Oracle® Cloud

Using Oracle Fusion Analytics Warehouse

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Oracle Cloud Using Oracle Fusion Analytics Warehouse,

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Preface

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Audience

This document is intended for Oracle Fusion Analytics Warehouse consumers and authors using the Services to run a business.

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

- Get Started with 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.

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Get Started with Oracle Fusion Analytics Warehouse

Learn how to get started with KPIs, cards, decks, data, and projects.

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Topics:

- About Oracle Fusion Analytics Warehouse
- About Users and Security
- About Groups
- About Favorites

About Oracle Fusion Analytics Warehouse

Oracle Fusion Analytics Warehouse empowers customers with industry-leading, AI-powered, self-service analytics capabilities for data preparation, visualization, enterprise reporting, augmented analysis, and natural language processing.

Learn About the New Oracle Fusion Analytics Warehouse Experience

To streamline your data analysis, the user experience for Oracle Fusion Analytics Warehouse has merged with Oracle Analytics Cloud. For example, KPIs have transitioned to key metrics, and cards and decks have migrated to workbooks in Oracle Analytics Cloud.
The alignment of consumer- and author-oriented experiences provide these benefits:

- Flexibility for building dashboards.

- A consolidated home page and catalog experience for all the ready-to-use and custom application content.

- An integrated mobile experience through the Oracle Analytics Mobile applications.

If your organization provisioned Oracle Fusion Analytics Warehouse as of Platform Release 23.R3, you work with your business user content exclusively in Oracle Analytics Cloud. The URLs for your service are *servername*/ui/oax/ for the administration console and *servername*/ui/dv/ for Oracle Analytics Cloud business user application content. Depending on the tasks you want to accomplish, you can learn more in these topics:

- Get Started with Data Visualization

- Get Started with Analyses and Dashboards

- Get Started with Data Modeling

- Get Started with Key Metrics

If your organization provisioned Oracle Fusion Analytics Warehouse before Platform Release 23.R3, you've worked with your content as described in this publication (*Using Oracle Fusion Analytics Warehouse*). The URLs for your service are *servername*/ui/oax/ for custom decks,

KPIs, and the administration console, and *servername*`/ui/dv/` for Oracle Analytics Cloud business user application content. You can also use features of Oracle Analytics Cloud as described in these topics:

- Get Started with Data Visualization

- Get Started with Analyses and Dashboards

- Get Started with Data Modeling

- Get Started with Key Metrics

Access to both of these experiences will be available for a limited period, to allow you to migrate the existing KPIs, cards, and decks either by recreating them manually in Oracle Analytics Cloud or using the migration utility on the console that's available to administrators. After your administrator migrates data and content, you'll work exclusively in Oracle Analytics Cloud. KPIs, cards, and decks are planned to be deprecated and removed from the product in a future release. Administrators can use the migration utility to translate custom KPIs to key metrics and custom cards and to workbooks. To learn more about using the Migration Utility, see About Migrating Custom Content. To learn about building Overview and Detail Dashboards Oracle Analytics Cloud, see Build Analytical Applications.

Oracle Fusion Analytics Warehouse is a Cloud application that delivers best-practice key performance indicators (KPIs) and deep analyses to help decision-makers run their business. Packaged analytics applications start with Oracle Fusion Cloud Applications, and can be deployed rapidly, personalized, and extended. Oracle Fusion Analytics Warehouse is built on top of Oracle Analytics Cloud, and is powered by Oracle Autonomous Data Warehouse.

Oracle Fusion Analytics Warehouse spans data pipelining, data warehousing (using Autonomous Data Warehouse), semantic models, and curated content including prebuilt KPIs, dashboards, and detailed analyses. Oracle Fusion Analytics Warehouse supports new and extended content by providing a layer of data personalization and extensions using well-defined interfaces. Because Oracle Fusion Analytics Warehouse is a Cloud offering, Oracle fully manages the service from deployment and performance tuning, to upgrades and maintenance.

Oracle Fusion Analytics Warehouse is based on the real-world notions of KPIs, cards, and decks, and provides a collaborative experience optimized for executives and decision-makers. Business analysts can extend Oracle Fusion Analytics Warehouse using the intuitive KPI editor, as well as Oracle Analytics Cloud features to author new visualizations, reports, and dashboards. These analytics, whether new or prebuilt, work alongside KPIs, cards, and decks for a comprehensive data analysis experience.
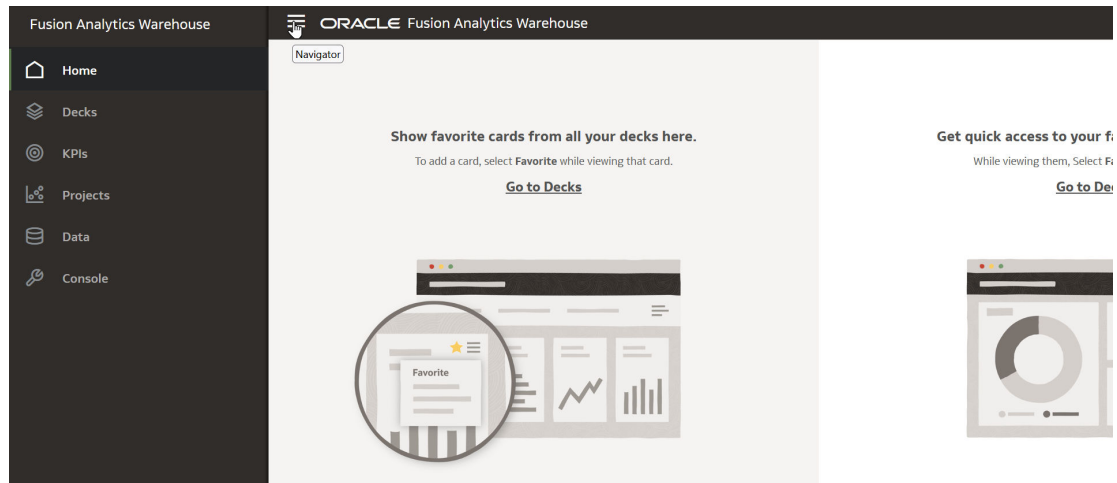
About Users and Security

Data sourced from Oracle Fusion Analytics Warehouse is secured by job role, which allocates what each user can and can't do within the application.

About Job Roles

The application administrator can assign job roles to users. Each job role is designed to allow individual users to perform the tasks they need to do while enforcing restrictions to areas of the application that users don't need access to. There are administrative roles behind the scenes, however from a business user's perspective there are two job roles:

Consumer

- Can view pre-configured data objects such as KPIs, cards, and decks

- Can create and manipulate new or copies of pre-configured decks and cards

Author

- Can perform all Consumer functions

- Can create new Oracle Analytics Cloud content

- Can create and manipulate all datasets, data objects, and KPIs

- Can create and manipulate decks and cards created by others

About Security

Object-level security controls the visibility to business logical objects based on a user's duty role. You can set up object-level security for web objects, such as dashboards, KPIs, visualizations, and so on, and for metadata repository objects, such as business models and subject areas (for custom duty roles).

Data-level security controls the visibility of data (content rendered in visualizations, cards, dashboards, and so on) based on the user's association to data in Oracle Fusion Analytics Warehouse. The same card, visualization, or analysis, when run by two different users, can bring up different data. However, the structure of the card, visualization, or analysis is the same for all users, unless a user doesn't have access to the subject area the card, visualization, or analysis is based on, in which case the report displays 'You don't have permission to access this card. Please contact the admin.'

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.

About Favorites

Mark reports, cards, and decks as favorites to add them to the Home page and display the favorite star in other views.

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You can add content from anywhere within the application to the Home page by marking it as a favorite. The Home page doesn't include any favorite content by default.

Favorite cards show some information about the card, and clicking the favorite card launches the card's deck. Favorite projects, dashboards, and analyses show a link to the main content, and clicking the favorite object launches the report.

Mark a Card as a Favorite

You can mark a card a favorite so that it appears on the Home page by default.

1. On the card, select **Favorite** from the menu or click the star icon.

2. To remove the favorite designation, select **Unfavorite** from the card menu or click the star icon.\
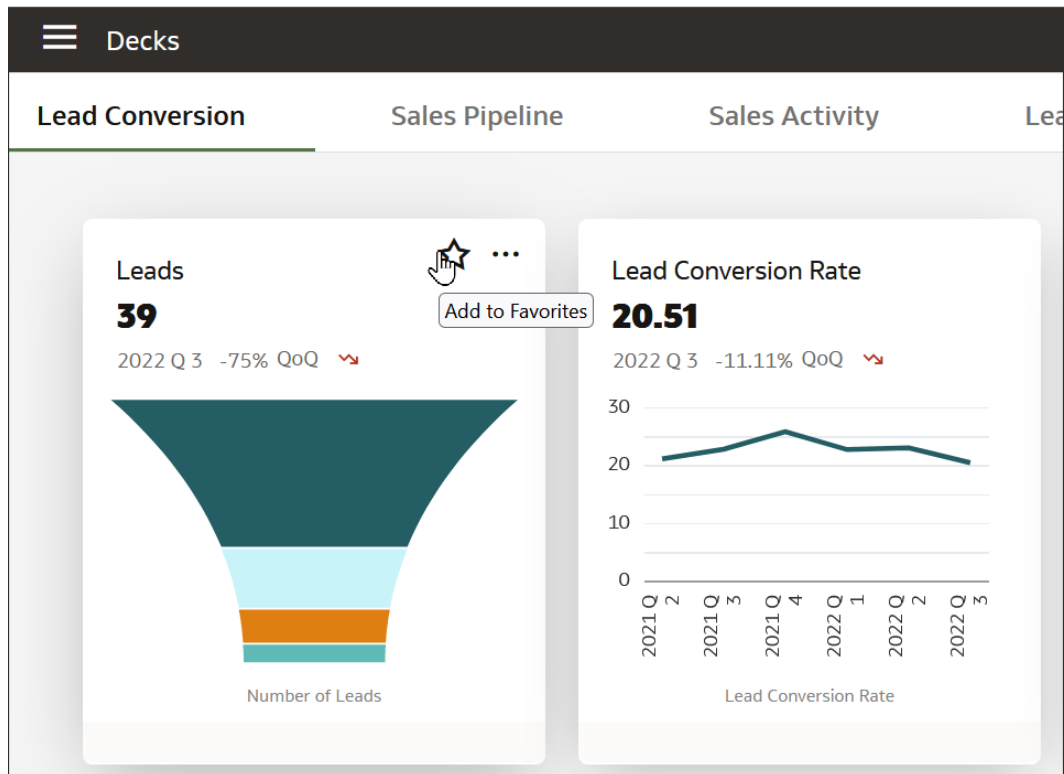
Mark a Workbook as a Favorite

You can mark a workbook a favorite so that it appears on the Home page by default.

1. On the workbook page, select **Favorite** from the menu or click the star icon.

2. To remove the favorite designation, select **Unfavorite** from the menu or click the star icon.
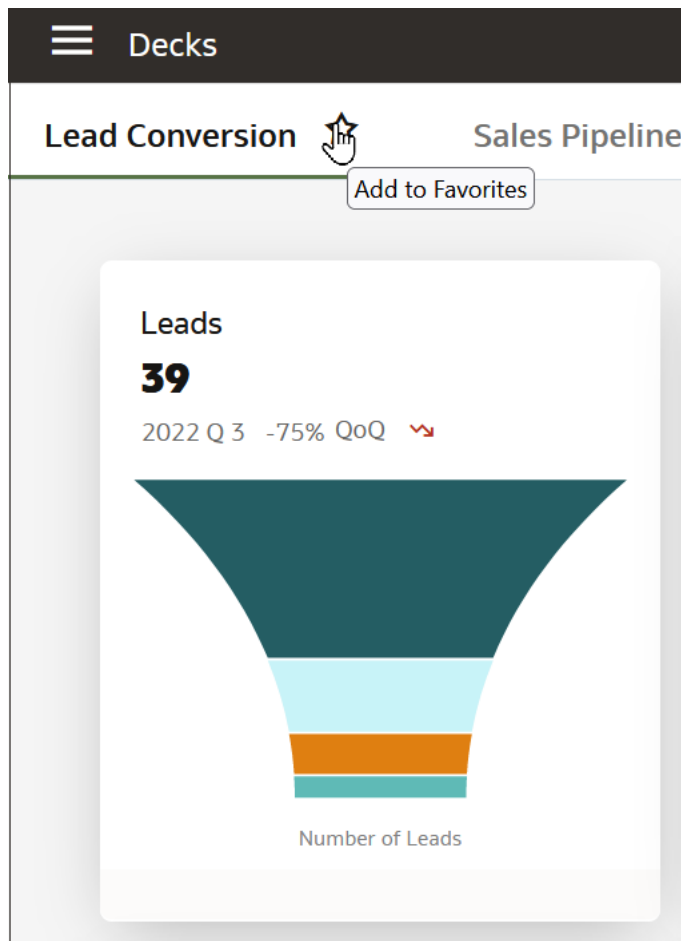
Mark Embedded Content as a Favorite

You can mark embedded content such as a project, dashboard, or analysis as a favorite so that it appears on the Home page by default.

1. On the project, dashboard, or analysis, select **Favorite** from the menu or click the star icon.

2. To remove the favorite designation, select **Unfavorite** from the content menu or click the star icon.

2
Get Started with Key Metrics, KPIs, Cards, and Decks

Key metrics, visualizations, and workbooks comprise the organization structure for your data analysis and presentation.

Topics:

Get Started with Key Metrics

Key metrics help you analyze your data to create better performance against your business goals.

Key metrics are associated with datasets and subject areas to allow you to study business performance consistently across multiple sets of analyses.

Topics:

About Key Metrics

Key metrics are a logical relationship of a measure and the semantics of that measure to create a key performance indicator (KPI) in a dataset or subject area.

Key metrics are associated with and follow the dataset or subject area so they're available to all users of that data. You can apply key metric expressions to the reference columns in a dataset or single subject area. You can drag and drop measures from the Data Panel to the calculation area to build the key metric, and add related columns of measures, dimensions, or attributes based on the key metric to glean details about the key metric itself. When you apply a key metric, it behaves just like any other measure.

Key metrics provide useful insights to your data that dynamically update as the data changes. By using key metrics, you can study details around KPIs to more definitively determine how to adjust business practices and achieve your business goals.

When you add conditional formatting to key metrics, you can visually highlight the changes in your measures in your analytic visualizations. You can apply conditional formatting to any

columns within the key metric, or you can apply conditional formatting to the dataset or subject area the key metric is attached to. If you have a group of related subject areas, each subject area can have its own set of key metrics. Because the conditional formatting is applied to the key metric itself, you always see consistent and up-to-date visualizations of your business goals.

You can search for key metrics just like subject area measures or columns, however you can't search for the related columns key metrics.

Key Metrics Limitations

- Key metrics can include other key metrics in expressions when they're within the same top-level key metric. For example, a related column can refer to the top-level key metric, and the top-level key metric can refer to the child metric, but they can't rely on each other to provide the data.

- Key metrics are secured at the dataset level. For subject areas, key metrics are secured at the same level as the column level as defined in the RPD.

- Key metrics aren't attached to a workbook and can't use workbook calculations.

- Key metrics converted from existing KPIs don't have the following attributes:

  – Owner

  – Tags

  – Target goals

  – Trend goals

  – Data blending

  – Diff view

  – Site-level personalization of KPIs

What Are Datasets?

Datasets are self-service data models that you build specifically for your data visualization and analysis requirements.

A dataset can be based on one table, spreadsheet, or file. Or a dataset can be a self-service data model that contains multiple tables with relationships defined between the tables.

You can create datasets from data from files that you upload, or SaaS applications, Oracle Analytics reports, and many relational and big data sources that you build connections to. See Data Sources Available for Use in Datasets.

Datasets are subsets of the file or data source's data that you curate and shape to meet your specific analytics and visualization needs. A dataset contains data source connection information, tables, the columns you specify, and the data enrichments and transformations that you apply.

You can use a dataset in multiple workbooks and in data flows. If you change a dataset, changes affect all workbooks and data flows that use the dataset.

When you create and build a dataset, you can:

- Choose between many types of connections or spreadsheets.

- Create datasets based on data from multiple tables in a database connection, Oracle data source, or a local subject area. And create datasets based on data from tables in different connections and subject areas. For example, you can build a dataset that includes tables from an Autonomous Data Warehouse connection, tables from a Spark connection, and tables from a local subject area.

- Specify joins between tables.

- Transform and enrich the columns in the dataset.

Create a Dataset Using a Data Flow

Use a data flow to curate data and create a dataset. For example, you might merge two datasets, cleanse the data, and output the results to a new dataset.

1. On the Home or Data page, click **Create** and select **Data Flow**.

2. In the Add Dataset dialog, select a dataset then click **Add**.

   You can add more data sources at any time by clicking **Add Step (+)**, then clicking **Add Data**.

3. Optional: In the Add Data pane, configure your data. For example, include or exclude columns, or rename columns.

4. Build your data flow:

   For each function that you want to perform, click **Add a step (+)**, click the step type you want, then specify the properties in the Step editor pane.

   Tip: Hover over the last step to display the **Add a step (+)** option. You can also edit your flow and add steps using **Options** in the Column header. For example, you can rename, reformat, merge, or transform columns.

5. Add a **Save Data** step to the end of your data flow.

6. Save your data flow.

   You can start processing your data now by clicking **Run Data Flow**, or later using the **Data Flows** panel on the Data page (from the Home page, click **Navigator**, then click **Data**). You can access the generated dataset on the **Datasets** panel on the Data page.

Data Sources Available for Use in Datasets

Learn which data sources you can use in datasets. You can use most data sources to create datasets that contain multiple tables.

Oracle Data Sources

You can use one of more of these Oracle data source connections to create a dataset containing multiple tables.

- Oracle Analytics Local Subject Areas

- Oracle Fusion Cloud Applications Suite (Use the **Oracle Applications** connection type)

- Oracle Autonomous Data Warehouse

- Oracle Autonomous Transaction Processing

- Oracle Database

- Oracle NetSuite

- Oracle Service Cloud

Other Data Sources

You can use one or more of these data source connections to create a dataset containing multiple tables.

- Amazon EMR

- Amazon Redshift

- Apache Hive

- DB2

- Dropbox

- Files (XLSX, XLS, CSV, and TXT)

- Google Drive

- GreenPlum

- HortonWorks Hive

- IBM BigInsights Hive

- Impala (Cloudera)

- Informix

- MapR Hive

- Microsoft Azure SQL Database

- MongoDB

- Pivotal HD Hive

- PostgreSQL

- Salesforce

- Snowflake

- Spark

- SQL Server

- Sybase ASE

- Sybase IQ

- MySQL

Data Sources Not Available for Multiple Table Datasets

These data source connections aren't available to create or include in a dataset containing multiple tables.

- Oracle Fusion Cloud Enterprise Performance Management (EPM)

- Oracle Essbase

- Google Analytics

Create a Key Metric

You create a key metric within a dataset, then add measures and columns to enhance the analysis.

