | • Has access to create Oracle Analytics Cloud connections to other non-Oracle Applications sources, such as Excel files and Google drive |
| | | | • Has access to create Oracle Analytics Cloud datasets |

| Role Name | Role Description | Purpose | Permissions |
|---|---|---|---|
| Functional Administrator | Oracle Fusion Analytics Warehouse functional administrator | Performs functional configuration (pipeline, reporting) in Oracle Fusion Analytics Warehouse. | • Can access the Data Pipeline user interface<br>• Has no access to the Data Security user interface<br>• Has no access to the Job Monitoring console<br>• Can access the Console menu<br>• Has no access to user and role administration<br>• Has no access to the Semantic Model Extensions user interface<br>• Has no access to the ready-to-use Oracle Analytics Cloud objects (visualization projects, dashboards, and analyses)<br>• Has no access to the ready-to-use KPIs<br>• Has no access to decks, KPIs, and Oracle Analytics Cloud projects<br>• Can't create any Oracle Analytics Cloud content and KPIs<br>• Can't create, update, and delete decks and cards<br>• Can't share decks and cards<br>• Has no access to Oracle Analytics Publisher<br>• Has no access to data modeling<br>• Has no access to create Oracle Analytics Cloud connections<br>• Has no access to create Oracle |

| Role Name | Role Description | Purpose | Permissions |
|-----------|------------------|---------|-------------|
| | | | Analytics Cloud datasets |

| Role Name | Role Description | Purpose | Permissions |
|---|---|---|---|
| Security Administrator | Oracle Fusion Analytics Warehouse security administrator | Administers system roles and data security. | • Has no access the Data Pipeline user interface<br>• Has access to the Data Security user interface<br>• Has no access to the Job Monitoring console<br>• Can access the Console menu<br>• Has access to user and group administration<br>• Has no access to the Semantic Model Extensions user interface<br>• Has no access to the ready-to-use Oracle Analytics Cloud objects (visualization projects, dashboards, and analyses)<br>• Has no access to the ready-to-use KPIs<br>• Has no access to decks, KPIs, and Oracle Analytics Cloud projects<br>• Can't create any Oracle Analytics Cloud content and KPIs<br>• Can't create, update, and delete decks and cards<br>• Can't share decks and cards<br>• Has no access to Oracle Analytics Publisher and data modeling<br>• Has no access to create Oracle Analytics Cloud connections<br>• Has no access to create Oracle Analytics Cloud datasets |

| Role Name | Role Description | Purpose | Permissions |
|---|---|---|---|
| Modeler Administrator | Oracle Fusion Analytics Warehouse data model administrator | Promote data model (RPD) customization to the Oracle Analytics Cloud instance. | • Has no access to the Data Pipeline user interface<br>• Has no access to the Data Security user interface<br>• Has no access to the Job Monitoring console<br>• Can access the Console menu<br>• Has no access to user and role administration<br>• Can access the Semantic Model Extensions user interface<br>• Can access the ready-to-use Oracle Analytics Cloud objects (visualization projects, dashboards, and analyses)<br>• Can access the ready-to-use KPIs<br>• Can create KPIs<br>• Can create Oracle Analytics Cloud content<br>• Can't create, update, and delete decks and cards<br>• Can't share decks and cards<br>• Can't create Oracle Analytics Publisher reports<br>• Has access to data modeling<br>• Can apply the data model file (repository file) to the Test environment<br>• Can create Oracle Analytics Cloud connections<br>• Can create Oracle Analytics Cloud datasets |

| Role Name | Role Description | Purpose | Permissions |
| --- | --- | --- | --- |
| Modeler | Oracle Fusion Analytics Warehouse modeler | Modify the semantic model to bring in custom dimensions and attributes. | • Has no access to the Data Pipeline user interface<br>• Has no access to the Data Security user interface<br>• Has no access to the Job Monitoring console<br>• Can access the Console menu<br>• Has no access to user and role administration<br>• Can access the Semantic Model Extensions user interface<br>• Can access the ready-to-use Oracle Analytics Cloud objects (visualization projects, dashboards, and analyses)<br>• Can access the ready-to-use KPIs<br>• Can create Oracle Analytics Cloud content<br>• Can create KPIs<br>• Can't create, update, and delete decks and cards<br>• Can't share decks and cards<br>• Can't create Oracle Analytics Publisher reports<br>• Has access to data modeling<br>• Can create Oracle Analytics Cloud connections<br>• Can create Oracle Analytics Cloud datasets |

| Role Name | Role Description | Purpose | Permissions |
|---|---|---|---|
| Author | Oracle Fusion Analytics Warehouse author | Create and edit KPIs, cards, decks, visualization projects, reports, and dashboards. | • Has no access to the Data Pipeline user interface<br>• Has no access to the Data Security user interface<br>• Has no access to the Job Monitoring console<br>• Has no access to the Console menu<br>• Has no access to user and role administration<br>• Has no access to the Semantic Model Extensions user interface<br>• 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"<br>• Has read-only access to the ready-to-use KPIs<br>• Can edit the custom Oracle Analytics Cloud objects (visualization projects, dashboards, and analyses)<br>• Can edit the custom KPIs<br>• Can change the filter values for existing visualization projects<br>• Can add filters for existing visualization projects<br>• Can create and edit Oracle |

| Role Name | Role Description | Purpose | Permissions |
| --- | --- | --- | --- |
| | | | Analytics Cloud content, KPIs, decks, and cards |
| | | | • Can delete custom KPIs, decks, and cards |
| | | | • Can consume KPIs, cards, and decks created by other users on which they have access permissions |
| | | | • Can share decks and cards |
| | | | • Can create Oracle Analytics Publisher reports |
| | | | • Has no access to data modeling |
| | | | • Has no access to create Oracle Analytics Cloud connections |
| | | | • Has access to create Oracle Analytics Cloud datasets |

| Role Name | Role Description | Purpose | Permissions |
|---|---|---|---|
| Consumer | Oracle Fusion Analytics Warehouse consumer | Read access to Oracle Analytics Cloud content and can create cards and decks. | <ul><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 KPIs</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 KPIs</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></ul> |

| Role Name | Role Description | Purpose | Permissions |
|-----------|------------------|---------|-------------|
|           |                  |         | • Can't create any KPIs<br>• Can create, update, and delete decks and cards<br>• Can share decks and cards<br>• Has read-only access to Oracle Analytics Publisher<br>• Has no access to data modeling<br>• Has no access to create Oracle Analytics Cloud connections<br>• Has access to create Oracle Analytics Cloud datasets |

Refer to the full list of privileges in Mapping of System Roles to Permissions in Fusion Analytics Warehouse. This document is updated typically for each release of Oracle Fusion Analytics Warehouse. Ensure that you are 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 Analytics Warehouse 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. See Set Up the Reporting Configurations for Enterprise Resource Planning.