1. From the Data page, open a dataset.

2. In the Data Panel, right-click **Key Metrics** and select **Add Key Metric**.

Add Key Metric

Name		$f(x)$	Search	
Description			▸ Operators	
			▸ Aggregate	
			▸ Running Aggregate	
			▸ String	
			▸ Math	
			▸ Calendar/Date	
			▸ Conversion	

Select a function to see description

Validate   Cancel   Save

3. Enter a **Name** and **Description** for the key metric.

4. Drag and drop measures and dimensions to create a calculation representing the key metric you're building.

5. To check your calculations for errors, click **Validate**.

6. When you're done, click **Save**.

   A green dot on the name of the key metric means it's not saved.

Add a Related Column to a Key Metric

You can add related columns of dimensions and measures to a key metric to expand the attributes around your analysis.

You need to create a key metric so that you can add a related column to it.

1. Right-click the key metric in the data area and select **Add Related Column**.

   The Add Related Column dialog opens.

2. Drag and drop the dimensions and measures to the calculation area to create the related column.

3. When you're done, click **Save**.

Add Conditional Formatting to a Key Metric

You can add conditional formatting to a key metric so the visualization automatically highlights the areas of interest.

1. In the Visualizations Panel, drag and drop the type of visualization you want to use to the canvas.

2. Drag and drop the key metric to the area of the Grammar Panel that makes sense for your visualization. Drag and drop other dimensions and measures to the areas that make sense for them too.

3. Click **Conditional Formatting** then click the tab representing the area you want to format - **Dataset**, **Workbook**, or **Visualization**.
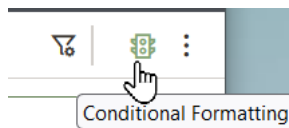
4. Enter a name for the formatting rule and select the measure you want to use from the Key Metrics folder.

5. Select a preset, or select the parameters you want to compare from the drop down lists.

6. To add a new formatting rule, click **Add New Rule**.

7. Save the workbook.

8. Right-click the visualization, select **Conditional Formatting**, and select the rule you want to apply.

   You can apply multiple rules to the same visualization.

9. When you're done click **Save**.

Get Started with KPIs

KPIs are key performance indicators that measure an organization's performance against key business objectives.

Your enterprise defines key performance indicators to manage and improve performance. Key performance indicators (KPIs) measure the progress towards your organization's goals. KPIs are comprised of a measure and a target and usually analyzed by dimensions such as organization, customer, product, and geography. KPIs can help organizations quickly focus on activities that have the greatest impact on business performance.

In Oracle Fusion Analytics Warehouse, you display KPI data on a card. You organize multiple cards into a deck. You can move, remove, or duplicate cards as the data changes, and create as many cards and decks as needed to present the KPI data clearly. You can have as many as eight cards per deck. Each card gets updated based on changes in the KPI data.

Topics:

• [About KPIs]

- [Evaluate KPIs](#)

- [Create a KPI](#)

- [Download a KPI](#)

- [Upload a KPI](#)

- [Inspect a KPI](#)

- [Edit a KPI](#)

About KPIs

Key Performance Indicators (KPIs) represent a comprehensive view of performance against a specific organization objective.

Oracle industry experts use KPIs as a central object to describe best-practice, business concepts of Oracle Fusion Analytics Warehouse. A KPI represents the value of a measure or metric as evaluated against a target. This gives the KPI a status which a simple metric doesn't have. KPIs reflect the essential health of the business and serve as a rallying point for business collaboration. KPIs also provide a launching point for additional predictive and prescriptive analysis and exploration.

Creating a KPI allows you to combine different data into a single container and then view that data in a variety of ways. This way you can create best practice business concepts simply using measures and targets.

- Designate a primary measure **Value** for which the KPI is evaluated against the Target.

- Choose one or more **Targets** that the organization is working towards.

- Select the goal of the **Target**.

- Determine which time periods you want to show: Month, Quarter, or Year.

- Set up any related **Dimensions** or **Measures** by which to group values on a card, and to allow filtering by those **Dimensions**.

- If you want to **Filter** by specific data, then set up filters.

There are a few things to keep in mind when you are working with KPIs.

- The type of KPI is reflected by the icon for the KPI. A blue icon represents a KPI created by a user. Red icons represent KPIs originally created by Oracle. A red icon with a small Oracle "O" indicates a KPI provided by Oracle; while a red icon with a person symbol embedded indicates a KPI provided by Oracle but customized by a user.

- The status for a KPI is reflected in the color of the band at the top of the KPI Card. The name of each of these respective statuses can be modified to best reflect the specifics of a KPI, but the common status still persists as a common state used across all Cards. Depending on the Conditions defined, the threshold equates to one of these options: Critical (Red), Warning (Orange), Good (Green), or On Target (No color).

- Only one **Value** measure is allowed.

- Data element properties apply to all instances of that element within the same KPI. If you want to create different sets of properties for the same data element, duplicate the element, and then apply the different sets of properties to each element. Be sure to name each element in a way that identifies each, such as Revenue_US showing US Dollars for currency and Revenue_EU showing Euros for currency.

- You can blend multiple **Datasets** in a join but cannot blend multiple subject areas. In the **Data Blending** drop-down, select **Custom** to specify options.

- Generate **Visualizations** or **Filters** (or both) by placing columns in **Related Dimensions**. The columns are generated from the source KPI data in all the cards in the deck.

- The templates available in the Conditions area are determined by the **Target Goals**. If you select Org Target and Revenue Objective for your target goals, then Org Target and Revenue Objective are available in the Conditions area, and visualizations that complement those targets are shown in the **Preset Templates**. The **Template** names, ranges, and color values are customizable.

Data Blending in KPIs

A KPI is based on a single dataset or subject area, or multiple data sources with at least one join between the data sources in order to establish their respective data relationships. Joins are described within Oracle Analytics Cloud using the visualization tool. Describe the joins, then add the data to the KPI to use the relationships. The join is automatically a traditional left join, however you may want to specify other relationships for blending data across datasets. (See Blend Data that You Added in *Visualizing Data and Building Reports in Oracle Analytics Cloud*.) The presence of a subject area denies these options.

To change these blending options, select the name of the KPI then edit its properties. In the Data Blending field, select either **Auto** or **Custom**. If you choose **Custom**, you can set the blending of each data source present to either **All Rows** or **Matching Rows**. You must assign at least one source to **All Rows**. See Blend Data that You Added and Change Data Blending in a Project in *Visualizing Data and Building Reports in Oracle Analytics Cloud*.

Evaluate KPIs

A KPI's status and score are determined by comparing its actual value against the target(s) and thresholds that you define. The performance status of a KPI is represented by the color and associated status shown on the card.

For example, for a product sales KPI in which high values are desirable, you can define ranges. Thresholds are the numeric values that separate the ranges. You can set the custom thresholds on personal cards for KPIs that will override the color coding provided by the common threshold state set in the KPI itself.

Evaluation Range Rule	Threshold	Name	Status Indicator
Profit is 100% of Target or higher	Greater than or equal to 100%	Good	Green
Profit is between 70-100% of Target	Between 70% and 100%	Warning	Yellow
Profit is 70% of Target or lower	Less than or equal to 70%	Critical	Red

Create a KPI

Create a KPI using elements available in data and projects.

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Measurements, targets, and related measurements must be facts.

- **Measurement** is the single column that is being assessed in the KPI.

- **Target** generates a status for the KPI card. A specified target in combination with the **Target Goal** determines what kind of condition templates are available, which can be modified as needed. You can add multiple **Targets**.

- Use **Related Measurements** as supplemental information in a card's visualization.

- **Measurement**, **Target**, and **Related Measurement** include properties settings for number format customizations for that number.

Time levels, related grouping categories, and filters must all be dimensions.

- Time level columns map a KPI to a specific business calendar and then later filter a KPI Card based on time

- If you don't want a KPI to reference time or a calendar, deselect **Time-based KPI**.

- To associate a Time-based KPI with a specific calendar, select **Column-driven**, **Gregorian**, or **Enterprise** for the Calendar Type.

  – **Column-driven** calendars use a specific column to dynamically select the correct calendar. For example, your organization may use different business calendars based on Ledger or Business Unit. A "Ledger - US1" filter referencing a US GAAP chart of accounts might use the April to May calendar, while a second "Ledger-US2" filter referencing an IFRS chart of accounts might use a non-standard calendar. To accommodate each scenario, select a type of column for the calendar to be based on in the **Calendar Based On** list. Then specify the appropriate data column in the last field. You can use the default column, or you can select an alternate column manually. The column you select maps to and determines the correct calendar.

  – **Gregorian** is the Gregorian solar calendar with 12 months of 28–31 days each.

  – **Enterprise** is a common calendar defined in the application setup.

- Use the application data to add Time levels for year, quarter, and period. For most calendars, period is the same as month except, for example, in the case of an asset calendar, monthly period grain isn't applicable and alternate period can be specified, if required. For all calendars, all levels aren't required, however you can only filter a KPI card to the grain provided in the KPI.
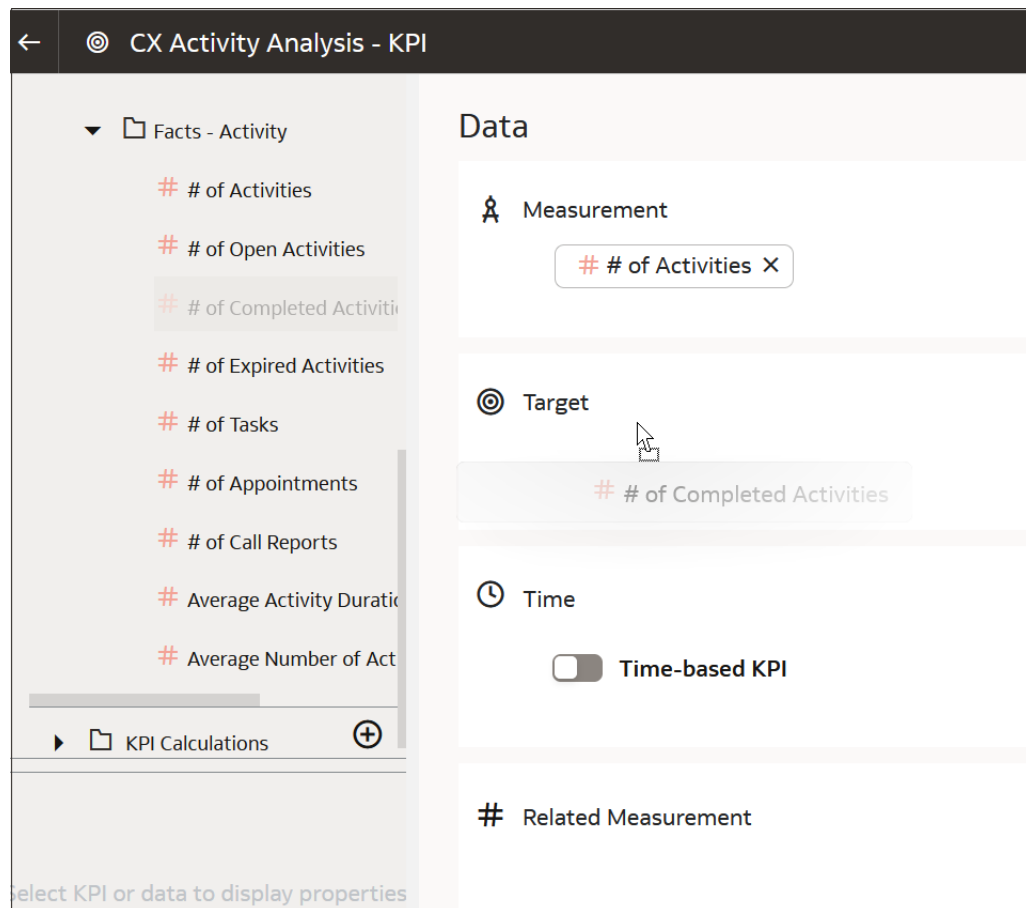
1. From the Home page, click **Navigator** and select **KPIs**.

2. On the KPIs page, click **Create**.

3. In the **Add Dataset** dialog, select the **Subject Area**(s) or **Dataset**(s) you want to use.

4. Enter the **Name**, **Description**, and **Owner** of the KPI in the Overview section. **Name** is required.

   By selecting the KPI **Name** in the **Data Pane**, the properties for the KPI can be set. These include more nuanced configuration of data blending, and details around the properties and behavior of the KPI. A **Target Goal** defines the desired business goals for the KPI such as Hit Target, Stay Above Target or Stay Below Target. These are used to evaluate the KPI's status against the Target. The **Trends Goal** can also be specified, and this is seen on the KPI card as a positive or negative directional arrow based on the optimal, selected direction.

5. Drag and drop elements from the **Data Pane** to the **Data** fields.

6. Create calculations by clicking the plus sign (**+**) next to **KPI Calculations** and using the **Expression Editor** to formulate the equation. Double-click **Data Elements** and **Expression** options to add them to the equation. Validate the equation before saving it.

7. Add links to cards, projects, stories, or dashboards, or external URLs. You can rearrange links to display them in a specific order.

8. Click **Data Preview** at the bottom of the screen to see a preview of the resulting data used to generate any card subsequently created from this KPI.

Download a KPI

Download an existing KPI JSON file from Oracle Analytics Cloud.

1. From the Home page, click **Navigator** and select **KPIs**.

2. On the KPIs page, click the **Page** menu and select **Download**.

3. Select the KPI you want to download and click **Download**.

4. Navigate to where you want to download the KPI JSON file and click **Save**.

Upload a KPI

Upload a KPI JSON file to the KPI repository.

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A KPI definition can be saved locally as an archive. It can then be uploaded to the same or different Oracle Fusion Analytics Warehouse application.

1. From the Home page, click **Navigator** and select **KPIs**.

2. On the KPIs page, click the **Page** menu and select **Upload**.

3. Drag the file you want to add to the KPI repository to the Upload KPI dialog, or click in the Upload KPI dialog to navigate to the file location.

4. Click Import.

Inspect a KPI

You can view basic information about a KPI when you inspect it.

1. From the Home page, click **Navigator** and select **KPIs**.

2. On the KPIs page, click the **Actions** menu for the KPI you want to change and click **Inspect**.

3. You can edit the **Name**, **Description**, or **Permissions** for the KPI. All other information about the KPI is read-only.

   If you want to change additional information about the KPI, you need to edit it.

   > ✎ **Note:**
   >
   > When editing KPI permissions, authenticated users can find usernames using **Search**.

4. Click **Save**.

Edit a KPI

Edit a KPI to incorporate different data elements and supplemental information.

1. From the Home page, click **Navigator** and select **KPIs**.

2. You can edit a KPI, or create a copy of a KPI and edit one of the copies.

   • To edit a KPI, click the **Actions** menu for the KPI you want to change and click **Edit**.

   • To create a copy of a KPI, click the **Actions** menu for an Oracle-provided KPI (with an oval symbol) and click **Save As**, then edit the one of the copies of the KPI.

3. Add data with join relationships to the existing datasets or subject areas by clicking the plus sign (**+**) next to the KPI name in the Data Elements pane.

4. Update the KPI properties by clicking the name of the KPI in the Data Elements pane and changing the values in the Properties pane.

5. Click **Save**.

Add Multiple Canvases to a Card

You can link to a project or dashboard with multiple canvases in a KPI.

Projects, dashboards, and analyses can have multiple visualizations, also known as canvases and stories. Changes in the project or dashboard are automatically reflected in the KPI. See Create Visualizations.

1. Open the KPI you want to change and click **Add Link**.

2. Navigate to the project or dashboard you want to link to and click **Open**.

3. In the Add Link dialog, select the canvas or dashboard you want to display.

4. Optional: Add a user-friendly **Link Name** to describe the visualizations.

5. Select which **Filters** from the linked visualizations you want to pass to the KPI .

6. Click **OK**.

Get Started with Cards

Cards are the presentation medium for KPI data.

A KPI can be instantiated as a card. Because each card can be personalized, a single card can spawn any number of cards. Cards live on decks, and until a card is placed on a deck its status isn't tracked. Finally, when you delete a card you don't delete the underlying KPI.

Topics:

• About Cards

• Create a Card

About Cards

Cards are visual representations of KPI data that can be organized into decks.

Cards provide a progressive disclosure of KPI details. You can customize what appears on each card. The same card can exist in multiple decks. You can also duplicate a card to show similar, but not exactly the same data on another card.

Each card describes how KPI features are shown:

- **Card Name** is the name that appears at the card title and is based on the KPI.

- **Target** is the metric that the KPI is compared against.

- **Summary** shows the time period applied to the current card, the value method used to compare the data to the target, and any changes (if selected) between the represented time and a previous time period.

- **Detail Visualization** shows what primary metric is displayed, the group by which the primary metric is broken out, and the type of visualization used on the card.

- **More Options** shows the values of any additional metrics that were added to the visualization, any groups that are used to break out the metrics, the location of the legend, whether the plot area values are visible, and whether the axis labels are visible.

As you customize a card, ensure the combination of information doesn't create an overly-complex visualization.

Create a Card

Create a card about a KPI to add it to a deck of other cards showing different perspectives of the same KPI.

1. From the Decks page, choose the deck you want to add a card to, click the **Actions** menu, and then select **Add Card**.

2. If you want to change the default visualization, select an option from the **Preview** list.

3. Click **Add Card** to include it in the currently selected deck, or click **Customize Card** to change the specific data you show on the card.

Customize a Card

You can customize cards to provide specific detailed information.

You can modify individual cards to show specific data about a KPI definition such as target value, time period, and which measure to display on the card.

1. From the Decks view, click the **Actions** menu on the card you want to customize and select **Customize**.

2. Select **General**.

3. Edit the **Card Name**, which is based on the name of the KPI.

4. Update the **Target**, which lists all measures defined for the KPI, and calculates the card status. Targets are based on dimensional breakout or across the breakout depending on how the target is defined in the KPI.

5. Specify a period to show data in the **Time** field.

6. Show the actual target **Value** or select a variance compared to the **Target** value.

7. **Show Changes** over the prior period, same period last year, or year.

8. Select which measure to **Display** in the card.

9. You can **Group by** a dimension.

10. Select the type of **Visualization** you want to display.

11. Select **Values** related to the KPI.

12. Select **Groups** by which to show the **Values** related to the KPI.

13. Specify where the **Legend** appears on the visualization.

14. Display **Plot Area Values** and **Axis Labels** to show the numeric values and scale shown in the preview.

15. You can filter data by any criteria (except time data which is set in the **Time** field in the **General** tab).

Filter Card Data

Filter the cards in a deck to show specific information about a KPI in each card, or filter each card to show more specific information about the KPI elements, such as region or time.

1. From the **Decks** view, click the **Actions** menu on the card you want to customize and select **Settings**.

2. Select **Filters**.

3. In the Filters area, click the plus sign (**+**) to select from a list of available filters for this KPI.

4. Click **Save**.

Add Related Links to a Card

Add links to other KPIs or related projects in your folders to a card to increase understanding of the data in the card.