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 Analytics Warehouse in Oracle Identity Cloud Service | Users for Oracle Fusion Analytics Warehouse must exist in the Oracle Identity Cloud Service instance associated with your Oracle Fusion Analytics Warehouse instance. You create users in the Oracle Identity Cloud Service instance in several ways. | See Create Users |
| License the users to access Oracle Fusion Analytics Warehouse | An Oracle Fusion Analytics Warehouse user is an Oracle Fusion Analytics Warehouse licensed user. You license a user in Oracle Fusion Analytics Warehouse when you assign one of the Oracle Fusion Analytics Warehouse 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 Analytics Warehouse. | See License the Users to Access Oracle Fusion Analytics Warehouse |
| Create groups | As a security administrator, you can create custom groups to meet your business requirements. | See Create a Group |

| Task | Description | More Information |
|------|-------------|-----------------|
| 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 Create an Application Role |
| 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 Analytics Warehouse. | See Add Application Roles to a Group and Assign Groups to Application Roles |
| Associate users and groups | You must associate users and groups as the groups assigned to the users provide them the access to Oracle Fusion Analytics Warehouse. | See Assign Groups to Users and Assign Users to a Group |
| 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 Custom Security in Fusion Analytics Warehouse. | See Add Security Assignments to a User and Manage Users for a Data Security Assignment |

# Manage Users

As a service or security administrator, you must ensure that you add users with applicable permissions to work with Oracle Fusion Analytics Warehouse.

**Topics:**

- Create Users
- License the Users to Access Oracle Fusion Analytics Warehouse
- Update the User Details
- Remove a User's Access to Oracle Fusion Analytics Warehouse
- Automatically Assign Licensed Groups to Users

- Assign Groups to Users
- Remove Groups Assigned to a User
- 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 Analytics Warehouse must exist in the Oracle Identity Cloud Service instance associated with your Oracle Fusion Analytics Warehouse 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.
- Manually create users in the Oracle Identity Cloud Service instance using the Oracle Fusion Analytics Warehouse user interface.

# 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 Analytics Warehouse 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 Analytics Warehouse instance.

See Create User Accounts in *Administering Oracle Identity Cloud Service*.

# Create Users in Oracle Fusion Analytics Warehouse

Manually create users in the Oracle Identity Cloud Service instance using the Oracle Fusion Analytics Warehouse user interface.

When you add a user using the Oracle Fusion Analytics Warehouse user interface, the user is available in the Oracle Identity Cloud Service instance associated with your Oracle Fusion Analytics Warehouse instance. You later assign the applicable licensed groups to the user that enable the user to perform certain tasks in Oracle Fusion Analytics Warehouse.

See System Groups.

1. Sign in to Oracle Fusion Analytics Warehouse.
2. On the Home page, open the **Navigator** menu, click **Console**, and then click **Security** under **Service Administration**.
3. On the Security page, click the Users tab, and then click **Add User**.

4. In Add User, click **Create a New User**.

5. In Add User, provide the user details and click **Next**.

6. Select the check box for each of the licensed groups that you want to assign to the user and click **Finish**.

# License the Users to Access Oracle Fusion Analytics Warehouse

You must assign at least one system group to a user to enable them to perform relevant tasks in Oracle Fusion Analytics Warehouse. System groups provide a set of privileges to perform tasks in Oracle Fusion Analytics Warehouse.

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 Oracle Fusion Analytics Warehouse.

2. On the Home page, open the **Navigator** menu, click **Console**, and then 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. Optional: If you don't find a specific user, then click **Create a New User** to create the user and assign the applicable system groups.

   See Create Users in Oracle Fusion Analytics Warehouse .

6. Click **Next**.

7. Select the check box for each of the licensed groups that you want to assign to the user and click **Finish**.

# Update the User Details

You can update the user details such as first name, last name, and email but the user name is non-editable after specifying it initially.

1. Sign in to Oracle Fusion Analytics Warehouse.

2. On the Home page, open the **Navigator** menu, click **Console**, and then click **Security** under **Service Administration**.

3. On the Security page, select a user from the users listed under the Users tab or use the Search option and then click **User Profile**.

4. In User Details, update the applicable information and click **Save**.

# Remove a User's Access to Oracle Fusion Analytics Warehouse

Remove a user's access to Oracle Fusion Analytics Warehouse by removing their assignment to a system group.

A user assigned to a system group consumes an Oracle Fusion Analytics Warehouse license. When a user no longer needs to consume the Oracle Fusion Analytics Warehouse license according to their entitlement, you can revoke the user's assignment to the applicable system groups. The user won't be able to access Oracle Fusion Analytics Warehouse as the user's access to Oracle Fusion Analytics Warehouse depends on the system group assigned to them. When you remove all system groups from the user, then the user can no longer be authenticated to Oracle Fusion Analytics Warehouse.

1. Sign in to Oracle Fusion Analytics Warehouse.

2. On the Home page, open the **Navigator** menu, click **Console**, and then click **Security** under **Service Administration**.

3. On the Security page, select a user from the displayed users or use the Search option to search for and select a user.

4. Click **Remove User**.

# Automatically Assign Licensed Groups to Users

You can automatically assign the Oracle Fusion Analytics Warehouse licensed 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 Analytics Warehouse.

When you enable the synchronization of Oracle Fusion Cloud Applications with the Oracle Identity Cloud Service instance associated with your Oracle Fusion Analytics Warehouse instance, all the Oracle Fusion Cloud Applications groups are visible on the Security page in Oracle Fusion Analytics Warehouse. You must map the Oracle Fusion Cloud Applications custom groups to the Oracle Fusion Analytics Warehouse author and consumer licensed groups. Later when you synchronize the users from Oracle Fusion Cloud Applications to Oracle Identity Cloud Service, Oracle Fusion Analytics Warehouse selects those users, checks if the mapped Oracle Fusion Cloud Applications custom groups are assigned to those users, and then automatically assigns the corresponding licensed groups to those users.

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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse author and consumer licensed groups, under the Groups tab, select the frequency of the synchronization of the Oracle Fusion Analytics Warehouse licensed groups with the new Oracle Fusion Cloud Applications users.

10. Optional: Under the Groups tab, click **Apply Changes Now**.

Oracle Fusion Analytics Warehouse adds the Oracle Fusion Analytics Warehouse licensed groups to the new Oracle Fusion Cloud Applications users.