1. In the KPI pane, select **Edit** from the Action menu.

2. In the Links area, click **Add Link** or **Add URL** and select the data element or web page you want to link to.

3. Click **OK**.

Get Started with Decks

Organize cards into a deck of information about a general topic.

Topics:

- About Decks
- Create a Deck
- Filter Data by Deck
- Export a Deck
- Inspect a Deck
- Hide a Deck

About Decks

Decks are a customizable method of organizing business information from KPIs.

Decks are composed of cards, and like physical cards, can be organized in ways that make the most sense based on the card contents. You can add as many as eight cards to a deck. Decks can be sorted by filters and timeframes.

You can access all the decks you have permissions to view or work with from the Decks page.

Create a Deck

Organize a collection of cards about a KPI by creating a deck.

1. On the Decks page, click the **Actions** menu and select **Add Deck**.

2. Type a **Deck Name** and click **Save**.

Add a Visualization to a Workbook

Add a visualization to a workbook to increase awareness of key metric factors.

1. From the **Workbook** page, select the workbook you want to add a visualization to.

2. Click the **Add Visualization** icon or select **Add Visualization** from the **Actions** menu.

3. Select the visualization you want to add to the workbook.

4. Click **Customize Visualization** to make changes to the card.

5. Click **Add Visualization**.

Move a Card

Move a card from one deck to another.

1. In the **Card** view, click the **Actions** menu and select **Move to....**

2. Select the deck you want to move the card to and click **Move**.

Filter Data by Deck

Filter the cards in a deck to show specific information about a KPI in each card, or filter each card to show more specific information about the KPI elements.

Deck-level filters are subject to the data shown in all the cards in the deck. To filter individual cards, use the filters for those cards. If card-level filters come in conflict with the deck's filters, the deck converts to a heterogeneous state and the individual cards adopt the filters. If you want to use a deck filter, you must override all the cards' filters, or you can keep the individual card filters.

1. Review existing deck-level filters at the top of the Decks page, which can be toggled on and off by clicking the **Filter** icon on the right. Card-level filters are shown at the bottom of each card.

2. Add a deck-level filter (when filters are toggled on) by clicking the plus icon (**+**) icon at the top of the Decks page.

   If a card exists in a deck that uses a dynamically-driven **Calendar Based On** column, you need a filter for that column at the deck or card level. An asterisk indicates which filter is required. A single filter can function as both a dimension/ grouping category filter as well as a calendar selector. See Create a KPI

Export a Deck

You can share a deck with other users by exporting the deck as a PDF, PowerPoint, or image file.

1. From the Decks page, select the deck you want to export.

2. From the **Actions** menu, select **Export**.

3. Type the **Name** you want to give to the exported file, and select the file **Format** you want to export.

4. Click **Export**.

   You can open or save the file using the Opening dialog.

Inspect a Deck

Set security on a deck using permissions.

Users with permissions to view a deck can see and modify the deck.

1. On the Decks page, click the **Actions** menu and select **Inspect**.

2. Search for the users or roles you want to grant permissions to.

3. Select the scope of permissions you want to view and select the level of control you want to grant to the user or role.

> ✎ **Note:**
>
> When editing deck permissions, authenticated users can find usernames using **Search**.

Hide a Deck

Remove a deck from view by hiding it.

You can hide a deck from view by all users if the information isn't being used. Hiding a deck removes any favorite designation.

1. On the Decks page, select the deck you want to hide.

2. Click the **Actions** menu and select **Hide**.

3. To unhide all decks, click the **Actions** menu and select **Unhide All**.

   All decks are now available. If you want to remove any decks from view, you need to hide them again.

Configure and Use Notifications

Create email notifications of events that impact KPIs.

Topics:

- About Email Notifications
- Set Email Notifications

About Email Notifications

When you set up notifications in a card, you will receive emails about KPI status changes.

For each card you enabled for Notifications, You will receive daily email Notifications at the email address added to your User Profile.

The daily email notification includes a list of KPI cards listed by the status parameters you enabled. Click on each card to open them.

Set Email Notifications

Allow Notifications to send daily updates about the card to everyone who is subscribed to the card's notifications.

Choose whether to send notifications when certain status criteria occur.

1. From the Decks page, click the **Actions** menu of the card you want to receive email notifications for, and then select **Allow Notifications**.

   If **Allow Notifications** is dimmed, it means a target has not been set for the KPI.

2. From the **Actions** menu of the card you want to receive email notifications for, select **Customize**.

3. Click **Status** and select the options for your email notification for this card. For example, select **Critical**, **Warning**, and/or **On Target** for notifications when the KPI reaches each of these thresholds.

4. Click **OK**.

3

Work with Projects

Create and manipulate projects to provide configured data for KPIs.

Oracle Fusion Analytics Warehouse employs the Oracle Analytics Cloud Project as an embedded Detail Page. Detail pages are included in the default application. New projects can be constructed in Oracle Analytics Cloud and added into the application by adding links to KPIs.

> **Note:**
>
> To improve the performance of your projects, it's best to have brushing turned off. To turn brushing off, click **Menu** on the project toolbar and select **Project Properties**. Then in the **General** tab of each project, set brushing to **Off**.

There are two features of Oracle Analytics Cloud that work differently in Oracle Fusion Analytics Warehouse

- In Oracle Fusion Analytics Warehouse, you can extend a prebuilt RPD through Semantic Model Extensions that allows you to merge a custom Oracle Analytics Cloud RPD with the Oracle Fusion Analytics Warehouse RPD. You can also build extensions through this process.
- HTML code and scripts aren't available in Answers.

All other Oracle Analytics Cloud features work as expected in Oracle Fusion Analytics Warehouse.

- Add Data to Projects
- Add Data Sources to Analyze and Explore Data
- Create Visualizations
- Create and Apply Filters

Typical Workflow for Exploring Projects

Here are the common tasks for exploring your data.

Task	Description	More Information
Create a project and add datasets	Create a new data visualization project and add one or more datasets to the project.	Create a Workbook and Add Visualizations
Add data elements	Add data elements (for example, data columns or calculations) from the selected dataset to visualizations on the Prepare canvas.	Build a Visualization by Adding Data from the Data Panel
Adjust the canvas layout	Add, remove, and rearrange visualizations.	Update Canvas Properties

Add Data to Projects

Projects need data to create KPIs from.

Both KPIs and Detail pages based on Oracle Analytics Cloud projects rely on data described in Oracle Analytics Cloud. For the Oracle Fusion Analytics Warehouse default applications data is generated from the data pipeline resulting in business-centric Subject Areas. This data can be augmented with data from Datasets created in Oracle Analytics Cloud. These same approaches can be used to add new data to Oracle Fusion Analytics Warehouse for use in projects or KPIs.

Topics:

- Create a Workbook and Add Visualizations
- Different Methods to Add Data
- Refresh a Workbook's Data
- Pause Data Queries in a Workbook
- Undo and Redo Edits
- Replace a Dataset in a Workbook
- Remove a Dataset from a Workbook
- Save Your Changes Automatically

Create a Workbook and Add Visualizations

To start a workbook, choose and add a dataset and then drag and drop its columns onto the Visualize page's canvas to create visualizations.

You create workbooks to store and organize your analytics content, such as graphs and charts.

Tutorial

If you want to learn about the datasets that are available to you, then you can view a list of datasets and find out more information about each dataset. .

1. On the Home page, click **Create** and click **Workbook**.

2. In the Add Data dialog, click a dataset and then click **Add to Workbook**.

3. In the Data Panel, locate and drag and drop data columns onto the Visualize canvas to start building visualizations.

4. Click **Save**.

Different Methods to Add Data

You can use different methods to add data from the Data Panel to create or update visualizations on a canvas.

Use one of the following methods to add data from the Data Panel:

- Drag data elements from the Data Panel and drop them onto the canvas.

- Select a data element or use Shift-click or Ctrl-click to select multiple data elements in the Data Panel, then right-click to select either a particular visualization type or the option to create a visualization automatically.

- Double-click a data element or use Shift-click or Ctrl-click to select multiple data elements in the Data Panel, then right-click to add them to the canvas.

When you update an existing visualization, you can add data from the Data Panel onto the Grammar Panel or Assignments Pane on the canvas. You can move the data elements from one area to another in the Grammar Panel or Assignments Pane. The visualization is updated based on your selection.

You can create a visualization by selecting a visualization type from the Visualization tab of the Data Panel and adding data elements to the canvas.

Refresh a Workbook's Data

Refresh the data in a workbook to ensure that your visualizations contain the most current data.

A user with Administrator privileges can set the **Refresh Data when Canvas Is Opened**, **Auto Refresh Data**, and **Refresh Interval** properties to automatically refresh the canvas' data.

1. On the Home page, select a workbook, click the **Actions menu**, and then select **Open**.

2. In the Visualize canvas, go to the workbook toolbar and click **Refresh Data**.

Pause Data Queries in a Workbook

You can disable the Auto Apply Data option to pause issuing new queries as you change visualization content in a workbook.

You can quickly configure a visualization without having to wait for data updates after each change.

1. On the Home page, select a workbook, click the **Actions menu**, and then select **Open**.

2. Click **Visualize**.

3. Click the **Auto Apply Data** button to pause data queries.

   Data queries are temporarily disabled.

4. Make changes to a visualization in the workbook.

   Your changes are displayed but data isn't updated, and a bubble is displayed indicating the number of data requests that have been skipped.

5. Click the bubble if you want to refresh the data now.

   Data queries are still disabled.

6. Click the **Auto Apply Data** button to re-enable data queries.

Undo and Redo Edits

You can quickly undo your last action and then redo it if you change your mind. For example, you can try a different visualization type when you don't like the one you've just selected, or you can go back to where you were before you drilled into the data.

The undo and redo options are useful as you experiment with different visualizations. You can undo all the edits you've made since you last saved a workbook. However, in some cases, you can't undo and then redo an edit. For example, in the Create Dataset page, you've selected an analysis from an Oracle Application data source to use as a dataset in the workbook. In the next step, if you use the undo option to remove the dataset, you can't redo this change.

- To undo or redo an edit, go to the toolbar for the workbook or the dataset and click **Undo Last Edit** or **Redo Last Edit**. You can use these options only if you haven't saved the workbook since making the changes.

- When you're working on a workbook, click **Menu** on the workbook toolbar and select **Revert to Saved** to undo all the edits you've made since you last saved your workbook. **Revert to Saved** is enabled after you've saved the workbook for the first time. This option is automatically disabled if you select the **Auto Save** option.

Replace a Dataset in a Workbook

When you replace a dataset, Oracle Analytics suggests how you can re-map the columns from the dataset that you replaced to the replacement dataset. You can accept or update these suggested mappings.

For example, you might replace a workbook's test dataset with a production dataset. Or you can copy a workbook and its visualizations, and then use the duplicate workbook as a template. After you rename the duplicated workbook, you can add a different dataset.

When you replace the dataset, any data mapping that you specify is applied to the workbook. For example, if you map a data element to **None**, the specific data is removed from the workbook's visualizations, calculations, and filters.

1. On the Home page, select a workbook to use as a template, click the **Actions menu**, and then select **Open**.

2. From the Visualize page, click **Data**.

3. In the Data page, click the **Data Diagram**.

4. Locate the dataset to replace and click **Actions**.

5. Select **Replace Dataset**.

6. In the Replace Dataset dialog, click the replacement dataset. Click **Select**.

7. Review, update, and specify the column mappings for the workbook's visualizations, calculations, and filters.

8. Click **Replace**.

9. Optional: If you want to add blending between datasets, then in the **Data Diagram**, click between the datasets that you want to blend, and in the Blend Data dialog add column matches.

Remove a Dataset from a Workbook

You can remove a dataset from a workbook. When you do this, you remove all of the dataset's columns from the workbook's visualizations, filters, and calculations.

1. On the Home page, select a workbook, click the **Actions menu**, and then select **Open**.

2. In the **Visualize** canvas, go to the Data Panel pane, right-click the dataset that you want to remove, and select **Remove from Workbook**.
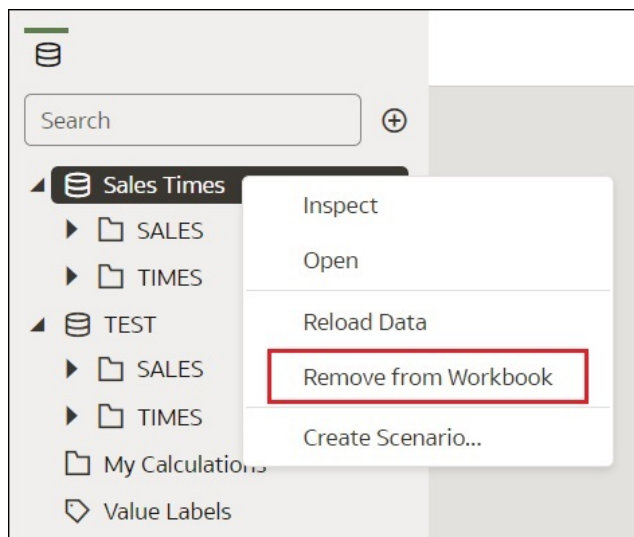
3. Click **Save**.

Save Your Changes Automatically

You can use the auto save option to save your updates to a visualization workbook in real-time automatically.

If you've already saved your workbook in a specific location, the Save Workbook dialog isn't displayed after you click **Auto Save**.

1. On the Home page, select a workbook, click the **Actions menu**, and then select **Open**.

2. From the Save menu, select **Auto Save**.

3. In the Save Workbook dialog, enter the **Name** and optional **Description** to identify your workbook.

4. Select the folder where you want to save your workbook.

5. Click **Save**. Any workbook updates are saved in real-time.

Suppose that two users are updating the same workbook and **Auto Save** is enabled. The **Auto Save** option is automatically disabled when different types of updates are made to the workbook. A message is displayed that states that another user has updated the workbook.

Add Data Sources to Analyze and Explore Data

Locate and include the data you want to work with.

Topics:

- Typical Workflow to Add Data Sources
- About Data Sources
- Data Sources and Subject Areas
- Data Sources and Measure Columns
- Databases
- Connect to Data
- Spreadsheets

Typical Workflow to Add Data Sources

Here are the common tasks for adding data from data sources.

Task	Description	More Information
Add a connection	Create a connection if the data source that you want to use is either Oracle Applications or a database.	Connect to an Application in Oracle Fusion Cloud Applications Suite Connect to an Oracle Database
Create a data source	Upload data from spreadsheets. Retrieve data from Oracle Applications and databases. Creating a data source from Oracle Applications or a database requires you to create a new connection or use an existing connection.	Create Datasets from Databases
Remove data	Remove data that you added.	Remove a Dataset from a Workbook

About Data Sources

You can connect to many types of data source, such as Cloud databases, on-premise databases, and many commonly used applications, such as Dropbox, Google Drive, and Amazon Hive.

You create a connection for each data source that you want to access in Oracle Analytics. Once connected, you can visualize your data to create insights.

A data source is any tabular structure. You see data source values after you load a file or send a query to a service that returns results.

A data source can contain any of the following:

- **Match columns** - These contain values that are found in the match column of another source, which relates this source to the other, for example, Customer ID or Product ID.

- **Attribute columns** - These contain text, dates, or numbers that are required individually and aren't aggregated, for example, Year, Category Country, Type, or Name.

- **Measure columns** - These contain values that should be aggregated, for example, Revenue or Miles driven.

You can analyze a data source on its own, or you can analyze two or more data sources together, depending on what the data source contains. If you use multiple sources together, then at least one match column must exist in each source. The requirements for matching are:

- The sources contain common values, for example, Customer ID or Product ID.

- The match must be of the same data type, for example, number with number, date with date, or text with text.

When you save a workbook, the permissions are synchronized between the workbook and the external sources that it uses. If you share the workbook with other users, then the external sources are also shared with those same users.

Any data that you upload (as a dataset) is stored securely in Oracle Cloud.

Data Sources and Subject Areas

You can combine data sources with subject areas to explore and analyze the data.

A subject area either extends a dimension by adding attributes or extends facts by adding measures and optional attributes. You can't define hierarchies in data sources.

A subject area organizes attributes into dimensions, often with hierarchies, and a set of measures, often with complex calculations, that can be analyzed against the dimension attributes, for example, the measure net revenue by customer segment for the current quarter, and the same quarter a year ago.

When you use data from a source such as an Excel file, the file adds information that is new to the subject area. For example, suppose you purchased demographic information for postal areas or credit risk information for customers and want to use this data in an analysis before adding the data to the data warehouse or an existing subject area.

Using a source as standalone means that the data from the source is used independently of a subject area. It's either a single file used by itself or it's several files used together and in both cases a subject area isn't involved.

You can extend a dimension by adding attributes from a data source to a subject area:

- You can only make matches to a single dimension.

- The set of values in matched columns are unique in the data source. For example, if the data source matches on ZIP code, then ZIP codes in the source are unique.

- You make matches between one or composite columns. An example of a one column match is that product key matches product key. For composite columns, an example is that company matches company and business unit matches business unit.

- All other columns must be attributes.

You can add measures from a data source to a subject area:

- You make matches to one or more dimensions.

- The set of values in matched columns aren't necessarily unique in the data source. For example, if the data source is a set of sales matched to date, customer, and product, then you can have multiple sales of a product to a customer on the same day.

- You make matches between one or composite columns. An example of a one column match is that product key matches product key. For composite columns, an example is that city and state from separate columns creates the composite City_State in a customers address.

A data source that adds measures can include attributes. You can use these attributes alongside external measures and not alongside curated measures in visualizations. For example, when you add a source with the sales figures for a new business, you can match these new business sales to an existing time dimension and nothing else. The data might include information about the products sold by this new business. You can show the sales for the existing business with those of the new business by time, but you can't show the old business revenue by new business products, nor can you show new business revenue by old business products. You can show new business revenue by time and new business products.

Data Sources and Measure Columns

You can work with data sources that either include or don't include a measure column.

- You can match tables with measures to other tables with a measure, a dimension, or both.

- When you match tables to other tables with measures, the tables don't need to be at the same grain. For example, you can match a table of daily sales table to a sales by quarter table.

A table with no measures is treated as a dimension.

- Matches can be between single or composite columns. A single column match might be the product key in one table matching the product key in another. A composite column match might be where company and business unit in one table matches company and business unit in the other table.

- All other columns must be attributes.

Dimension tables can be matched to other dimensions or they can be matched to tables with measures. For example, a table with Customer attributes can be matched to a table with demographic attributes provided both dimensions have unique Customer key columns and Demographic key columns.

Databases

You can connect to databases and include some or all of the information from them in your projects.

Topics:

- Database Connection Options

- Connect to a Database

- Connect to an Oracle Database

- Create Datasets from Databases

- **Edit a Data Source Connection**
- **Delete a Data Source Connection**

Database Connection Options

When you specify connection details using the Create Connection dialog or Inspect dialog, some database types have extra configuration options.

Notes on using this table

- **Version Numbers**:
    - "1.x" means any version starting with a 1 (for example, this includes version 1.4.3 but not version 2.0).
    - "2.0.x" means any version starting with 2.0 (for example, this includes version 2.0.4 but not version 2.4).
    - "1.6+" means any version starting with 1 and is greater than or equal to (>=) 1.6 (for example, this includes version 1.8 but not version 2.4).

- **Use in Datasets** - "Yes" means that you can connect to a data source using one of the connectivity options displayed underneath and visualize data of that type. Datasets are displayed on the Data page in Oracle Analytics Cloud. See Connect to Data.

- **Use in Semantic Modeler** - "Yes" means that Semantic Modeler supports this data source type. "No" means that you should use Model Administration Tool to model data of this type until it's supported by Semantic Modeler in a future update.
  Note: When Oracle Analytics is deployed as part of other services such as Fusion Analytics Warehouse or NetSuite Analytics Warehouse, you can't connect to the semantic model. Therefore you can ignore the **Use in Semantic Modeler** column in the following table.

- **Use in Model Administration Tool** - "Yes" means that Model Administration Tool supports this data source type. If it's also supported by Semantic Modeler, we recommend that you use Semantic Modeler.
  Note: When Oracle Analytics is deployed as part of other services such as Fusion Analytics Warehouse or NetSuite Analytics Warehouse, you can't connect to the RPD. Therefore you can ignore the **Use in Model Administration Tool** column in the following table.

- **Connectivity Options**:
    - **Standard** means that the data source host is accessible via the public Internet.
    - **Private access channel** means that Oracle Analytics Cloud can access data on a private host over a private access channel. You can use a private access channel to connect to private data sources that are within your virtual cloud network (VCN) on Oracle Cloud Infrastructure or other networks peered to the VCN such as your corporate network. See Connect to Private Data Sources Through a Private Access Channel.
    - **Remote Data Connectivity:**
        * In the **Use in Datasets** column, this means that if your administrator has set up and enabled remote data connectivity, you can visualize on-premises data of that type. You'll see a check box named **Use Remote Data Connectivity** on the Create Connection dialog that you select to indicate that the database is on-premises.

* In the **Use in Semantic Modeler** or **Use in Model Administration Tool** columns, this means that if your administrator has set up and enabled remote data connectivity, you can model on-premises data of that type. See Configure and Register Data Gateway for Reporting.

    Notes:

    * With data flows, you can source data from remote databases (using a remote connection with Data Gateway). However, you can't save data to datasets that use remote connections.

    – **Data Access** options:
    Live only means that in a dataset, the table can only get its data directly from the data source.

    Cache only means that in a dataset, the table can only load or reload its data into cache.

    Live or Cache means that in a dataset the table can access its data in either live mode or cache mode.

    See Specify Whether a Dataset Table Is Cached or Live.

    – **System Connection** means that data modelers can connect to a semantic model using connection details copied from an Oracle Analytics Cloud connection. For supported data sources, data modelers copy the **Object ID** from the Inspect pane into Semantic Modeler. If you're using Model Administration Tool, copy the Object ID into the Connection Pool dialog.

* In addition to the connections types listed on the Connections page, you can connect remotely to other on-premises data sources using generic JDBC.

Data Sources Supported for Use with Oracle Analytics Cloud (sorted alphabetically by Oracle databases first, then other databases)

Data Source/ Connection Type	Supported Versions	Use in Datasets	Use in Semantic Modeler (specific to Oracle Analytics Cloud)	Use in Model Administration Tool (specific to Oracle Analytics Cloud)	Supports SSL	More information
Oracle Analytic Views	Oracle Database 19c	Yes Connectivity options: • Standard • Data access - Live	No	Yes Connectivity options: • Standard	No	See Connect to Oracle Analytics Views.

Data Source/ Connection Type	Supported Versions	Use in Datasets	Use in Semantic Modeler (specific to Oracle Analytics Cloud)	Use in Model Administration Tool (specific to Oracle Analytics Cloud)	Supports SSL	More information
Oracle Applications	Oracle Fusion Cloud Applications Suite On-premises Oracle BI Enterprise Edition deployments Another Oracle Analytics service	Yes Connectivity options: • Standard • Remote Data Connectivity* • Data access - Cache only	No	No	Yes	* Remote connectivity for datasets is only available using Data Gateway for Linux. Connector supports several applications in Fusion Applications Suite. See About the Oracle Applications Connector. See also Connect to an Application in Oracle Fusion Cloud Applications Suite.
Oracle Autonomous Data Warehouse	18.2.4-20 and later 19c	Yes Connectivity options: • Standard • Private access channel • Remote Data Connectivity • Data access - Live or cache	Yes Connectivity options: • Standard • Remote Data Connectivity • System Connection	Yes Connectivity options: • Standard • Private access channel • Remote Data Connectivity • System Connection	Yes	Supports saving output from data flows. For semantic model connections, you can only have one global wallet, therefore you can only connect to one instance. See Connect to Oracle Autonomous Data Warehouse .

Data Source/ Connection Type	Supported Versions	Use in Datasets	Use in Semantic Modeler (specific to Oracle Analytics Cloud)	Use in Model Administration Tool (specific to Oracle Analytics Cloud)	Supports SSL	More information
Oracle Autonomous Transaction Processing	19c	Yes Connectivity options: • Standard* • Private access channel • Remote Data Connectivity • Data access - Live or cache	Yes Connectivity options: • Standard • Remote Data Connectivity • System Connection	Yes Connectivity options: • Standard** • Private access channel • Remote Data Connectivity • System Connection	Yes	Supports saving output from data flows. * For dataset connections, you can have one wallet per connection, therefore you can connect to multiple instances. ** For semantic model connections, you can only have one global wallet per connection, therefore you can only connect to one instance. See Connect to Oracle Autonomous Transaction Processing.
OCI Resource (Preview)	-Not applicable*	No*	No	No	Yes	* Use this connection type to register Oracle functions for use in data flows. See Create a Connection to Your OCI Tenancy.

Data Source/ Connection Type	Supported Versions	Use in Datasets	Use in Semantic Modeler (specific to Oracle Analytics Cloud)	Use in Model Administration Tool (specific to Oracle Analytics Cloud)	Supports SSL	More information
Oracle Database	12.1+ 12.2+ 18+ 19+	Yes Connectivity options: • Standard* • Private access channel • Remote Data Connectivity • Data access - Live or cache	Yes Connectivity options: • Standard • Remote Data Connectivity • System Connection	Yes Connectivity options: • Standard** • Private access channel • Remote Data Connectivity • System Connection	Yes	Supports saving output from data flows. * For dataset connections, you can connect to multiple database instances. Upload a wallet for each connection. ** For semantic model connections, you can only have one global wallet per semantic model connection. Use the Oracle Database connection type to connect to Oracle Database Classic Cloud Service. Ensure that the appropriate security access rules are in place for Oracle Analytics Cloud to make a network connection to the database service on the database listening port. See Connect to an Oracle Database.

Data Source/ Connection Type	Supported Versions	Use in Datasets	Use in Semantic Modeler (specific to Oracle Analytics Cloud)	Use in Model Administration Tool (specific to Oracle Analytics Cloud)	Supports SSL	More information
Oracle EPM Cloud (for Oracle Fusion Cloud Enterprise Performance Management)	Latest version	Yes Connectivity options: • Standard • Data access - Live only	No	Yes Connectivity options: • Standard	Yes	See Connect to Oracle Fusion Cloud Enterprise Performance Management (EPM). You can't use Oracle Fusion Cloud Enterprise Performance Management (EPM) datasets in Data Flows. You can't blend datasets that use Oracle Fusion Cloud Enterprise Performance Management (EPM) data sources.

Data Source/ Connection Type	Supported Versions	Use in Datasets	Use in Semantic Modeler (specific to Oracle Analytics Cloud)	Use in Model Administration Tool (specific to Oracle Analytics Cloud)	Supports SSL	More information
Oracle Essbase	11.1.2.4.0+ 21c	Yes Connectivity options: • Standard • Private access channel • Remote Data Connectivity • Data access - Live only	No	Yes Connectivity options: • Standard • Private access channel • Remote Data Connectivity	No	For direct connections, see Create a Connection to Oracle Essbase. For remote connections via Data Gateway, see Create a Connection to Oracle Essbase Data on a Private Network . For remote connections via Private Access Channel, see Connect to Private Data Sources Through a Private Access Channel. You can't use Oracle Essbase datasets in Data Flows. You can't blend datasets that use Oracle Essbase data sources.
Oracle Hyperion Planning	11.1.2.4+	No	No	Yes Connectivity options: • Standard • Data access - Live only	No	-
Oracle NetSuite	Release 2019.2 (JDBC Driver 8.10.85.0)	Yes Connectivity options: • Standard	No	No	Yes *	* SSL: Default SSL support by driver. Enter NetSuite2.com as Data Source.

Data Source/ Connection Type	Supported Versions	Use in Datasets	Use in Semantic Modeler (specific to Oracle Analytics Cloud)	Use in Model Administration Tool (specific to Oracle Analytics Cloud)	Supports SSL	More information
Oracle Fusion Cloud B2C Service	1.2	Yes Connectivity options: • Standard • Data access - Live or cache	No	No	No	-
Oracle Talent Acquisition Cloud	17.4+ 15b.9.3+	Yes Connectivity options: • Standard • Data access - Live or cache	No	No	No	See Connect to Oracle Talent Acquisition Cloud.
Amazon EMR	Amazon EMR 4.7.2 running Amazon Hadoop 2.7.2 and Hive 1.0.0 Amazon EMR (MapR) No Amazon Machine Image (AMI) 3.3.2 running MapR Hadoop M3 and Hive 0.13.1	Yes Connectivity options: • Standard • Remote Data Connectivity • Data access - Live or cache	No	No	No	Complex data types not supported.
Amazon Redshift	1.0.1036 +	Yes Connectivity options: • Standard • Remote Data Connectivity • Data access - Live or cache	Yes Connectivity options: • Standard • Remote Data Connectivity • System Connection	Yes Connectivity options: • Remote Data Connectivity * • System Connection	Yes	-

Data Source/ Connection Type	Supported Versions	Use in Datasets	Use in Semantic Modeler (specific to Oracle Analytics Cloud)	Use in Model Administration Tool (specific to Oracle Analytics Cloud)	Supports SSL	More information
Apache Hive	2.3.0+ 3.0+	Yes Connectivity options: • Standard • Private access channel • Remote Data Connectivity • Data access - Live or cache	Yes Connectivity options: • Standard • Remote Data Connectivity • System Connection	Yes Connectivity options: • Standard • Private access channel • Remote Data Connectivity • System Connection	Yes	Supports saving output from data flows. Supports Kerberos.
CSV File	-	Yes Connectivity options: • Standard • Data access - Cache only	No	No	No	See Add Spreadsheets as Datasets.
DropBox	-	Yes Connectivity options: • Standard • Data access - Cache only	No	No	No	See Connect to Dropbox.
Google Analytics	Universal Analytics	Yes Connectivity options: • Standard • Data access - Cache only	No	No	No	See Connect to Google Drive or Google Analytics.
Google BigQuery	-	Yes Connectivity options: • Data access - Live or cache	Yes Connectivity options: • System Connection	Yes Connectivity options: • System Connection	Yes	Requires SSL.
Google Drive	-	Yes Connectivity options: • Standard	No	No	No	See Connect to Google Drive or Google Analytics.

Data Source/ Connection Type	Supported Versions	Use in Datasets	Use in Semantic Modeler (specific to Oracle Analytics Cloud)	Use in Model Administration Tool (specific to Oracle Analytics Cloud)	Supports SSL	More information
GreenPlum	4.3.8+	Yes Connectivity options: • Standard • Data access - Live or cache	No	No	No	-
Hortonworks Hive	1.2+	Yes Connectivity options: • Standard • Private access channel • Remote Data Connectivity • Data access - Live or cache	Yes Connectivity options: • Standard	Yes Connectivity options: • Private access channel • System Connection	Yes	Supports saving output from data flows. Supports Kerberos authentication for datasets.
IBM BigInsights Hive	1.2+	Yes Connectivity options: • Standard • Remote Data Connectivity • Data access - Live or cache	No	No	Yes	Supports Kerberos authentication for datasets.

Data Source/ Connection Type	Supported Versions	Use in Datasets	Use in Semantic Modeler (specific to Oracle Analytics Cloud)	Use in Model Administration Tool (specific to Oracle Analytics Cloud)	Supports SSL	More information
IBM DB2	10.5+ 11.1+	Yes Connectivity options: • Standard • Private access channel • Remote Data Connectivity • Data access - Live or cache	Yes Connectivity options: • Standard • Remote Data Connectivity • System Connection	Yes Connectivity options: • Standard • Private access channel • Remote Data Connectivity • System Connection	Yes	Supports SSL between Data Gateway and Oracle Analytics Cloud.
Impala (Cloudera)	2.7+	Yes Connectivity options: • Standard • Private access channel • Remote Data Connectivity • Data access - Live or cache	Yes Connectivity options: • Standard • Remote Data Connectivity • System Connection	Yes Connectivity options: • Standard • Private access channel • Remote Data Connectivity • System Connection	Yes	* Supports Kerberos authentication using Basic Auth.
Informix	12.10+	Yes Connectivity options: • Standard • Data access - Live or cache	No	No	No	-

Data Source/ Connection Type	Supported Versions	Use in Datasets	Use in Semantic Modeler (specific to Oracle Analytics Cloud)	Use in Model Administration Tool (specific to Oracle Analytics Cloud)	Supports SSL	More information
JDBC (Generic)	-	Yes Connectivity options: • Standard • Private access channel • Remote Data Connectivity • Data access - Cache only	No	No	-	See Connect to Remote Data Using Generic JDBC.
Local Subject Area in Oracle Analytics Cloud	-	Yes Connectivity options: • Standard • Data access - Live or cache	No	No	No	See Create a Dataset from a Local Subject Area.
MapR Hive	1.2+	Yes Connectivity options: • Standard • Private access channel • Remote Data Connectivity • Data access - Live or cache	Yes Connectivity options: • Standard	Yes Connectivity options: • Private access channel • System Connection	Yes	Supports saving output from data flows. Supports Kerberos authentication for datasets.
Microsoft Excel File	-	Yes Connectivity options: • Standard • Data access - Cache only	No	No	No	Only XLSX files (or XLS with unpivoted data). See Add Spreadsheets as Datasets.

Data Source/ Connection Type	Supported Versions	Use in Datasets	Use in Semantic Modeler (specific to Oracle Analytics Cloud)	Use in Model Administration Tool (specific to Oracle Analytics Cloud)	Supports SSL	More information
Microsoft Azure SQL Database	-	Yes Connectivity options: • Standard* • Data access - Live or cache	No	No	Yes**	* Use the **SQL Server** connection type on the Create Connection page. ** SSL is mandatory.
Microsoft Azure Synapse Analytics	-	Yes Connectivity options: • Standard • Data access - Live or cache	No	No	Yes	-
MongoDB	3.2.5	Yes Connectivity options: • Standard • Private access channel • Data access - Live or cache	Yes Connectivity options: • Standard • Remote Data Connectivity • System Connection	Yes Connectivity options: • Private access channel • System Connection	No	-
MySQL	5.6+ 5.7+ 8.0+	Yes * Connectivity options: • Standard • Private access channel • Remote Data Connectivity • Data access - Live or cache	Yes Connectivity options: • Standard • Remote Data Connectivity • System Connection	Yes ** Connectivity options: • Private access channel • Remote Data Connectivity • System Connection	Yes	* Supports Enterprise Edition Only. ** Supports all Editions.

Data Source/ Connection Type	Supported Versions	Use in Datasets	Use in Semantic Modeler (specific to Oracle Analytics Cloud)	Use in Model Administration Tool (specific to Oracle Analytics Cloud)	Supports SSL	More information
MySQL Heatwave	8.0.31+Note: (Cloud offering – current latest cloud version supported)	Yes Connectivity options: • Standard • Private access channel • Data access - Live or cache	No	Yes Connectivity options: • Private access channel • System Connection	Yes	-
OData	2.0	Yes Connectivity options: • Standard • Data access - Cache only	No	No	No	-
Pivotal HD Hive	-	Yes Connectivity options: • Standard • Remote Data Connectivity • Data access - Live or cache	Yes Connectivity options: • Standard	Yes Connectivity options: • Standard	Yes	Supports Kerberos authentication for datasets.
PostgreSQL	9.0+	Yes Connectivity options: • Standard • Private access channel • Data access - Live or cache	No	Yes Connectivity options: • Private access channel • System Connection	Yes	-

Data Source/ Connection Type	Supported Versions	Use in Datasets	Use in Semantic Modeler (specific to Oracle Analytics Cloud)	Use in Model Administration Tool (specific to Oracle Analytics Cloud)	Supports SSL	More information
REST API		Yes	No	No	No	Connect to wide range of data sources that have REST endpoints available. See Create a Connection to a Data Source with REST Endpoints (Preview).
Salesforce	-	Yes Connectivity options: • Standard • Data access - Live or cache	No	No	No	Before you create a Salesforce connection, in the Salesforce application make sure that you enable API access in the administrative permissions for the Salesforce user.
Snowflake	Current version	Yes * Connectivity options: • Standard • Private access channel • Data access - Live or cache	Yes Connectivity options: • Standard • Remote Data Connectivity • System Connection	Yes ** Connectivity options: • Standard • Private access channel • Remote Data Connectivity • System Connection	Yes***	* See Connect to Snowflake Data Warehouse. ** See Create Semantic Model Connections to Snowflake Data Warehouse. *** SSL is implicit. Connection from BI Publisher is via one of the dataset or semantic model connections.

Data Source/ Connection Type	Supported Versions	Use in Datasets	Use in Semantic Modeler (specific to Oracle Analytics Cloud)	Use in Model Administration Tool (specific to Oracle Analytics Cloud)	Supports SSL	More information
Spark	1.6+ 3.0	Yes Connectivity options: • Standard • Private access channel • Data access - Live or cache	Yes Connectivity options: • Standard • Remote Data Connectivity • System Connection	Yes Connectivity options: • Private access channel • Remote Data Connectivity • System Connection	Yes	Supports saving output from data flows. Supports Kerberos.
SQL Server	2014 2016 2017 2019	Yes Connectivity options: • Standard * • Private access channel • Remote Data Connectivity • Data access - Live or cache	Yes Connectivity options: • Standard • Remote Data Connectivity • System Connection	Yes Connectivity options: • Standard • Private access channel • Remote Data Connectivity • System Connection	Yes	* In SQL Server, set up a named connection using static port allocation. Dynamic port allocation isn't supported for connecting Oracle Analytics to SQL Server.
Sybase ASE	15.7+	Yes Connectivity options: • Standard • Data access - Live or cache	Yes Connectivity options: • Standard • Remote Data Connectivity • System Connection	No	No	-
Sybase IQ	16+	Yes Connectivity options: • Standard • Data access - Live or cache	No	No	No	-

Data Source/ Connection Type	Supported Versions	Use in Datasets	Use in Semantic Modeler (specific to Oracle Analytics Cloud)	Use in Model Administration Tool (specific to Oracle Analytics Cloud)	Supports SSL	More information
Teradata	16.20 17.x	Yes Connectivity options: • Remote Data Connectivity • Data access - Live or cache	Yes Connectivity options: • Remote Data Connectivity	Yes Connectivity options: • Remote Data Connectivity • System Connection	Yes	-
Vertica	9.x 12.x	Yes Connectivity options: • Standard • Private access channel • Remote Data Connectivity * • Data access - Live or cache	No	Yes Connectivity options: • Standard • Private access channel • Remote Data Connectivity * • System Connection	Yes **	* Remote connectivity for datasets is only available using Data Gateway ** Server-Side SSL support only – no support for Mutual-TLS.