## Assign Groups to Users

You can assign one or more users to one or more groups.

1. Sign in to Oracle Fusion Analytics Warehouse.

2. On the Home page, open the **Navigator** menu, click **Console**, and then click **Security** under **Service Administration**.

3. On the Security page, select a user from the displayed users or use the Search option to search for and select a user.

4. In the user details region, click **Assign Groups**.

5. In Assign Groups, search for a group or select from the list of groups displayed in this dialog.

6. Select the check box for one or more groups and click **Assign**.

## Remove Groups Assigned to a User

Remove groups assigned to a user if the user no longer requires the authorization to access Oracle Fusion Analytics Warehouse, specific permissions for tasks, and functional access.

1. Sign in to Oracle Fusion Analytics Warehouse.

2. On the Home page, open the **Navigator** menu, click **Console**, and then click **Security** under **Service Administration**.

3. On the Security page, select a user from the displayed users or use the Search option to search for and select a user.

You see the groups assigned to the user under the Groups tab in the user details region.

4. Under the Groups tab, select the check box for one or more groups and click **Remove Group**.

# 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse and perform various tasks.

**Topics:**

• Create a Group

• Remove a Group

- • Add Application Roles to a Group
- • Copy Application Roles to a Group
- • Remove Application Roles from a Group
- • Create an Application Role While Mapping
- • Assign Users to a Group
- • Upload and Download User Group Mappings
- • Remove Users from a Group
- • Copy User Mappings to a Group

# Create a Group

As a security administrator, you can create custom groups to meet your business requirements.

You can create custom groups in the following ways:

- • If you created custom groups in Oracle Fusion Cloud Applications, then you can synchronize them into the Oracle Identity Cloud Service instance associated with your Oracle Fusion Analytics Warehouse instance and thereby make them available in Oracle Fusion Analytics Warehouse.

- • You can create them manually in the Oracle Identity Cloud Service instance associated with your Oracle Fusion Analytics Warehouse instance using the Security pages in Oracle Fusion Analytics Warehouse.

1. Sign in to your service.
2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Security** under **Service Administration**.
3. On the Security page, click the Groups tab, and then click **New Group**.
4. In Create a New Group , enter a group name and description.
5. Click **Save**.

# Remove a Group

You can remove only the custom groups. When you remove a custom group, Oracle Fusion Analytics Warehouse removes the associated mappings of the application roles.

1. Sign in to your service.
2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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. Click **Remove Group**.

# Add Application Roles to a Group

As a security administrator, you can map the application roles available for Oracle Fusion Analytics Warehouse 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse, 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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**.

## Assign Users to a Group

When you assign users to a group, you create user memberships for the group. You can assign one or more users to one or more groups.

1. Sign in to your service.

2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Security** under **Service Administration**.

3. On the Security page, click the Groups tab.

4. Search for a group or select from the list of groups displayed under the Groups tab.

5. Click **Assign Users**.

6. In Assign Users, search for a user or select from the list of users displayed in this dialog.

7. Select the check box for one or more users and click **Assign**.

## 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.

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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 the **Actions menu** 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.

## Remove Users from a Group

You can remove one or more users from a group.

1.  Sign in to your service.

2.  In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Security** under **Service Administration**.

3.  On the Security page, click the Groups tab.

4.  Search for a group or select from the list of groups displayed under the Groups tab.

    You see the users assigned to the group under the Users tab in the group details region.

5.  Select the check box for one or more users and click **Remove User**.

## Copy User Mappings to a Group

As a security administrator, you can copy the users mapped to an existing group to a custom group to quickly add users to the new custom group.

1.  Sign in to your service.

2.  In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Security** under **Service Administration**.

3. On the Security page, click the Groups tab.

4. In the Groups list, search for a group or select the group to which you want to copy the users.

5. On the Groups tab, click **Copy User Mappings**.

6. In Copy User Mappings From Another Group, search for a group that you want to copy users from.

7. Under Copy Users, verify all the users who'll be copied to the custom group, and then click **Copy**.

8. Click **Save**.

# 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse deletes the mappings to the groups.

1. Sign in to your service.

2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse removes all users associated with the security assignment.

1. Sign in to your service.

2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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.



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 Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse processes the data and uploads the security assignments as per the FAW_CONTENT_AUTOSYNC_ASSIGNMENT table.