Connect to a Database

You can create, edit, and delete database connections and use the connections to create datasets from databases.

Topics:

- Connect to an Oracle Database
- Create Datasets from Databases
- Edit a Data Source Connection
- Delete a Data Source Connection

Connect to an Oracle Database

You can create a connection to a database and use the connection to access data, build a dataset, and visualize data.

▶ Video

You can't use remote connections to save a dataset from a Data Flow.

1. On the Home page, click **Create**, then click **Connection**.

2. In Create Connection dialog, click the connection type, for example, **Oracle Database**.

3. Enter a unique name for the new connection, and database connection details.

    -   If you're not creating an SSL connection, specify the connection information for the database, such as the hostname, port, credentials, service name and so on.

    -   If you're creating an SSL connection, in the **Client Wallet** field, click **Select** to browse for the `cwallet.sso` file. Ask your administrator for the location of the `cwallet.sso` file.

4. Use the **Connection Type** option to specify how you'd like to connect.

    -   When you create connections to Oracle Databases, you can connect in two ways using the **Connection Type** option:

        –   **Basic** - Specify the **Host**, **Port**, and **Service Name** of the database.

        –   **Advanced** - In the **Connection String** field specify the Single Client Access Name (SCAN) ID of databases running in a RAC cluster. For example:
            ```
            sales.example.com =(DESCRIPTION= (ADDRESS_LIST=
            (LOAD_BALANCE=on)(FAILOVER=ON) (ADDRESS=(PROTOCOL=tcp)
            (HOST=123.45.67.111)(PORT=1521)) (ADDRESS=(PROTOCOL=tcp)
            (HOST=123.45.67.222)(PORT=1521)) (ADDRESS=(PROTOCOL=tcp)
            (HOST=123.45.67.333)(PORT=1521))) (CONNECT_DATA=(SERVICE_NAME=
            salesservice.example.com)))
            ```

    -   **Enable Bulk Replication** - If you're loading a dataset for a workbook, then this option should be turned off and you can ignore it. This option is reserved for data analysts and advanced users for replicating data from one database to another database.

5. If you're connecting to an on-premises database, click **Use Remote Data Connectivity**.

    Check with your administrator that you can access the on-premises database.

6. If you want data modelers to be able to use these connection details. click **System connection**. See Database Connection Options.

7. Click **Save**.

Create Datasets from Databases

After you create database connections, you can use those connections to create datasets.

> **Note:**
>
> The maximum number of tables displayed is 10,000. If your connection provides access to additional tables and the tables you want aren't displayed, enter the SQL statement for the dataset manually by selecting the **Enter SQL** option.

1. On the Home page, click **Create**, and then click **Dataset**.

2. In Create Dataset, click the database connection containing the data to use.

3. In Add Dataset, click the schema containing the table with your data. Click the table to use for the dataset.

4. In the column list, browse or search for the columns you want to include in the dataset. You can click **Add All**, or select a column or columns and then click **Add Selected**.

5. Optional: Use the **Data Access** option to specify how to refresh the dataset.

   Alternatively, you can select the **Enter SQL** option to view or modify the data source's SQL statement or to write a SQL statement.

6. Click **Add**.

Edit a Data Source Connection

You can update a data source's connection details.

If you're editing an SSL connection to an Oracle Database and you need to use a new `cwallet.sso` file, in the **Client Wallet** field, click **Select** to browse for the `cwallet.sso` file. Ask your administrator for the location of the `cwallet.sso` file.

1. On the Home page click the Navigator, select **Data**, and then click **Connections**.

2. Hover over the connection that you want to edit. To the right of the highlighted connection, click **Actions menu**, and select **Inspect**.

3. In the Inspect dialog, edit the connection details.

   You can't see the current password or Logical SQL for connections. If you need to change these, create a new connection.

4. Click **Save**.

Delete a Data Source Connection

You can remove a data source connection from Oracle Analytics Cloud. For example, you must delete a database connection and create a new connection when the database's password has changed.

If the connection contains any datasets, then you must delete the datasets before you can delete the connection.

1. Go to the Data page and select **Connections**.

2. Hover over the connection that you want to delete. To the right of the highlighted connection, click **Actions menu**, and select **Delete**.

3. Click **Yes**.

Connect to Data

Gather data from various sources to include in your projects.

Topics:

- Connect to an Application in Oracle Fusion Cloud Applications Suite
- Connect to Dropbox

- [Connect to Google Drive or Google Analytics](#)
- [Connect to Oracle Autonomous Data Warehouse](#)
- [Connect to Oracle Autonomous Data Warehouse](#)
- [Connect to Oracle Autonomous Transaction Processing](#)
- [Connect to Oracle Big Data Cloud](#)
- [Create a Connection to Oracle Essbase](#)
- [Create a Connection to Oracle Essbase Data on a Private Network](#)
- [Connect to Oracle Talent Acquisition Cloud](#)
- [Connect to Snowflake Data Warehouse](#)

Connect to an Application in Oracle Fusion Cloud Applications Suite

Create a connection to an application in Oracle Fusion Cloud Applications Suite to visualize data from that application. For example, you can connect to Oracle Fusion Cloud Financials with Oracle Transactional Business Intelligence. You can also connect to Oracle BI Enterprise Edition.

1. On the Data page or Home page, click **Create**, then click **Connection**.

2. Click **Oracle Applications**.

3. Enter the connection details.

4. For **URL**, enter the URL for Fusion Applications Suite with Oracle Transactional Business Intelligence or Oracle BI EE.

   > **Note:**
   >
   > Don't enter the analytics URL of the current Oracle Analytics application you are logged in to. If you want to visualize the data used in a local analysis, create a dataset based on the analysis (local subject area). See Create a Dataset from a Subject Area in Your Instance.

5. Under **Authentication**, specify how you'd like to authenticate the connection:

   - **Always use these credentials** - Oracle Analytics always uses the login name and password you provide for the connection. Users aren't prompted to log in.

   - **Require users to enter their own credentials** - Oracle Analytics prompts users to enter their own user name and password for the data source. Users can only access the data for which they have the permissions, privileges, and role assignments.

   - **Use the active user's credentials** - Oracle Analytics doesn't prompt users to sign in to access the data. The same credentials they used to sign in to Oracle Analytics are also used to access this data source. Make sure that the Oracle Analytics user exists in Oracle Transactional Business Intelligence or Oracle Fusion Analytics Warehouse.

6. Save the details.

   You can now create datasets from the connection.

The connection is visible only to you (the creator), but you can create and share datasets for it.

Connect to Dropbox

You can create a connection to Dropbox and use the connection to access data.

📰 LiveLabs Sprint

Before you start, set up a Dropbox application. See the Dropbox documentation.

1. Ask your Oracle Analytics administrator to allow connections to Dropbox.

   Your Oracle Analytics administrator must register the following domains as safe:

   ```
   api.dropboxapi.com
   ```

   ```
   *.dropbox.com
   ```

   See Register Safe Domains.

2. On the Oracle Analytics Home page, click **Create**, and then click **Connection**.

3. Click **Dropbox** to display the Create Connection dialog.

4. Enter a **Connection Name** and optional **Description**.

5. Copy the URL displayed in the **Redirect URL** field.

6. In the Dropbox application, sign-in, and paste the **Redirect URL** URL into the Dropbox **OAuth 2 Redirect URIs** field, then click **Add**.

7. In Dropbox, copy the key in the **App Key** field.

8. In Oracle Analytics, paste the **App Key** key into the **Client ID** field.

9. In Dropbox, locate the **App Secret** field, then click **Show** and copy the value.

10. In Oracle Analytics, paste the **App Secret** value into the **Client Secret** field, then click **Authorize**.

11. In the Dropbox prompt to authorize the connection, click **Allow**.

    The Create Connection dialog refreshes and displays the name of the Dropbox account and associated email account.

12. Save the connection.

Connect to Google Drive or Google Analytics

You can create a connection to Google Drive or Google Analytics and use the connection to access data.

Before you start, set up a Google Drive or Google Analytics application. See the Google documentation.

We recommend that you use the latest Google Analytics connector, which supports column-listing.

1. Ask your Oracle Analytics administrator to allow connections to Google.

   Your Oracle Analytics administrator must register the following domains as safe:

   ```
   api.google.com
   ```

   ```
   *.google.com
   ```

See Register Safe Domains.

2. On the Oracle Analytics Home page, click **Create**, and then click **Connection**.

3. Click **Google Drive** or **Google Analytics** to display the Create Connection dialog.

4. Enter a **Connection Name** and optional **Description**.

5. Copy the URL displayed in the **Redirect URL** field.

6. In the Google application, paste the **Redirect URL** into the Google **Authorized redirect URIs** field, then click **Add**.

7. In Google, locate the **Client Secret** field, then click **Show** and copy the value.

8. In Oracle Analytics, copy the Google **Client Secret** value into the **Client Secret** field.

9. In **View Name**, specify the name of the default reporting view in Google Analytics that you'd like to analyze., then click **Authorize**.

10. In the Google prompt to authorize the connection, click **Allow**.

    The Create Connection dialog refreshes and displays the name of the Google account, and its associated email account.

11. Save the connection.

Connect to Oracle Autonomous Data Warehouse

You can create a connection to Oracle Autonomous Data Warehouse and use the connection to access data.

You can connect to Oracle Autonomous Data Warehouse using security certificates downloaded from Oracle Autonomous Data Warehouse to a wallet (known as mTLS, or Mutual Transport Layer Security), or without a wallet (known as TLS, or Transport Layer Security). See About TLS Authentication. The credentials wallet file secures communication between Oracle Analytics and Oracle Autonomous Data Warehouse. The wallet file (for example, `wallet_ADWC1.zip`) that you upload must contain SSL trusted certificates, to enable SSL on your Oracle Database Cloud connections.

📑 Tutorial

1. To connect using a credentials wallet file, (known as **Mutual TLS** connection), download the SSL certificates from Oracle Autonomous Data Warehouse.

   See Download Client Credentials (Wallets) in *Using Oracle Autonomous Database Serverless*.

   The credentials wallet file secures communication between Oracle Analytics and Oracle Autonomous Data Warehouse. The wallet file (for example, `wallet_ADWC1.zip`) that you upload must contain SSL certificates.

   To connect without using a credentials wallet file (known as **TLS** connection), skip Step 1 and go straight to the Step 2.

2. On the Home page, click **Create** then click **Connection**.

3. Click **Oracle Autonomous Data Warehouse** to display the connection dialog.

4. Enter a user-friendly **Connection Name** and **Description**.

5. For **Encryption Type**:

- To connect without a credentials wallet file, select **TLS** as the **Encryption Type**, enter a **Connection String**, then enter a **Username** and **Password** of a user in Oracle Autonomous Data Warehouse.

- To connect using a credentials wallet file, select **Mutual TLS** as the **Encryption Type**, then click **Select** and browse for and select the Client Credentials wallet file that you downloaded from Oracle Autonomous Data Warehouse (for example, wallet_ADWC1.zip), then enter a **Service Name**. The **Client Credentials** field displays the `cwallet.sso` file.

6. If you're connecting to a remote database, click Use Remote Data Connectivity.

   Check with your administrator that you can access the remote database.

7. If you want data modelers to be able to use these connection details. click **System connection**. See Database Connection Options.

8. Click **Save**.

You can now create datasets from the connection.

Connect to Oracle Autonomous Transaction Processing

You can create a connection to Oracle Autonomous Transaction Processing and use the connection to access data.

Before you start, ask your Autonomous Data Warehouse (ADW) administrator to configure ADW to allow access from Oracle Analytics Cloud. The configuration steps that administrators follow are different for public and private types of connection:

- For public connections, see Enable Access to Oracle Autonomous Data Warehouse Prerequisites.

- For private connections, see How do I connect to a private Oracle Autonomous Data Warehouse in a customer VCN?.

1. To connect using a credentials wallet file, (known as **Mutual TLS** connection), download the SSL certificates from Oracle Autonomous Data Warehouse.

   See Download Client Credentials (Wallets) in *Using Oracle Autonomous Database Serverless*.

   To connect without using a credentials wallet file (known as **TLS** connection), skip Step 1 and go straight to the Step 2.

   A credentials wallet file secures communication between Oracle Analytics and Oracle Autonomous Data Warehouse. The wallet file (for example, `wallet_ADWC1.zip`) that you upload must contain SSL certificates.

2. On the Home page, click **Create** then click **Connection**.

3. Click **Oracle Autonomous Transaction Processing**.

4. Enter a user-friendly **Connection Name** and **Description**.

5. For **Encryption Type**:

   To connect without a credentials wallet file, select **TLS**, then skip to the next step.

   To connect using a credentials wallet file, select **Mutual TLS**, then click **Select** and browse for and select the Client Credentials wallet file that you downloaded from Oracle Autonomous Data Warehouse (for example, wallet_ADWC1.zip). The **Client Credentials** field displays the `cwallet.sso` file.

6. For the **TLS** connection type (without a wallet), enter a **Connection String**, the **Username** and **Password** of a user in Oracle Autonomous Data Warehouse.

7. If you want data modelers to be able to use these connection details. click **System connection**. See Database Connection Options.

8. Click **Save**.

Connect to Oracle Big Data Cloud

You can create a connection to Oracle Big Data Cloud Compute Edition and use the connection to access data.

1. In Oracle Analytics Cloud, click **Create** and then click **Connection**.

2. Click **Oracle Big Data** to display the fields for the connection.

3. Enter the connection criteria.

4. Click **Save** to create the connection.

   You can now create datasets from the connection.

Create a Connection to Oracle Essbase

You can create a connection to Oracle Analytics Cloud – Essbase and use the connection to access source data.

1. On the Home page, click **Create**, and then click **Connection**.

2. Click **Oracle Essbase**.

3. Enter the connection details.

4. For **DSN** (data source name), enter the agent URL for your data source.

   For Oracle Analytics Cloud – Essbase use the format:

   ```
   https://fully_qualified_domain_name/essbase/agent
   ```

   For example: `https://my-example.analytics.ocp.oraclecloud.com/essbase/agent`.

   With this URL, you can connect without having to open any ports or performing additional configuration. Oracle Analytics Cloud – Essbase must have a public IP address and use the default port.

5. For **Username** and **Password**, enter user credentials with access to the Essbase data source.

6. Under **Authentication**, specify how you'd like to authenticate the connection:

   - **Always use these credentials** - Oracle Analytics always uses the login name and password you provide for the connection. Users aren't prompted to log in.

   - **Require users to enter their own credentials** - Oracle Analytics prompts users to enter their own user name and password for the data source. Users can only access the data for which they have the permissions, privileges, and role assignments.

   - (Displayed if Oracle Analytics supports impersonation for this database type) **Use the active user's credentials** - Oracle Analytics doesn't prompt users to

sign in to access the data. The same credentials they used to sign in to Oracle Analytics are also used to access this data source.

7. Save the details.

You can now create datasets from the connection.

Create a Connection to Oracle Essbase Data on a Private Network

You can create a connection to Oracle Essbase data on a private network and use the connection to access data.

You secure a connection to Oracle Essbase data held on a private network by using Data Gateway or Private Access Channel (for datasets or semantic models). For Data Gateway, your Administrator installs Data Gateway in your private network. Data Gateway then redirects queries to the Essbase host.

Before you start, make sure that your Oracle Essbase Marketplace instance has signed certificates.

1. On the Home page, click **Create**, and then click **Connection**.

2. Click **Oracle Essbase**.

3. Enter the connection details.

4. For **DSN** (data source name), enter the URL for your data source.

    These are the connectivity options to access Oracle Essbase on your private network:

    Note: When you specify the URL for your data source, <hostname>:<port> specify the hostname and port of the host accessible on the public internet that forwards traffic to your Remote Data Connector host.

    *   The basic URL syntax:

        ```
        http(s)://<hostname>:<port>/essbase/capi/<private essbase host
        address>/<Oracle Essbase Agent port on the
              specified host>
        ```

        For example,

        ```
        https://myproxyhost.example.com:1234/essbase/capi/mylocalhost/1423
        ```

    *   When Oracle Essbase is running on a secure port:

        ```
        http(s)://<hostname>:<port>/essbase/capi/<private essbase host
        address>/<Oracle Essbase Agent Secure port on the specified host>/
        secure
        ```

    *   When Oracle Essbase is running on a secure port, with a self-signed certificate:

        ```
        http(s)://<hostname>:<port>/essbase/capi/<private essbase host
        address>/<Oracle Essbase Agent Secure port on the specified host>/
        secure/selfsigned
        ```

5. Under **Authentication**, specify how you'd like to authenticate the connection:

- • **Always use these credentials** - Oracle Analytics always uses the login name and password you provide for the connection. Users aren't prompted to log in.

- • **Require users to enter their own credentials** - Oracle Analytics prompts users to enter their own user name and password for the data source. Users can only access the data for which they have the permissions, privileges, and role assignments.

- • (Displayed if Oracle Analytics supports impersonation for this database type) **Use the active user's credentials** - Oracle Analytics doesn't prompt users to sign in to access the data. The same credentials they used to sign in to Oracle Analytics are also used to access this data source.

6. If you're connecting to an on-premises database, click **Use Remote Data Connectivity**.

   Check with your administrator that you can access the on-premises database.

7. Save the details.

   You can now create datasets from the connection.

Connect to Oracle Talent Acquisition Cloud

You can create a connection to Oracle Talent Acquisition Cloud and use the connection to access data.

1. On the Home page, click **Create** and then click **Connection**.

2. Click **Oracle Talent Acquisition** to display the fields for the connection.

3. Enter the connection details.

4. For **Host**, enter the URL for the Oracle Talent Acquisition data source.

   For example, if the Oracle Talent Acquisition URL is `https://example.taleo.net`, then the connection URL that you must enter is `https://example.taleo.net/smartorg/Bics.jss`.

5. Select an **Authentication** option.

   - • Select **Always use these credentials**, so that the login name and password you provide for the connection are always used and users aren't prompted to log in.

   - • Select **Require users to enter their own credentials** when you want to prompt users to enter their user name and password to use the data from the Oracle Talent Acquisition Cloud data source. Users are required to log in see only the data that they have the permissions, privileges, and role assignments to see.

6. Click **Save**.

Connect to Snowflake Data Warehouse

You can create a connection to Snowflake Data Warehouse and use the connection to access data.

See format guidelines, `https://docs.snowflake.net/manuals/user-guide/connecting.html`.