- In Oracle Autonomous Data Warehouse associated with your Oracle Fusion Analytics Warehouse 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;
```

# 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 KPIs and decks with the ready-to-use or the custom-created duty roles.

You secure the subject areas and their elements through "Configure Object Permissions", a ready-to-use single step. See Configure Object Permissions.

For the front-end objects such as KPIs and decks, set the permissions individually for each object by adding the applicable duty role and the corresponding access. See Inspect a KPI and Inspect a Deck.

# 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 are 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.

1. Sign in to your service.

2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 are adding the data security assignment.

   • SEC_OBJ_MEMBER_VAL: The security assignment member for each context. See Security Object Tables.

5. When you are 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 the **Actions menu** 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 5-1    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 |
| 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 5-2    Assignment Member SQL**

| Security Object Code | SQL Code |
| --- | --- |
| OA4F_SEC_CST_COST_ORG_LIST | |
| | 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 <>-99999 |

**Table 5-2    (Cont.) Assignment Member SQL**

| Security Object Code | SQL Code |
| --- | --- |
| OA4F_SEC_FIN_AP_BUSINESSUNIT_LIST | |
| | SELECT TL.ORGANIZATION_NAME AS NAME,TL.ORGANIZATION_ID AS VALUE FROM DW_LEDGER_D L, DW_INTERNAL_ORG_D D, DW_INTERNAL_ORG_D_TL TL, DW_CONTENT_PARAM_CONFIG PARAM 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.PRIMARY_LEDGER = L.LEDGER_NAME AND TO_CHAR(L.LEDGER_ID)=PARAM.PARAMETER_ VALUE AND PARAM.PARAMETER_CODE='PARAM_ERP_FINAN CIALS_LEDGER_ID_LIST_REPORT' AND PARAM.PARAMETER_VALUE<>'ALL' AND D.ORGANIZATION_ID<>-99999<br><br>UNION<br><br>SELECT TL.ORGANIZATION_NAME AS NAME,TL.ORGANIZATION_ID AS VALUE FROM DW_LEDGER_D L, DW_INTERNAL_ORG_D D, DW_INTERNAL_ORG_D_TL TL, DW_CONTENT_PARAM_CONFIG PARAM 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.PRIMARY_LEDGER = L.LEDGER_NAME AND PARAM.PARAMETER_CODE='PARAM_ERP_FINAN CIALS_LEDGER_ID_LIST_REPORT' AND PARAM.PARAMETER_VALUE='ALL' |

**Table 5-2    (Cont.) Assignment Member SQL**

| Security Object Code | SQL Code |
| --- | --- |
| | AND (TO_CHAR(L.LEDGER_CHART_OF_ACCOUNTS_ID) IN (SELECT PARAM.PARAMETER_VALUE FROM DW_CONTENT_PARAM_CONFIG PARAM WHERE PARAM.PARAMETER_CODE='PARAM_ERP_FINANCIALS_CHART_OF_ACCOUNT_ID') <br><br> OR EXISTS (SELECT 1 FROM dw_content_param_config param WHERE param.parameter_code = 'PARAM_ERP_FINANCIALS_CHART_OF_ACCOUNT_ID' AND param.parameter_value = 'ALL') <br> ) <br> AND D.ORGANIZATION_ID<>-99999 <br><br> UNION <br><br> SELECT <br>    tl.organization_name   AS name, <br>    tl.organization_id     AS value <br> FROM <br>    dw_ledger_set_assignments_d assignments, <br>    dw_ledger_d               l, <br>    dw_internal_org_d         d, <br>    dw_internal_org_d_tl      tl, <br>    dw_content_param_config   param <br> WHERE <br>    param.PARAMETER_VALUE = 'ALL' <br>    AND param.parameter_code = 'PARAM_ERP_FINANCIALS_LEDGER_SET_ID_LIST_REPORT' <br>    AND assignments.ledger_id = l.ledger_id <br>    AND d.primary_ledger = l.ledger_name <br>    AND <br> ( d.payables_invoicing_bu_flag = 'Y' OR d.PAYABLES_PAYMENT_BU_FLAG = 'Y' ) <br>    AND d.organization_id = tl.organization_id <br>    AND tl.language = (SELECT PARAMETER_VALUE FROM DW_CONTENT_PARAM_CONFIG WHERE PARAMETER_CODE='PARAM_GLOBAL_FAW_LANGUAGES') <br>    AND |

**Table 5-2    (Cont.) Assignment Member SQL**

| Security Object Code | SQL Code |
|---|---|
| | (TO_CHAR(L.LEDGER_CHART_OF_ACCOUNTS_ID) IN (SELECT PARAM.PARAMETER_VALUE FROM DW_CONTENT_PARAM_CONFIG PARAM WHERE PARAM.PARAMETER_CODE='PARAM_ERP_FINANCIALS_CHART_OF_ACCOUNT_ID')<br><br>            OR EXISTS (SELECT 1 FROM dw_content_param_config param WHERE param.parameter_code = 'PARAM_ERP_FINANCIALS_CHART_OF_ACCOUNT_ID' AND param.parameter_value = 'ALL')<br>        )<br>    AND d.organization_id <> -99999<br><br>UNION<br><br>SELECT<br>    tl.organization_name   AS name,<br>    tl.organization_id     AS value<br>FROM<br>    dw_ledger_set_assignments_d assignments,<br>    dw_ledger_d                l,<br>    dw_internal_org_d          d,<br>    dw_internal_org_d_tl       tl,<br>    dw_content_param_config    param<br>WHERE<br><br>TO_CHAR(assignments.ledger_set_id) = param.parameter_value<br>    AND param.PARAMETER_VALUE <> 'ALL'<br>    AND param.parameter_code = 'PARAM_ERP_FINANCIALS_LEDGER_SET_ID_LIST_REPORT'<br>    AND assignments.ledger_id = l.ledger_id<br>    AND d.primary_ledger = l.ledger_name<br>    AND ( d.payables_invoicing_bu_flag = 'Y' OR d.PAYABLES_PAYMENT_BU_FLAG = 'Y' )<br>    AND d.organization_id = tl.organization_id<br>    AND tl.language = (SELECT PARAMETER_VALUE FROM DW_CONTENT_PARAM_CONFIG WHERE |

**Table 5-2    (Cont.) Assignment Member SQL**

| Security Object Code | SQL Code |
| --- | --- |
| | `PARAMETER_CODE='PARAM_GLOBAL_FAW_LANG`<br>`UAGES')`<br>`    AND d.organization_id <> -99999`<br>`ORDER BY NAME` |

**Table 5-2    (Cont.) Assignment Member SQL**

| Security Object Code | SQL Code |
| --- | --- |
| OA4F_SEC_FIN_AR_BUSINESSUNIT_LIST | |
| | `SELECT`<br>`TL.ORGANIZATION_NAME AS NAME,`<br>`TL.ORGANIZATION_ID AS VALUE`<br>`FROM DW_LEDGER_D L,`<br>`DW_INTERNAL_ORG_D D,`<br>`DW_INTERNAL_ORG_D_TL TL,`<br>`DW_CONTENT_PARAM_CONFIG PARAM`<br>`WHERE (D.BILLING_REVENUE_MNG_BU_FLAG`<br>`= 'Y' OR D.CUSTOMER_PAYMENTS_BU_FLAG`<br>`= 'Y')`<br>`AND  D.ORGANIZATION_ID =`<br>`TL.ORGANIZATION_ID`<br>`AND  TL.LANGUAGE = (SELECT`<br>`PARAMETER_VALUE FROM`<br>`DW_CONTENT_PARAM_CONFIG WHERE`<br>`PARAMETER_CODE='PARAM_GLOBAL_FAW_LANG`<br>`UAGES')`<br>`AND  D.PRIMARY_LEDGER = L.LEDGER_NAME`<br>`AND`<br>`TO_CHAR(L.LEDGER_ID)=PARAM.PARAMETER_`<br>`VALUE`<br>`AND`<br>`PARAM.PARAMETER_CODE='PARAM_ERP_FINAN`<br>`CIALS_LEDGER_ID_LIST_REPORT' AND`<br>`PARAM.PARAMETER_VALUE<>'ALL'`<br>`AND D.ORGANIZATION_ID<>-99999`<br><br>`UNION`<br><br>`SELECT`<br>`TL.ORGANIZATION_NAME AS NAME,`<br>`TL.ORGANIZATION_ID AS VALUE`<br>`FROM DW_LEDGER_D L,`<br>`DW_INTERNAL_ORG_D D,`<br>`DW_INTERNAL_ORG_D_TL TL,`<br>`DW_CONTENT_PARAM_CONFIG PARAM`<br>`WHERE (D.BILLING_REVENUE_MNG_BU_FLAG`<br>`= 'Y' OR D.CUSTOMER_PAYMENTS_BU_FLAG`<br>`= 'Y')`<br>`AND  D.ORGANIZATION_ID =`<br>`TL.ORGANIZATION_ID`<br>`AND  TL.LANGUAGE = (SELECT`<br>`PARAMETER_VALUE FROM`<br>`DW_CONTENT_PARAM_CONFIG WHERE`<br>`PARAMETER_CODE='PARAM_GLOBAL_FAW_LANG`<br>`UAGES')`<br>`AND  D.PRIMARY_LEDGER = L.LEDGER_NAME`<br>`AND` |

**Table 5-2    (Cont.) Assignment Member SQL**

| Security Object Code | SQL Code |
| --- | --- |
| | ```<br>PARAM.PARAMETER_CODE='PARAM_ERP_FINAN<br>CIALS_LEDGER_ID_LIST_REPORT' AND<br>PARAM.PARAMETER_VALUE='ALL'<br>AND<br>(TO_CHAR(L.LEDGER_CHART_OF_ACCOUNTS_I<br>D) IN (SELECT PARAM.PARAMETER_VALUE<br>FROM DW_CONTENT_PARAM_CONFIG PARAM<br>WHERE<br>PARAM.PARAMETER_CODE='PARAM_ERP_FINAN<br>CIALS_CHART_OF_ACCOUNT_ID')<br>     OR EXISTS (SELECT 1 FROM<br>dw_content_param_config param WHERE<br>param.parameter_code =<br>'PARAM_ERP_FINANCIALS_CHART_OF_ACCOUN<br>T_ID' AND param.parameter_value =<br>'ALL')<br>     )<br>AND D.ORGANIZATION_ID<>-99999<br><br>UNION<br><br>SELECT<br>    tl.organization_name   AS name,<br>    tl.organization_id     AS value<br>FROM<br>    dw_ledger_set_assignments_d<br>assignments,<br>    dw_ledger_d               l,<br>    dw_internal_org_d         d,<br>    dw_internal_org_d_tl      tl,<br>    dw_content_param_config   param<br>WHERE<br>    param.parameter_code =<br>'PARAM_ERP_FINANCIALS_LEDGER_SET_ID_L<br>IST_REPORT'<br>    AND param.PARAMETER_VALUE = 'ALL'<br>    AND assignments.ledger_id =<br>l.ledger_id<br>    AND d.primary_ledger =<br>l.ledger_name<br><br>AND( d.billing_revenue_mng_bu_flag =<br>'Y' OR d.CUSTOMER_PAYMENTS_BU_FLAG =<br>'Y' )<br>    AND d.organization_id =<br>tl.organization_id<br>    AND tl.language = (SELECT<br>PARAMETER_VALUE FROM<br>``` |

**Table 5-2    (Cont.) Assignment Member SQL**

| Security Object Code | SQL Code |
| --- | --- |
| | DW_CONTENT_PARAM_CONFIG WHERE PARAMETER_CODE='PARAM_GLOBAL_FAW_LANG UAGES')<br>    AND (TO_CHAR(L.LEDGER_CHART_OF_ACCOUNTS_I D) IN (SELECT PARAM.PARAMETER_VALUE FROM DW_CONTENT_PARAM_CONFIG PARAM WHERE PARAM.PARAMETER_CODE='PARAM_ERP_FINAN CIALS_CHART_OF_ACCOUNT_ID')<br>        OR EXISTS (SELECT 1 FROM dw_content_param_config param WHERE param.parameter_code = 'PARAM_ERP_FINANCIALS_CHART_OF_ACCOUN T_ID' AND param.parameter_value = 'ALL')<br>        )<br>    AND  d.organization_id <> -99999<br><br>UNION<br><br>SELECT<br>    tl.organization_name    AS name,<br>    tl.organization_id      AS value<br>FROM<br>    dw_ledger_set_assignments_d assignments,<br>    dw_ledger_d              l,<br>    dw_internal_org_d        d,<br>    dw_internal_org_d_tl     tl,<br>    dw_content_param_config  param<br>WHERE<br><br>TO_CHAR(assignments.ledger_set_id) = param.parameter_value<br>    AND param.parameter_code = 'PARAM_ERP_FINANCIALS_LEDGER_SET_ID_L IST_REPORT'<br>    AND param.PARAMETER_VALUE <> 'ALL'<br>    AND assignments.ledger_id = l.ledger_id<br>    AND d.primary_ledger = l.ledger_name<br><br>AND( d.billing_revenue_mng_bu_flag = 'Y' OR d.CUSTOMER_PAYMENTS_BU_FLAG = 'Y' ) |

**Table 5-2    (Cont.) Assignment Member SQL**

| Security Object Code | SQL Code |
| --- | --- |
| | ```
    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 <> -99999
ORDER BY NAME
``` |
| OA4F_SEC_FIN_FA_ASSET_BOOK_LIST | ```
SELECT
BOOK_TYPE_CODE AS name,
BOOK_TYPE_CODE AS value
FROM
DW_FA_BOOK_CONTROLS_D
``` |

**Table 5-2    (Cont.) Assignment Member SQL**

| Security Object Code | SQL Code |
| --- | --- |
| OA4F_SEC_FIN_LEDGER_LIST | |