1. On the Home page, click **Create**, and then click **Connection**.

2. Click **Snowflake Data Warehouse**.

3. Enter a Connection Name.

4. In **Hostname**, enter the host account name using one of the following formats:

   • For Amazon Web Services US West, use `<account>.snowflakecomputing.com`

   • For all other regions on Amazon Web Services, use `<account>.<region>.snowflakecomputing.com`

   • For all regions on Microsoft Azure, use `<account>.<region>.azure.snowflakecomputing.com`

   Where `account` is the Snowflake account name that you want to use to access the data, for example: `exampleaccountname.snowflakecomputing.com`.

5. For **Username** and **Password**, enter user credentials with access to the Snowflake data source.

6. For **Database Name**, enter the name of the database containing the schema tables and columns that you want to connect to.

7. For **Warehouse**, enter the name of the warehouse containing the database, schema tables and columns that you want to connect to. For example, `Example-WH`.

8. If you want data modelers to be able to use these connection details. click **System connection**. See Database Connection Options.

9. Click **Save**.

Spreadsheets

You can include data from spreadsheets in projects.

Topics:

• About Files for Datasets

• Create a Dataset from a File Uploaded from Your Computer

• Create a Dataset From a File Uploaded from Dropbox, Google Analytics, or Google Drive

About Files for Datasets

You can create datasets from Microsoft Excel spreadsheets (XLSX and XLS), CSV files, and TXT files. The maximum file size you can upload is 250 MB and the data column limit for a single file is 250 columns.

You can upload and use files from your computer, or from Dropbox or Google Drive data source connections.

When you upload a file, you can use it only in the dataset that you uploaded it to. Because Oracle Analytics doesn't store an uploaded file, you must upload the file again to include it in another dataset.

Formatting Rules for Excel Spreadsheet Files

• Tables start in Row 1 and Column 1 of the Excel file.

• Tables have a regular layout with no gaps, repeated column names, or inline headings. An example of an inline heading is one that's repeated on every page of a printed report.

- Tables don't contain pivoted data.

- Row 1 contains the unique names of the columns in the table.

- Row 2 and greater contain the data for the table.

- Data in a column is of the same type. For example, don't use a phone number column to hold email addresses.

- Data is at the same granularity.

Character Set Encoding Rules for CSV and TXT Files

- Encode source files using UTF-8.

- Before you edit your files, configure your text editor to use the appropriate font and script (or subset).

Create a Dataset from a File Uploaded from Your Computer

You can upload Excel spreadsheets (XLSX or XLS), CSV files, and TXT files from your computer to create a dataset.

Confirm that the file that you want to upload meets these requirements:

- The file is either an Excel spreadsheet in .XLSX or .XLS format, a CSV file, or a TXT file.

- The spreadsheet contains no pivoted data.

- The spreadsheet is structured properly for import and use as a dataset. See About Files for Datasets.

1. On the Home page, click **Create** and then click **Dataset**.

2. In the Create Dataset dialog, either drag and drop a file to the dialog, or click **Drop data file here or click to browse** to browse your computer for a file to upload.

3. In the Create Dataset page's **Name** field, provide a name for the dataset table created from the file.

4. Optional: If you're uploading a CSV or TXT file, then in the **Separated By**, **Thousand Separator**, and **Decimal Separator** fields, confirm or change the default delimiters.

   To specify a custom delimiter, choose Custom in the **Separated By** field and enter the character you want to use as the delimiter. In the CSV or TXT file, a custom delimiter must be one character. The following example uses a pipe (|) as a delimiter: Year|Product|Revenue|Quantity|Target Revenue| Target Quantity.

5. Click **OK** to upload the file and create the dataset.

Create a Dataset From a File Uploaded from Dropbox, Google Analytics, or Google Drive

You can upload Excel spreadsheets (XLSX or XLS), CSV files, and TXT files from Dropbox, Google Analytics, or Google Drive and use them to create datasets.

> **Note:**
>
> Files uploaded from Google Analytics aren't available to create or include in a dataset with multiple tables.

Before you create the dataset, confirm that the connection you need exists.

Confirm that the file that you want to upload meets these requirements:

- The file is either an Excel spreadsheet in .XLSX or .XLS format, a CSV file, or a TXT file.
- The spreadsheet contains no pivoted data.
- The spreadsheet is structured properly for import and use as a dataset. See About Files for Datasets.

1. On the Home page, click **Create** and then click **Dataset**.
2. In the Create Dataset dialog, select a connection.
3. Browse for and select the file that you want to upload.
4. In the Create Dataset page's **Name** field, provide a name for the dataset table created from the file.
5. If you're uploading a CSV or TXT file, then in the **Separated By**, **Thousand Separator**, and **Decimal Separator** fields, confirm or change the default delimiters.

   To specify a custom delimiter, choose Custom in the **Separated By** field and enter the character you want to use as the delimiter. In the CSV or TXT file, a custom delimiter must be one character. The following example uses a pipe (|) as a delimiter: Year| Product|Revenue|Quantity|Target Revenue| Target Quantity.
6. Click **OK** to upload the file and create the dataset.

Create Visualizations

Create visualizations of data to include in KPIs.

Topics:

- Build a Visualization by Adding Data from the Data Panel
- Create the Best Visualization For Selected Data Elements
- Add Data to a Visualization
- Use the Assignment Panel to Add Data to the Visualization
- Change Visualization Types
- Sort Data in Visualizations

- • [Sort, Drill, and Select Data in Visualizations](#)
- • [About Synchronizing Visualizations in a Canvas](#)
- • [Update Canvas Properties](#)
- • [Adjust Visualization Properties](#)
- • [Add Reference Lines to Visualizations](#)
- • [Format Numeric Values of Columns](#)
- • [Format Numeric Values of Visualizations](#)
- • [Transform Data](#)
- • [Convert Text Columns to Date or Time Columns](#)
- • [Apply Color to Visualizations](#)

Build a Visualization by Adding Data from the Data Panel

This topic describes how to add data to a visualization.

Topics:

- • [Create the Best Visualization For Selected Data Elements](#)
- • [Add Data to a Visualization](#)
- • [Use the Assignment Panel to Add Data to the Visualization](#)

Create the Best Visualization For Selected Data Elements

When you select data elements on the Data Panel, Oracle Analytics can create the best visualization for you.

1. On the Home page, select a workbook, click the **Actions menu**, and then select **Open**.

2. Select the data you want to visualize by selecting one or more data elements on the Data Panel , right-click, and then click **Create Best Visualization**.
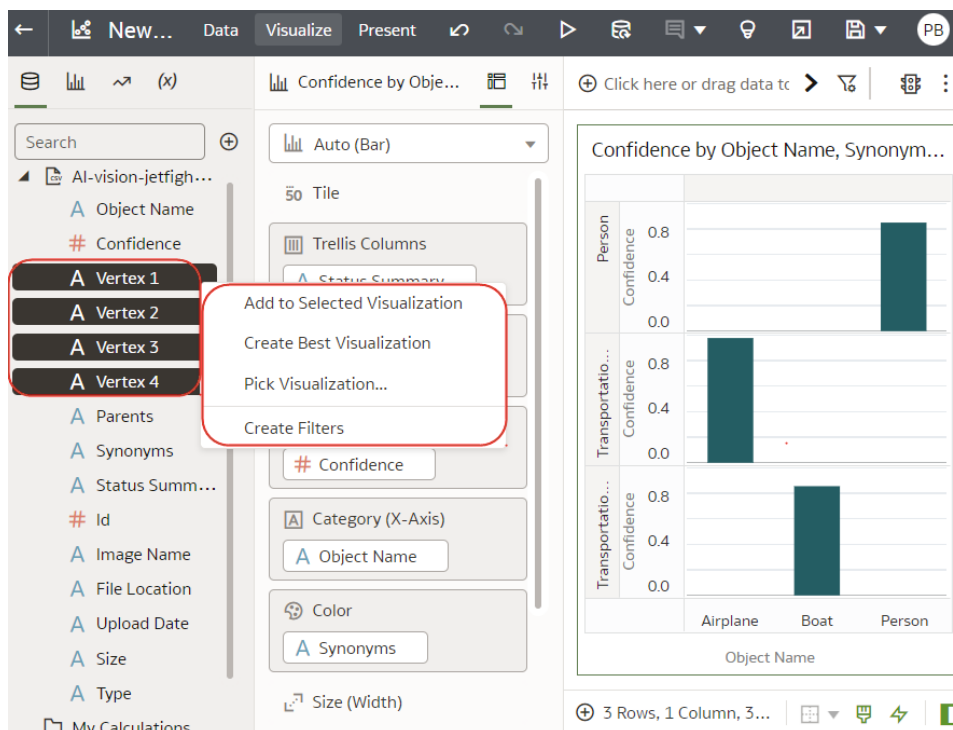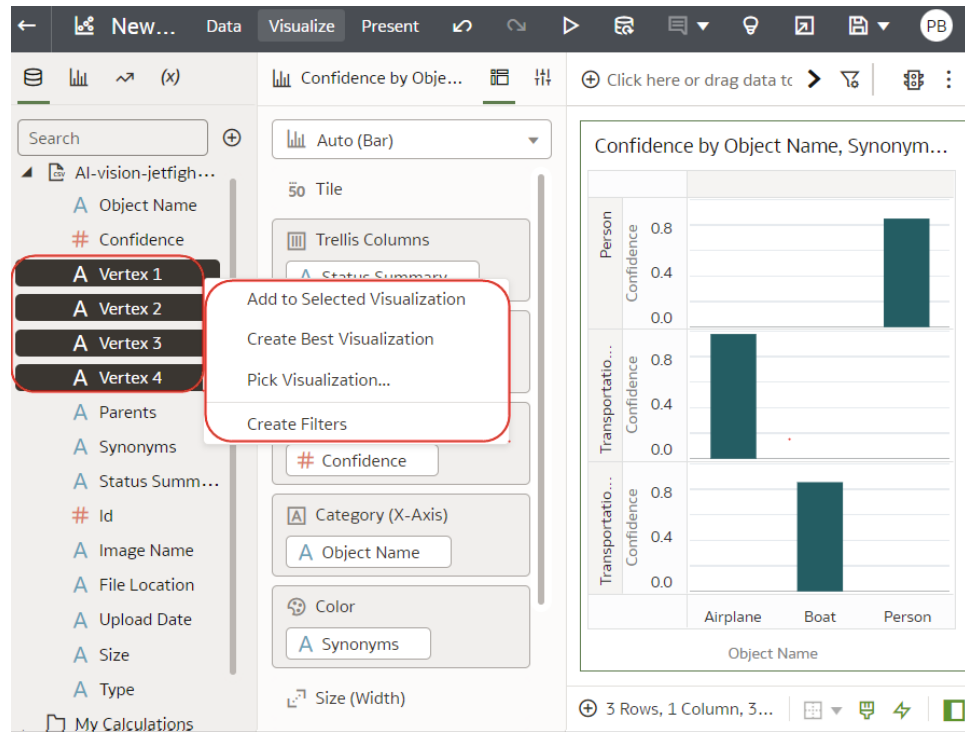
Add Data to a Visualization

After you've selected the datasets for your workbook, you can begin to add data elements such as measures and attributes to visualizations.

If you haven't already created a visualization, you need to create one.

You can select compatible data elements from the datasets and drop them onto the Grammar Panel in the Visualize canvas. Based on your selections, visualizations are created on the canvas. The Grammar Panel contains sections such as Columns, Rows, Values, and Category.

1. On the Home page, select a workbook, click the **Actions menu**, and then select **Open**.

2. If you created a workbook, then add a dataset to it.

3. Select the data you want to visualize by selecting one or more data elements on the Data Panel and then using one of the following methods:

   • Right-click, and click **Add to Selected Visualization**.

- Right-click, select **Pick Visualization**, and select a visualization type (for example, a table or heat map).

- Drag and drop them onto the visualization canvas or the Grammar Panel.
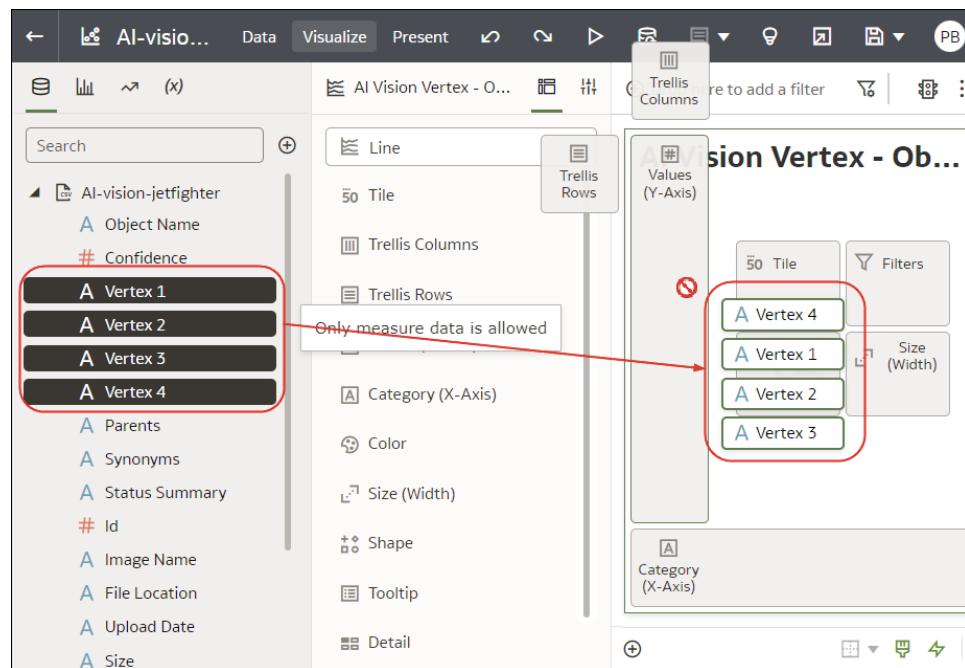
Tips on adding data

- To help you understand the components of a visualization, hover over it and click **Show Assignments** to annotate the visualization components, for example, the X-Axis and Y-Axis of a chart.
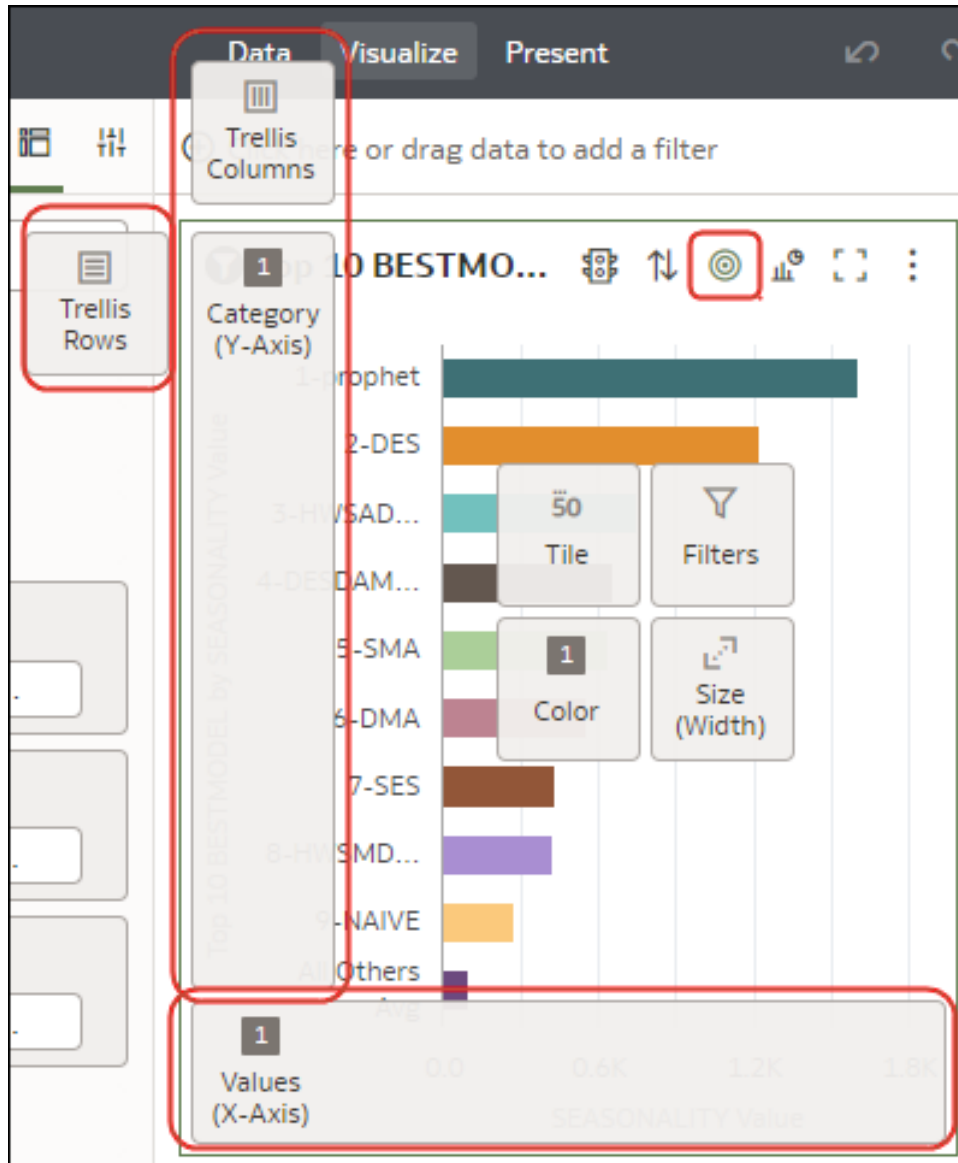
- Use the Grammar Panel to configure visualization components (for example, add, remove, re-order).
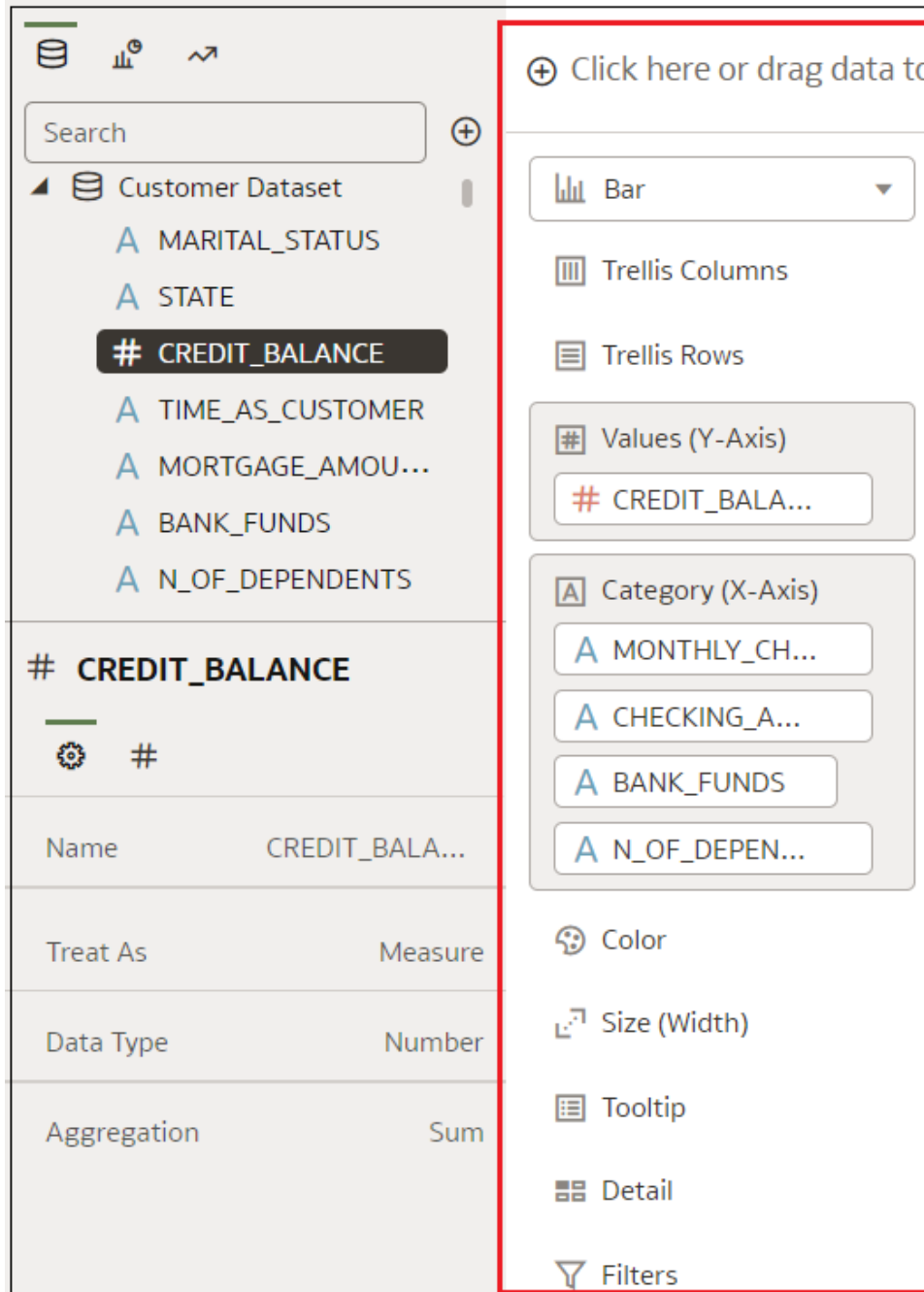
Use the Assignment Panel to Add Data to the Visualization

You can use the Assignment Panel to help you position data elements in the optimal locations for exploring content.