```
SELECT ledger.ledger_name   AS name,
       ledger.ledger_id    AS value
  FROM dw_ledger_d ledger,
       dw_content_param_config param
 WHERE param.parameter_code =
'PARAM_ERP_FINANCIALS_LEDGER_ID_LIST_
REPORT'
   AND param.parameter_value = 'ALL'
   AND
( TO_CHAR(ledger.ledger_chart_of_acco
unts_id) IN (SELECT
param.parameter_value FROM
dw_content_param_config param WHERE
param.parameter_code =
'PARAM_ERP_FINANCIALS_CHART_OF_ACCOUN
T_ID')
         OR  EXISTS (SELECT 1 FROM
dw_content_param_config param WHERE
param.parameter_code =
'PARAM_ERP_FINANCIALS_CHART_OF_ACCOUN
T_ID' AND param.parameter_value =
'ALL') )
     AND ledger.ledger_id <> - 99999
UNION
SELECT ledger.ledger_name   AS name,
       ledger.ledger_id    AS value
  FROM dw_ledger_d ledger,
       dw_content_param_config param
 WHERE TO_CHAR(ledger.ledger_id) =
param.parameter_value
   AND param.parameter_code =
'PARAM_ERP_FINANCIALS_LEDGER_ID_LIST_
REPORT'
   AND param.parameter_value <> 'ALL'
   AND
( TO_CHAR(ledger.ledger_chart_of_acco
unts_id) IN (SELECT
param.parameter_value FROM
dw_content_param_config param  WHERE
param.parameter_code =
'PARAM_ERP_FINANCIALS_CHART_OF_ACCOUN
T_ID')
       OR EXISTS (SELECT 1 FROM
dw_content_param_config param WHERE
param.parameter_code =
'PARAM_ERP_FINANCIALS_CHART_OF_ACCOUN
T_ID' AND param.parameter_value =
'ALL')  )
```

**Table 5-2 (Cont.) Assignment Member SQL**

| Security Object Code | SQL Code |
|---|---|
| | ```
      AND ledger.ledger_id <> - 99999
UNION
SELECT ledger.ledger_name   AS name,
       ledger.ledger_id     AS value
  FROM dw_ledger_set_d ledgerset,
       dw_content_param_config param,
       dw_ledger_set_assignments_d
assignments,
       dw_ledger_d ledger
 WHERE ledgerset.ledger_set_id =
assignments.ledger_set_id
   AND assignments.ledger_id =
ledger.ledger_id
   AND param.parameter_code =
'PARAM_ERP_FINANCIALS_LEDGER_SET_ID_L
IST_REPORT'
   AND param.parameter_value = 'ALL'
   AND
( TO_CHAR(ledger.ledger_chart_of_acco
unts_id) IN (SELECT
param.parameter_value FROM
dw_content_param_config param WHERE
param.parameter_code =
'PARAM_ERP_FINANCIALS_CHART_OF_ACCOUN
T_ID')
         OR EXISTS (SELECT 1 FROM
dw_content_param_config param WHERE
param.parameter_code =
'PARAM_ERP_FINANCIALS_CHART_OF_ACCOUN
T_ID' AND param.parameter_value =
'ALL') )
    AND ledgerset.ledger_set_id <> -
99999 AND ledger.ledger_id <> - 99999
UNION
SELECT ledger.ledger_name   AS name,
       ledger.ledger_id     AS value
  FROM dw_ledger_set_d ledgerset,
       dw_content_param_config param,
       dw_ledger_set_assignments_d
assignments,
       dw_ledger_d ledger
 WHERE
TO_CHAR(ledgerset.ledger_set_id) =
param.parameter_value
   AND ledgerset.ledger_set_id =
assignments.ledger_set_id
   AND assignments.ledger_id =
ledger.ledger_id
``` |