A workbook must contain one or more datasets before you can add data elements to the Assignment Panel. The sections in the Assignment Panel are the same as in the Grammar Panel.

1. On the Home page, select a workbook, click the **Actions menu**, and then select **Open**.

2. Hover over the visualization and click **Show Assignments** to show the visualization components, for example, the X-Axis and Y-Axis of a chart.
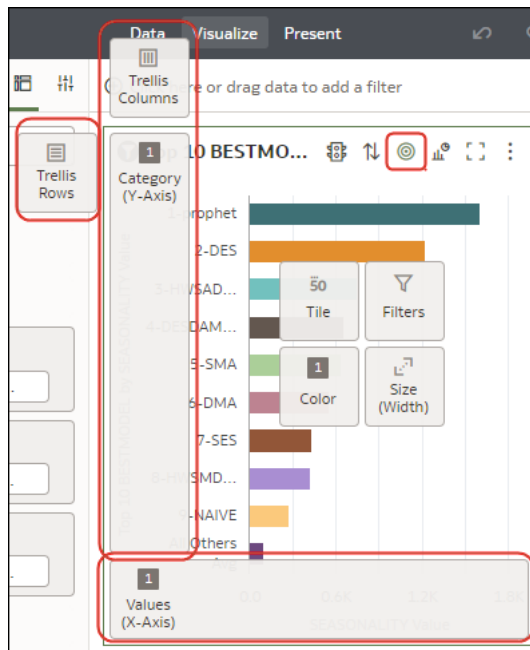
3. Drag a data element to the visualization and hover over assignments; you'll see a green cross when you're hovering over a valid assignment.

4. Drop the data element on the selected assignment.

Change Visualization Types

You can change visualization types to best suit the data you're exploring.

When you create a workbook and add data elements to the canvas, Auto Visualization mode chooses the most appropriate visualization type based on the selected data element. The Auto Visualization mode is on (selected) by default. If you add more data elements, the visualization type is automatically updated, and the best type is selected based on the data elements.

If you want to use a different visualization type, then you need to select it from the visualization type list. When you change the visualization type, Auto Visualization mode is turned off. When the Auto Visualization mode is off (deselected), adding more data elements to the canvas won't change the visualization type automatically.

1. On the Home page, select a workbook, click the **Actions menu**, and then select **Open**.

2. Select a visualization on the canvas, and on the visualization toolbar, click **Change Visualization Type**.

3. Select a visualization type. For example, select Treemap to change the visualization type from Pivot to Treemap.

   When you change the visualization type, the data elements are moved to matching drop target names. If an equivalent drop target doesn't exist for the new visualization type, then the data elements are moved to a Grammar Panel section labeled **Unused**. You can then move them to the Grammar Panel section you prefer.

Sort Data in Visualizations

Sometimes you're working with a lot of data in visualizations. To optimize your view of that data in the workbook's visualization canvas, you need to sort it.

If your workbook doesn't have a visualization, create one. See Create a Workbook and Add Visualizations.

1. On the Home page, select a workbook, click the **Actions menu**, and then select **Open**.

2. In the Visualize canvas, do one of the following:

   • In the main editing panel, right click the data element you want to sort, hover over **Sort By** next to the element label, and select a sorting option (for example, Low to High, High to Low, None).

   • In the Visualization Grammar Panel, **Grammar** pane, right click the data element you want to sort, hover over **Sort By** then click a sorting option (for example, Low to High, A to Z, None).
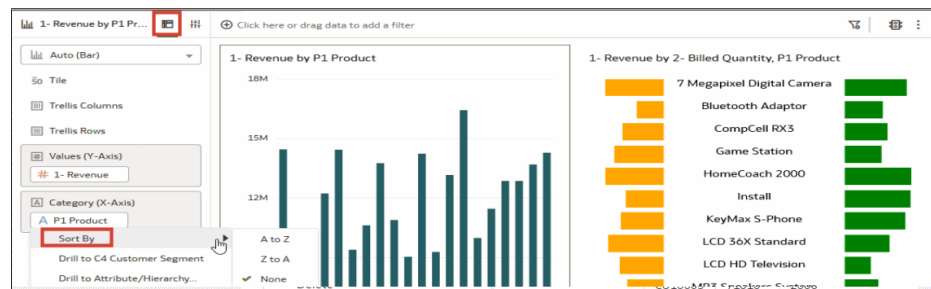
Sort, Drill, and Select Data in Visualizations

You can narrow your focus to explore certain aspects of your data by sorting, drilling, and selecting data.

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1. On the Home page, select a workbook, click the **Actions menu**, and then select **Open**.

2. Select a visualization and click **Menu**.

3. Select one of the following:

   • Click **Sort By** and then select **Custom**, or click **Sort** in the visualization tool bar to display the Sort Order dialog where you can sort one or more attributes in a visualization. You can create and view sorts, define sort attributes, arrange the sort order for multiple sorts, and view and resolve sort conflicts. You can also sort an attribute by a measure column that isn't used in the visualization.
   If the table includes subtotals or contains a dimension, then all column sorts on columns after the subtotal or dimension, are sorted in the subtotal group.

   If you're working with a table view with multiple sorts, then the system always sorts the last column that you sorted first. In some cases where specific values display in the left column, you can't sort the center column. For example, if the

left column is Product and the center column is Product Type, then you can't sort the Product Type column. To work around this issue, swap the positions of the columns and try to sort again.

- Click **Drill** to create a drill to a data element, and to create a drill through hierarchies in data elements, for example you can create a drill to weeks within a quarter. You can also create drills using multiple data elements. For example, you can select two separate year members that are columns in a pivot table, and drill into those members to see the details.

- Click **Drill to [*Attribute Name*]** to directly drill to a specific attribute within a visualization.

- Click **Keep Selected** to keep only the selected members and remove all others from the visualization and its linked visualizations. For example, you can keep only the sales that are generated by a specific sales associate.

- Click **Remove Selected** to remove selected members from the visualization and its linked visualizations. For example, you can remove the Eastern and Western regions from the selection.

About Synchronizing Visualizations in a Canvas

You can specify whether or not to synchronize Visualizations in a canvas.

You use the **Synchronize Visualizations** setting to specify how the visualizations on your canvas interact. By default, visualizations are linked for automatic synchronization.

When **Synchronize Visualizations** is set to **On**, and you add or remove data values from a visualization, this automatically adds or removes the values in corresponding visualizations. When **Synchronize Visualizations** is set to **Off**, this unlinks your visualizations and turns off automatic synchronization.

When **Synchronize Visualizations** is **On**, then all filters on the filter bar and actions that create filters, such as drill, apply to:

- All the visualizations in a canvas with a single dataset.
- All the visualizations of joined datasets with multiple datasets.

  If a data element from a dataset is specified as a filter but isn't matched with the joined datasets, then the filter only applies to the visualization of the dataset that it was specified for.

When **Synchronize Visualizations** is set to **Off**, then analytic actions such as Drill affect only the visualization to which you applied the action.

Update Canvas Properties

You can use the canvas properties to perform many different tasks. For example, change the layout, set brushing, or configure canvas refresh settings.

1. On the Home page, select a workbook, click the **Actions menu**, and then select **Open**.

2. Right-click a canvas tab and click **Canvas Properties**.

3. Update the canvas properties.

4. Click **Save**.

Adjust Visualization Properties

You can customize how the visualizations in your workbook look and function. For example, the legend's location, number format, and font used in titles and labels.

The tabs and fields displayed under the Properties pane depend on the type of visualization that you're working with.

If your workbook doesn't have a visualization, create one. See Begin to Build a Workbook and Create Visualizations.

1. On the Home page, select a workbook, click the **Actions menu**, and then select **Open**.
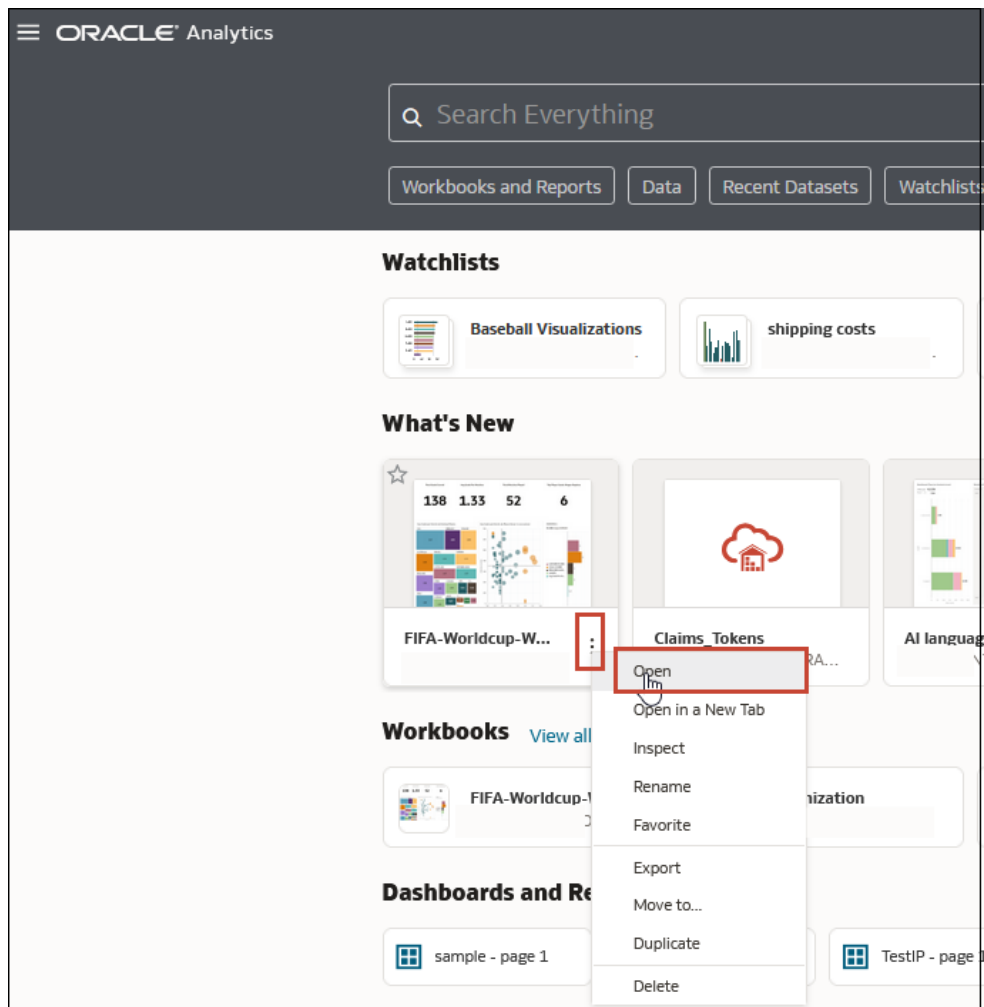
2. Click **Edit** to open the workbook in author mode.

3. In the Visualize canvas, select a visualization.

4. Use the tabs in the Properties pane to adjust the visualization's properties as needed.
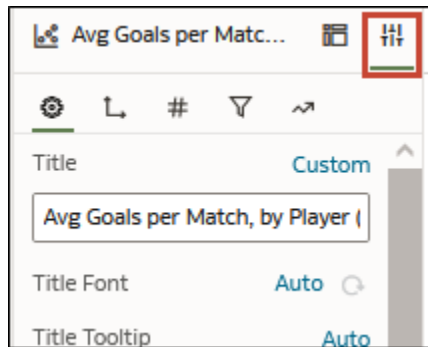
Add Reference Lines to Visualizations

Reference lines enable you to identify averages, medians, percentiles, and similar information in a visualization.

1. On the Home page, select a workbook, click the **Actions menu**, and then select **Open**.

2. In the Data Panel, click the **Analytics** icon ⤳ .

3. Drag and drop **Reference Line** into a visualization. Alternatively, you can double-click **Reference Line** to add it to the selected visualization.

4. Use the Analytics pane on the Grammar panel to configure the line.

   For example, you might use the **Method** option to display a line or a band, or use the **Function** option to change the default line to Average, Percentile, or Top N.

5. Click **Save**.

Format Numeric Values of Columns

You can format numeric values of a column in your visualizations using a wide range of ready-to-use formats. For example, you might change the aggregation type from Sum to Average.

1. On the Home page, select a workbook, click the **Actions menu**, and then select **Open**.

2. In the Data Panel, select the column.

3. In the properties pane for the selected column, use the **General** or **Number Format** tabs to change the numeric properties.

   - **General** - Change the column name, data type, treat as (measure or attribute), and aggregation type.
     For example, to change how a number is aggregated, use the **Aggregation** option.

   - **Number Format** - Change the default format of a number column.

4. Click **Save**.

Format Numeric Values of Visualizations

You can format numeric properties of a visualization using a wide range of ready-to-use formats. For example, you might change the aggregation type from Sum to Average.

1. On the Home page, select a workbook, click the **Actions menu**, and then select **Open**.

2. Click **Visualize** and select a visualization.

3. In the properties pane for the selected visualization, use the **Values** tab to change the numeric properties.

   For example, to change how a number is aggregated, use the **Aggregation Method** option.

4. Click **Save**.

Transform Data

You can use column menu options to transform data. For example, you might convert text to uppercase or trim leading and trailing spaces from data. Transform your data to make it more useful and powerful for content consumers.
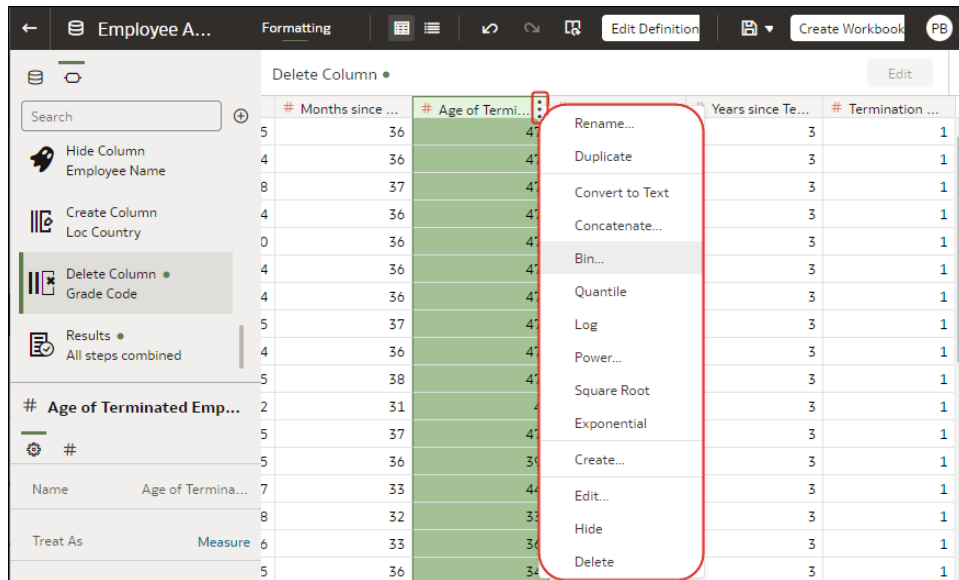
If you don't apply the transformation script and close the workbook or the dataset, you lose all the data transform changes you've performed.

1. On the Home page, open a dataset or workbook.

   - Select the dataset, click the **Actions menu**, and then select **Open**. In the Data Diagram or Join Diagram, right-click a data source and click **Open** to display the transform editor.

   - Select the workbook that contains the dataset, click the **Actions menu**, select **Open**, then click **Data**. In the Data Diagram or Join Diagram, right-click a data source and click **Open** to display the transform editor.

   > **Note:**
   >
   > Oracle Analytics displays a Data Diagram for single-table datasets or a Join Diagram for multi-table datasets.

2. Mouse-over the column you want to transform.

3. Click **Options** (the ellipsis top-right of the data column), and select a transformation option (for example, **Bin**, **Rename** or **Convert to Text**).

Oracle Analytics adds a step for the transform option you selected to the **Preparation Script** panel.

4. To save your data preparation changes and apply them to your data, click **Save Dataset**.

   If you're working with a single table dataset or a file-based dataset, click **Apply Script**.

Adjust the Display Format of a Date or Number Column

You can adjust the display format and granularity level of a date column.

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For example, you might want to change the format of a transaction date column from `November 1, 2017` to `2017-11-01`, or change the level of granularity from year to month.

1. On the Home page, open a dataset or workbook.

   • Select the dataset, click the **Actions menu**, and then select **Open**. In the Data Diagram or Join Diagram, right-click a data source and click **Open** to display the transform editor.

   • Select the workbook that contains the dataset, click the **Actions menu**, select **Open**, then click **Data**. In the Data Diagram or Join Diagram, right-click a data source and click **Open** to display the transform editor.