**Table 5-2    (Cont.) Assignment Member SQL**

| Security Object Code | SQL Code |
| --- | --- |
| | ```<br>    AND param.parameter_code =<br>'PARAM_ERP_FINANCIALS_LEDGER_SET_ID_L<br>IST_REPORT'<br>    AND param.parameter_value <> 'ALL'<br>    AND<br>( TO_CHAR(ledger.ledger_chart_of_acco<br>unts_id) IN (SELECT<br>param.parameter_value FROM<br>dw_content_param_config param WHERE<br>param.parameter_code =<br>'PARAM_ERP_FINANCIALS_CHART_OF_ACCOUN<br>T_ID')<br>        OR EXISTS (SELECT 1 FROM<br>dw_content_param_config param WHERE<br>param.parameter_code =<br>'PARAM_ERP_FINANCIALS_CHART_OF_ACCOUN<br>T_ID' AND param.parameter_value =<br>'ALL') )<br>    AND ledgerset.ledger_set_id <> -<br>99999 AND ledger.ledger_id <> - 99999<br>``` |
| OA4F_SEC_HCM_BUSINESSUNIT_LIST | ```<br>SELECT TL.BUSINESS_UNIT_NAME AS NAME,<br>TL.BUSINESS_UNIT_ID AS VALUE<br>FROM DW_BUSINESS_UNIT_D_TL TL<br>WHERE TL.LANGUAGE =   (SELECT<br>PARAMETER_VALUE FROM<br>DW_CONTENT_PARAM_CONFIG WHERE<br>PARAMETER_CODE='PARAM_GLOBAL_FAW_LANG<br>UAGES')<br>``` |
| OA4F_SEC_HCM_COUNTRY_LIST | ```<br>SELECT TL.COUNTRY_NAME AS NAME,<br>TL.COUNTRY AS VALUE<br>FROM DW_COUNTRY_D_TL TL WHERE<br>TL.LANGUAGE = (SELECT<br>PARAMETER_VALUE FROM<br>DW_CONTENT_PARAM_CONFIG WHERE<br>PARAMETER_CODE='PARAM_GLOBAL_FAW_LANG<br>UAGES')<br>``` |

**Table 5-2    (Cont.) Assignment Member SQL**

| Security Object Code | SQL Code |
| --- | --- |
| OA4F_SEC_HCM_DEPARTMENT_LIST | 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') |
| OA4F_SEC_HCM_LEGAL_EMPLOYER_LIST | 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') |
| OA4F_SEC_HCM_SEE_SELF_RECORD | 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') |
| OA4F_SEC_INV_BUSINESSUNIT_LIST | 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 <> '-99999' |

**ORACLE**

**Table 5-2    (Cont.) Assignment Member SQL**

| Security Object Code | SQL Code |
| --- | --- |
| OA4F_SEC_INV_ORG_TRANSACTIONS_LIST | 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 <> '-99999' |
| OA4F_SEC_OM_BUSINESS_UNIT_LIST | 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<>-99999 |
| OA4F_SEC_PPM_EXPENDITURE_BUSINESSU NIT_LIST | 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<>-99999 |

**Table 5-2    (Cont.) Assignment Member SQL**

| Security Object Code | SQL Code |
| --- | --- |
| OA4F_SEC_PPM_PROJECT_BUSINESSUNIT_LIST | SELECT<br>TL.ORGANIZATION_NAME AS NAME,<br>TL.ORGANIZATION_ID AS VALUE<br>FROM<br>DW_INTERNAL_ORG_D D,<br>DW_INTERNAL_ORG_D_TL TL<br>WHERE (D.PROJECT_ACCOUNTING_BU_FLAG<br>= 'Y' AND D.BUSINESS_UNIT_FLAG = 'Y')<br>AND  D.ORGANIZATION_ID =<br>TL.ORGANIZATION_ID<br>AND  TL.LANGUAGE = USERENV('LANG')<br>AND D.ORGANIZATION_ID<>-99999 |
| OA4F_SEC_PPM_PROJECT_ORGANIZATION_LIST | SELECT<br>TL.ORGANIZATION_NAME AS NAME,<br>TL.ORGANIZATION_ID AS VALUE<br>FROM<br>DW_INTERNAL_ORG_D D,<br>DW_INTERNAL_ORG_D_TL TL<br>WHERE (D.PROJECT_ORGANIZATION_FLAG<br>= 'Y' )<br>AND  D.ORGANIZATION_ID =<br>TL.ORGANIZATION_ID<br>AND  TL.LANGUAGE = USERENV('LANG')<br>AND D.ORGANIZATION_ID<>-99999 |
| OA4F_SEC_PROC_REQ_BUSINESSUNIT_LIST | SELECT<br>TL.ORGANIZATION_NAME AS NAME,<br>TL.ORGANIZATION_ID AS VALUE<br>FROM<br>DW_INTERNAL_ORG_D D,<br>DW_INTERNAL_ORG_D_TL TL<br>WHERE (D.REQUISITION_BU_FLAG  = 'Y'<br>AND D.BUSINESS_UNIT_FLAG = 'Y')<br>AND  D.ORGANIZATION_ID =<br>TL.ORGANIZATION_ID<br>AND  TL.LANGUAGE = (SELECT<br>PARAMETER_VALUE FROM<br>DW_CONTENT_PARAM_CONFIG WHERE<br>PARAMETER_CODE='PARAM_GLOBAL_FAW_LANG<br>UAGES')<br>AND D.ORGANIZATION_ID<>-99999 |

**Table 5-2    (Cont.) Assignment Member SQL**

| Security Object Code | SQL Code |
|---|---|
| OA4F_SEC_PROC_SPEND_PRC_BUSINESSUNIT_LIST | `SELECT`<br>`TL.ORGANIZATION_NAME AS NAME,`<br>`TL.ORGANIZATION_ID AS VALUE`<br>`FROM`<br>`DW_INTERNAL_ORG_D D,`<br>`DW_INTERNAL_ORG_D_TL TL`<br>`WHERE (D.PROCUREMENT_BU_FLAG = 'Y'`<br>`AND D.BUSINESS_UNIT_FLAG = 'Y')`<br>`AND  D.ORGANIZATION_ID =`<br>`TL.ORGANIZATION_ID`<br>`AND  TL.LANGUAGE = (SELECT`<br>`PARAMETER_VALUE FROM`<br>`DW_CONTENT_PARAM_CONFIG WHERE`<br>`PARAMETER_CODE='PARAM_GLOBAL_FAW_LANG`<br>`UAGES')`<br>`AND D.ORGANIZATION_ID<>-99999` |

# 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 are 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 are 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 the **Actions menu** 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 are 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 are 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 the **Actions menu** 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.

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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 the **Actions menu** 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 Analytics Warehouse 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 ready-to-use 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 Analytics Warehouse 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 ready-to-use 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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**.



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 the **Actions** menu 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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.



4. Unzip the DataSecurityExclusionAssignments_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 Exclude Assignments** in **File Type**.

**Upload a File**

File Type  | Data Security Exclude Assignments  ▼ |

◉ Merge to the existing settings

○ Replace existing configuration settings

Upload a .csv file

**Drag and Drop**
Select a file or drop one here.

Cancel    Upload File

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 the **Actions** menu 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 Analytics Warehouse uses the mappings to apply the security assignments to the applicable Oracle Fusion Cloud Applications users in Oracle Fusion Analytics Warehouse during the automatic synchronization of the data security assignment configurations between Oracle Fusion Cloud Applications and Oracle Fusion Analytics Warehouse.

During the next data pipeline run, Oracle Fusion Analytics Warehouse applies this mappings.

> ✎ **Note:**
>
> **Replace existing configuration settings** deletes the existing custom role mappings.

1. Sign in to your service.

2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Uploads** under Application Administration.

3. 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.



4. Unzip the CustomRoleMapping_csv file you downloaded and create the mapping by entering the Oracle Fusion Cloud Applications jobe role in the FA_JOB_ROLE column and a corresponding Oracle Fusion Analytics Warehouse data or duty role in the FAW_ROLE column.

   When you are done updating the file, save your changes.

5. On the Uploads page, click **Upload File** and select **Custom Job Roles Mapping** in **File Type**.



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 the **Actions** menu 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. See Create a Group

- 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 Analytics Warehouse. Ensure that you are signed into Cloud Customer Connect prior to viewing this document.

# 6

# Customize Oracle Fusion Analytics Warehouse

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 create, configure, and assign custom groups to users. See Assign Users to a Group and Assign Groups to Users.

**Topics:**

- About Semantic Model Customization
- About Best Practices 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

# 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 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.

You can customize the model by extending ready-to-use dimensions with additional attributes from another data source, by adding a fact to an existing subject area, and by reorganizing the ready-to-use subject areas to create a new subject area to name a few.

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.

- 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.

# About Best Practices and Tips to Extend the Semantic Model

Before extending your semantic model, review the best practices 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

Best practices 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.

Best practices 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 Analytics Warehouse 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.

Best practice while extending a dimension is to 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. Combining the extensions into one database object and then defining all extensions using one step is highly recommended.

Best practice while adding a fact is to always set the content levels for the custom dimensions that are joining to the custom fact.

# 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 the **Actions menu**.

   You see the actions that are applicable to the branch.

5. From the **Actions menu**, 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 ready-to-use 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 is defined in Oracle Fusion Analytics Warehouse 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'
    ```

    d. Click Preview Data to view the data that is returned by the SQL query.

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 ready-to-use dimensions with additional attributes from another data source.

1. Sign in to your service.

2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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.

    b. In the Hierarchy Level-Based Aggregation dialog, select the dimension, level, and then click **OK**.

    c. Click **Add Dimension** to add more dimensions.

13. Click **Next**.

14. Optional: Select additional subject areas to add the fact.

15. 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.

## Create a Subject Area

You can create a subject area as a container and later add dimensions and facts to your new subject area or create a subject area based on an existing one.

1. Sign in to your service.

2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 **Create a Subject Area**.

   You see the wizard sequence to create a subject area.

7. In step 1 of the wizard, enter a name for your customization step, for example, `Custom Profitability` and add a brief description.

8. Create a subject area using one of the methods:

   a. Select **Create a Subject Area** to create a subject area container, provide a name, add a description, and then click **Next**. You see step 4 of the wizard. Click **Finish** to create the subject area.

   b. Select **Create a Subject Area based on an existing one** to create a subject area using an existing one in the system and provide these details:

      i. Select an existing subject area, name your subject area, and then click **Next**.

      ii. In step 2 of the wizard, select the data elements that you want in your new subject area.

      iii. Click **Add Subject Area** to select and add data elements from multiple subject areas.

      iv. In step 3 of the wizard, organize and rename the data elements in your new subject area.

      v. Click **Next**.

      vi. In step 4 of the wizard, review your new subject area and click **Finish** to create it.

   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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 an 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 the **Actions menu**.

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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 the **Actions menu**.

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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 the **Actions menu**.

5. From the **Actions menu**, 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 it's 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 the **Actions menu** and then click **View Details**.

9. On the Main branch details page, hover over a step to view the **Actions menu** 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 the **Actions menu** 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 ready-to-use and custom duty and data type of application roles.

1. Sign in to your service.

2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 ready-to-use "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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 are viewing the presentation objects, then expand the subject area folders and double-click the objects. If you are 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 Analytics Warehouse 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 Analytics Warehouse.

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 ready-to-use 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 KPIs and decks, set the permissions individually for each object by adding the applicable duty role and the corresponding access. See Inspect a KPI and Inspect a Deck.

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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 ready-to-use object permissions-related step.

4.  In the Security Configurations region, search for the ready-to-use "Configure Object Permissions", and hover over it to view the Actions menu, 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.

1.  Sign in to your service.

2.  In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 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 Analytics Warehouse 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 Analytics Warehouse excludes them at the time of publishing the model.

1. Sign in to your service.

2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse 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 Analytics Warehouse instance. See Create an Oracle Fusion Analytics Warehouse Subscription Instance .

1. Connect to the autonomous data warehouse corresponding to your Oracle Fusion Analytics Warehouse 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 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 Analytics Warehouse removes the customizations in the target instance and overwrites it with the one from the source instance.

1. Sign in to your service.

2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 KPIs or click **Choose KPIs**, search for and select the customized KPIs that you want to promote, and then click **OK**.

   > **Note:**
   >
   > If you delete a KPI from the development instance that was previously promoted to the production instance and you later use the **Promote All** option to promote all the KPIs to the production instance, then you need to explicitly delete the "applicable" KPI from the production instance. For example, if you had promoted KPIs A, B, and C and later deleted KPI B in the development instance and again promoted using the **Promote All** option, then Oracle Fusion Analytics Warehouse promotes only A and C without deleting KPI B in the production instance. You must explicitly delete KPI 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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.

# 7
# Manage Oracle Fusion Analytics Warehouse

As the cloud account administrator with the functional administrator or system administrator application role, you can manage your Oracle Fusion Analytics Warehouse 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

## 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

## 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. 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.

The application upgrade adds new pillars, modules, data models (facts and dimension tables), KPIs, cards, and decks. 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.

See About Oracle Fusion Analytics Warehouse Releases.

## Update Your Application

As the service administrator, you can view available application updates and schedule a date to accept the update.

Oracle Fusion Analytics Warehouse 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.

1.  Sign in to your service.

2.  In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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**.

# Bundle Your Application Artifacts

As a service administrator, you can manage snapshots of your application artifacts as 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](#)

# About Bundles

Bundles are snapshots of your application artifacts such as configurations and customizations at a certain point in time.

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, report parameters, activation metadata, and data augmentations. You can install this bundle in an existing environment after a hard data reset. This is useful to leave content as-is and reset data pipeline.

- Semantic Model bundle: This includes main branch, tags, custom branch, duty and data roles for semantic extension.

- Security bundle: This includes custom groups, custom application roles, and custom security.

- Content bundle: This includes snapshots of Oracle Analytics Cloud folders, projects, dataset definitions, KPIs, decks, and duty roles for content. 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 since they depend on data.

## 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.

1. Sign in to your service.

2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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.



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 applicable Oracle Analytics Cloud content, decks, and KPIs using the corresponding toggles and buttons.

- For a data config bundle, select the **Include all data configuration settings** check box or select applicable modules and augmentations using the corresponding toggles and buttons.



- For a semantic extensions bundle, select the **Include all semantic extensions** check box, or select the **Publish a branch or tag in the target environment** check box and select the applicable option from the dropdown list, or select applicable tags and branches using the corresponding toggles and buttons.

- For a security bundle, select the **Include all security settings** check box or select either the groups or application roles or both using the corresponding toggles and buttons.



- For an environment bundle, provide a name.

- For a composite bundle, select any of the other bundles.



## 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 take to different instances.

1. Sign in to your service.

2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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.

1. Sign in to your service.

2. In Oracle Fusion Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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.



5. Click **Import**.

# Deploy a Bundle

You can deploy a generated bundle in the target environment to revert to state of artifacts represented by the bundle. Oracle Fusion Analytics Warehouse 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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**.

# View 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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then click **Bundles** under **Application Administration**.

3. On the Bundles page, click the **Activity** tab.

# Configure a Virus Scanner

To keep Oracle Fusion Analytics Warehouse 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 Analytics Warehouse.

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 Analytics Warehouse, open the **Navigator** menu, click **Console**, and then 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 Analytics Warehouse relies on Oracle Autonomous Data Warehouse as the data store and Oracle Analytics Cloud for it's 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 Analytics Warehouse doesn't have the ability to use the Oracle Analytics Cloud snapshots. Use Bundles to backup Oracle Analytics Cloud artifacts and Oracle Fusion Analytics Warehouse customizations and configurations. For example, you can export an Oracle Fusion Analytics Warehouse 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 Analytics Warehouse environment and deploy it. See Bundle Your Application Artifacts.

# About Disaster Recovery

Oracle Fusion Analytics Warehouse is built upon Oracle Cloud Infrastructure and leverages the Oracle PaaS services for disaster recovery.

For the Oracle Fusion Analytics Warehouse ready-to-use content, you can provision a fresh Oracle Fusion Analytics Warehouse environment with the latest software and perform the data activation steps. Oracle Fusion Cloud Applications provides the data

for Oracle Fusion Analytics Warehouse. Use a data reset to populate Oracle Fusion Analytics Warehouse with historical data from the Oracle Fusion Cloud Applications source at any time. Customizations to Oracle Fusion Analytics Warehouse 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 Analytics Warehouse subscription and provision it in a region other than production Oracle Fusion Analytics Warehouse. 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 Analytics Warehouse 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.

# 8

# Troubleshooting

**When I log in, Oracle Fusion Analytics Warehouse doesn't load properly.**

When you log out, be sure to close all Oracle Fusion Analytics Warehouse sessions and close your browser before logging in as another user. You can have one session of Oracle Fusion Analytics Warehouse 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 Analytics Warehouse 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 Analytics Warehouse 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, you must:

1. Reset the warehouse.

2. Activate the functional areas.

3. Ensure that the Oracle Fusion Cloud Applications password is accurate for the Oracle Fusion Analytics Warehouse instance. Typically the password gets replaced in Oracle Fusion Cloud Applications after the production to test refresh.