   > **Note:**
   >
   > Oracle Analytics displays a Data Diagram for single-table datasets or a Join Diagram for multi-table datasets.

2. Hover over the column you'd like to edit and click **Options**.

3. To change the format of a date column, click **Convert to Date**, then click **Source Format** and select the format you want to use in the visualization.

4. To change the format of a number column, click **Edit**, and use functions in the functions library to change the format.

   For example, to round up a number column DISCOUNT_VALUE from two decimal places to no decimal places, specify `ROUND(DISCOUNT_VALUE, 0)`.

5. Click **Add Step**.

   Oracle Analytics adds a step to the Preparation Script panel.

6. To save your data preparation changes and apply them to your data, click **Save Dataset**.

   If you're working with a single table dataset or a file-based dataset, click **Apply Script**.

Convert Text Columns to Date or Time Columns

You can convert any text column to a date, time, or timestamp column.

For example, you can convert an attribute text column to a true date column.

1. On the Home page, open a dataset or workbook.

   • Select the dataset, click the **Actions menu**, and then select **Open**. In the Data Diagram or Join Diagram, right-click a data source and click **Open** to display the transform editor.

   • Select the workbook that contains the dataset, click the **Actions menu**, select **Open**, then click **Data**. In the Data Diagram or Join Diagram, right-click a data source and click **Open** to display the transform editor.

   > **Note:**
   >
   > Oracle Analytics displays a Data Diagram for single-table datasets or a Join Diagram for multi-table datasets.

2. Hover over the column that you want to convert.

3. Click **Options** and select one of the conversion options, for example, **Convert to Number**, or **Convert to Date**.

   Oracle Analytics adds a step to the Preparation Script panel.

4. To save your data preparation changes and apply them to your data, click **Save Dataset**.

   If you're working with a single table dataset or a file-based dataset, click **Apply Script**.

   The changes you make apply to all workbooks using that data source.

Apply Color to Visualizations

Use color to enhance your visualizations. For example, you might change the default color pallet for analyses in a workbook.

Topics:

• About Color Assignments in Visualizations

About Color Assignments in Visualizations

You can work with color to make visualizations more attractive, dynamic, and informative. You can color a series of measure values (for example, Sales or Forecasted Sales) or a series of attribute values (for example, Product and Brand).

Your color choices are shared across all visualizations on the canvas, so if you change the series or data point color in one visualization, then it appears on the other visualizations.
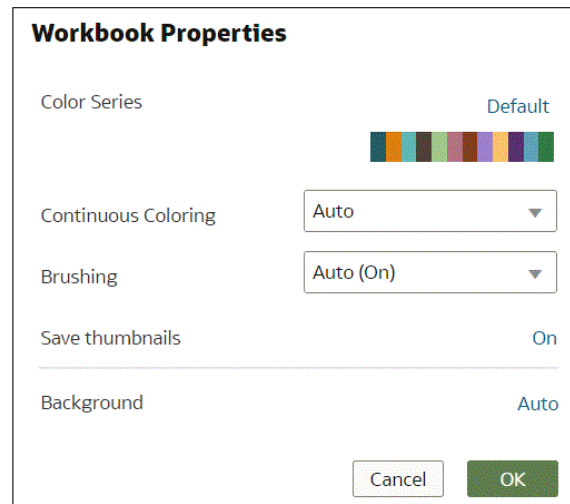
The **Visualize** canvas has a Color section in the Grammar Panel where you can put a measure column, attribute column, or set of attributes columns. The canvas assigns color to the columns that are included in the Color section:

• When a measure is in the Color section, then you can select different measure range types (for example, single color, two color, and three color) and specify advanced measure range options (for example, reverse, number of steps, and midpoint).

• When you've one attribute in the Color section, then the stretch palette is used by default. Color palettes contain a set number of colors (for example, 12 colors), and those colors repeat in the visualization. The stretch palette extends the colors in the palette so that each value has a unique color shade.

• If you've multiple attributes in the Color section, then the hierarchical palette is used by default, but you can choose to use the stretch palette, instead. The hierarchical palette assigns colors to groups of related values. For example, if the attributes in the Color section are Product and Brand and you've selected Hierarchical Palette, then in your visualization, each brand has its own color, and within that color, each product has its own shade.

Access Color Options

You can set color options for your workbook and for individual visualizations within your workbook.

1. On the Home page, select a workbook, click the **Actions menu**, and then select **Open**.

2. If you want to edit color options for the whole workbook:

   a. Click **Menu** on the workbook toolbar and select **Workbook Properties**.

   b. Use the **General** tab to edit the color series or continuous coloring.

3. If you want to edit color options for a visualization.

   a. Select the visualization and click **Menu** or right-click.

   b. Select **Color**. The available color options depend on how the measures and attributes are set up in your visualization.

Workbook Properties

Color Series   Default

Continuous Coloring   Auto ▼

Brushing   Auto (On) ▼

Save thumbnails   On

Background   Auto

Cancel   OK

c. You can experiment with visualization colors and select **Reset Visualization Colors** to revert to the original colors.

d. Select **Stretch Palette** to turn this option on or off.
Color palettes have a set number of colors, and if your visualization contains more values than the number of color values, then the palette colors are repeated. Use the Stretch Palette option to expand the number of colors in the palette. Stretch coloring adds light and dark shades of the palette colors to give each value a unique color. For some visualizations, stretch coloring is used by default.
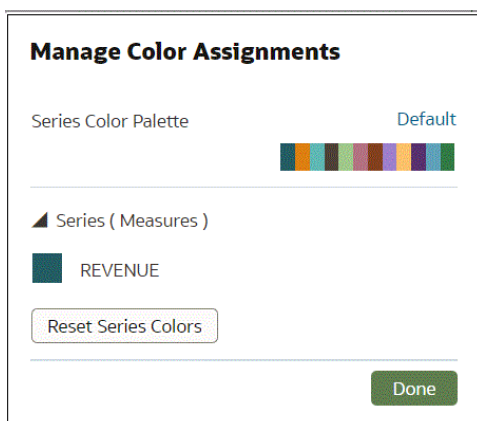
Change the Color Palette

You can switch between the various color palettes until you find the one you want.

🖼 LiveLabs Sprint

Each color palette contains 12 colors that you can apply to a visualization.

1. On the Home page, select a workbook, click the **Actions menu**, and then select **Open**.

2. Select a visualization to change the color palette for.

3. Click **Menu** or right-click and select **Color**, then select **Manage Assignments**.

4. Locate the **Series Color Palette** and click the color palette that's currently used in the visualization (for example, Default or Alta).

5. From the list, select the color palette that you want to apply to the visualization.

Assign Colors to Columns

Instead of using the palette's default colors, you can choose specific colors to fine-tune the look of your visualizations.

1. On the Home page, select a workbook, click the **Actions menu**, and then select **Open**.

2. Select the visualization that you want to manage the colors for.

3. Click **Menu** on the visualization toolbar or right-click and select **Color**, then select **Manage Assignments**.

4. If you're working with a measure column, you can do the following:

   • Click the box containing the color assigned to the measure. From the color picker dialog, select the color that you want to assign to the measure. Click **OK**.

   • Specify how you want the color range to be displayed for the measure (for example, reverse the color range, pick a different color range, and specify how many shades you want in the color range).
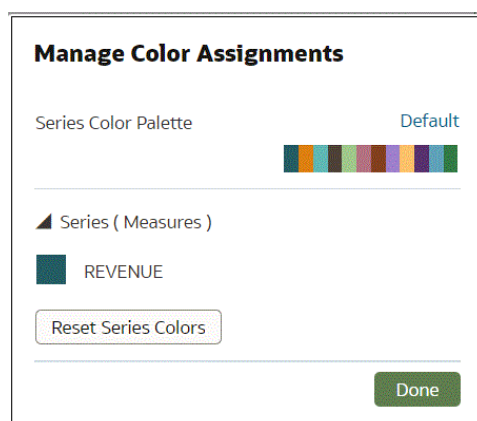
5. If you're working with an attribute column, then click the box containing the color assignment that you want to change. From the color picker dialog, select the color that you want to assign to the value. Click **OK**.
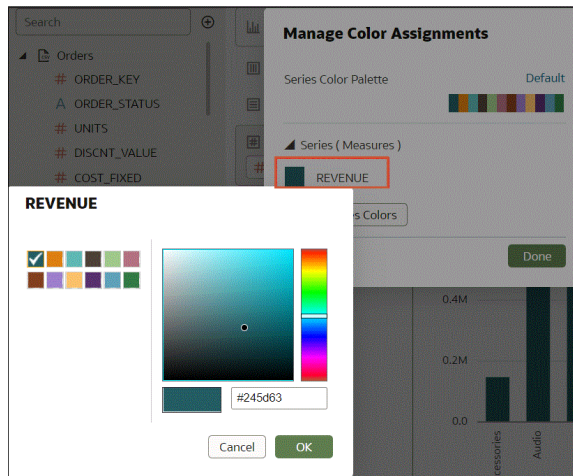
Create and Apply Filters

Use filters to focus on the data that is most meaningful.

Topics:

Typical Workflow to Create and Apply Filters

Here are the common tasks for creating and applying filters to projects, visualizations, and canvases.

Task	Description	More Information
Choose the appropriate filter type	Filter types (Range, Top / Bottom N filter, List, Date, and Expression) are specific to either a project, visualization, or canvas.	Apply Range Filters Apply Top Bottom N Filters Apply List Filters Apply Date Range Filters
Create filters on projects and visualizations	Create filters on a project or visualization to limit the data displayed and focus on a specific section or category.	Filter Data in a Workbook Create Filters on a Visualization
Build and use expression filters	You can build and use expression filters to define more complex filters using SQL expressions.	Apply Expression Filters
Set visualization interaction properties	Define how you want visualizations to affect each other.	How Datasets Interact with Filters

About Filters and Filter Types

Oracle Analytics supports many types of filter to enable you to focus on the data in which you're interested in visualizations, canvases, and workbooks.

The Range, List, Date, and Expression filter types are specific to either a visualization, canvas, or workbook. Filter types are automatically determined based on the data elements you choose as filters, but you can also switch to select another compatible filter type.

- **Date filters** - Use calendar controls to adjust time or date selections. You can either select a single contiguous range of dates, or you can use a date range filter to exclude dates within the specified range.

- **Expression filters** - Let you define more complex filters using SQL expressions.

- **List filters** - Applied to data elements that are text and date data types, and number data types that can't be aggregated. List filters are applied to the whole canvas or to a specific visualization on the canvas.

- **Range filters** - Generated for data elements that are number data types and that have an aggregation rule set to something other than none. Range filters are applied to data elements that are measures, and that limit data to a range of contiguous values, such as revenue of $100,000 to $500,000. Or you can create a range filter that excludes (as opposed to includes) a contiguous range of values. Such exclusive filters limit data to noncontiguous ranges (for example, revenue less than $100,000 or greater than $500,000).

- **Relative Time** - Focus on values for a specified time period relative to today. For example, focus on the last three years, the next three years, or year to date.

- **Top and bottom filters** - Applied to measure and attribute data elements. You can specify whether to filter by top or bottom, specify the number of items to display, and which measure or attribute to limit by.

About Filtering Data in Workbooks

- If you've applied role-based filters to a dataset, workbook users only see data to which they've been give access. For example, users with the application role *North American Analyst* will only see North American sales data when they open a shared global sales workbook.

- If your workbook contains multiple datasets and some aren't joined, then there are restrictions for how you can use filters.

- Any visualization that doesn't use the data element of an active filter is grayed out.

- You can't specify data elements of a dataset as a filter of another dataset unless the datasets are joined.

- To select an alternative filter type for date or time filters, click the filter and select a different type. For example, for a Month element you might change the filter type from **Date Range** to **List** to focus in on individual months.

Apply Date Range Filters

Date range filters use calendar controls to adjust time or date selections. You can select a single contiguous range of dates, or use a date range filter to exclude dates within the specified range.

If your workbook doesn't have a visualization, create one. See Create a Workbook and Add Visualizations.

1. On the Home page, select a workbook, click the **Actions menu**, and then select **Open**.

2. In the Visualize canvas, select a filter in the filter bar or on-canvas filter, and click **Date Range**.

3. Click the drop-down list, and select the type of date range you want to apply (for example, Range, Start at, End at, Equal).

4. Use the date pickers to configure the range.

5. Click outside of the filter to close the filter panel.

Apply Expression Filters

Using expression filters, you can define more complex filters using SQL expressions. Expression filters can reference zero or more data elements.

For example, you can create the expression filter "Sample Sales"."Base Facts"."Revenue" < "Sample Sales"."Base Facts"."Target Revenue". After you apply the filter, you see the items that didn't achieve their target revenue.

You create expressions using the Expression Filter panel. You can drag and drop data elements to the Expression Filter panel and then choose functions to apply. Expressions are validated for you before you apply them.

If your workbook doesn't have a visualization, create one. See Create a Workbook and Add Visualizations.

1. On the Home page, select a workbook, click the **Actions menu**, and then select **Open**.

2. In the Visualize canvas, go to the filter bar and click **Add Filter** and then select **Add Expression Filter**.

3. In the Expression Filter panel, compose an expression in the **Expression** field. For example, enter "Sample Sales"."Base Facts"."Revenue" < "Sample Sales"."Base Facts"."Target Revenue" to focus on items that didn't achieve their target revenue.

4. In the **Label** field, give the expression a name.

5. Optional: Enter a description.

   The description displays in the tooltip when you hover over a calculation.

6. Click **Validate** to check if the syntax is correct.

7. When the expression filter is valid, then click **Apply**. The expression applies to the visualizations on the canvas.

Apply List Filters

You apply list filters to text, non-aggregatable numbers, and dates, and you can choose which members to include or exclude from the filter.

If your workbook doesn't have a visualization, create one. See Create a Workbook and Add Visualizations.

1. On the Home page, select a workbook, click the **Actions menu**, and then select **Open**.

2. In the Visualize canvas, select a filter in the filter bar or select an on-canvas filter, then click **List**.

3. Locate the member you want to include and click it to add it to the Selections list. Alternatively, use the **Search** field and the **Search Options Menu** to find a member you want to add to the filter. Use the wildcards * and ? for searching.

4. Optional: Perform the following actions related to the Selections list:

   • Click a member to remove it from the list.

   • Click the eye icon next to a member to filter it out, but not remove it from the list.

   • Click **Menu** at the top, and select **Exclude Selections** to exclude members from the list.

   • Click **Null** to include members with null values in the list.

   • Click **Add** to add all members to the list.

   • Click **Clear** to remove all members from the list.

5. Click outside of the filter to close the filter panel.

Create On-Canvas Filters

You can add a filter directly to the canvas so that users can filter the data for some or all of the visualizations on the canvas. On-canvas filters are displayed in the Visualize canvas, Present canvas, and in preview mode, and are available for date, measure, and attribute columns.

By default the on-canvas filter's values are limited by other filters (report, canvas, on-canvas, and visualization filters). You can use the Properties pane to modify how the filters interact.

1. On the Home page, select a workbook, click the **Action Menu**, and then select **Open**.

2. Click the **Visualize** tab.

3. In the Data Elements panel, select a date, attribute, or measure to use as a filter on the canvas, and then drag it to the canvas to create a new visualization.

4. On the visualization's toolbar, click **Change Visualization Type** and select **List Box**.

5. Optional: In the on-canvas filter's list box Properties pane, select the General tab and click **Type** to specify the on-canvas filter type for:

- **Dates** - List, Date Range (default), Relative Time
  When you select Date Range or Relative Time, then Multi Select and Default Value on-canvas filter properties aren't available.

- **Measures** - Measure Range (default), Top Bottom N
  When you select Measure Range or Top Bottom N, then Multi Select and Default Value on-canvas filter properties aren't available.

- **Attributes** - List (default), Top Bottom N
  When you select Top Bottom N, then Multi Select and Default Value on-canvas filter properties aren't available.

6. Optional: In the on-canvas filter list box Properties pane, click the General tab and adjust how you want the filter to display (for example, **Title**, **Label**, **Align**).

7. Select the on-canvas filter and set the filter values.

8. Optional: In the on-canvas filter's list box Properties pane, click the Filters tab, and specify how you want the on-canvas filter to interact with the canvas and visualization filters and which items on the canvas to apply the filter to.

Apply Range Filters

You use Range filters for data elements that are numeric data types and have an aggregation rule set to something other than none.

Range filters are applied only to measure columns and limits data to a range of contiguous values, such as revenue of $100,000 to $500,000. Alternatively, you can create a range filter that excludes (as opposed to includes) a contiguous range of values. Such exclusive filters limit data to two noncontiguous ranges (for example, revenue of less than $100,000 or greater than $500,000).

If your workbook doesn't have a visualization, create one. See Create a Workbook and Add Visualizations.

1. On the Home page, select a workbook, click the **Actions menu**, and then select **Open**.

2. In the Visualize canvas, click the filter, then click **Range**.
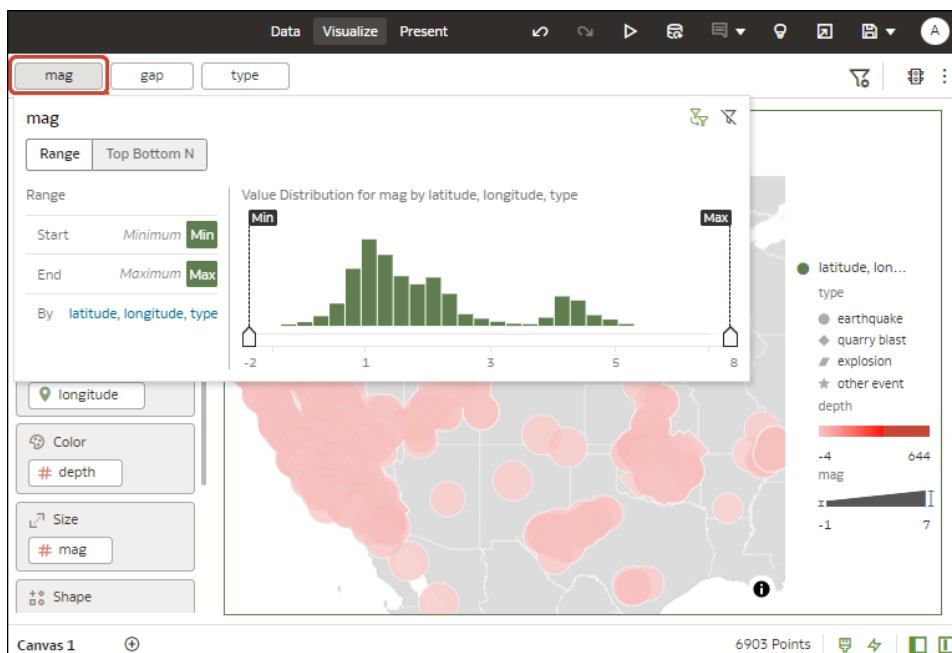
3. Click **By** to view the selected list of Attributes, then configure the filter:

   - Click a member to remove or add it to the selected list.

   - Click the **Plus (+)** icon to add a new member to the selected list.

   - Set the range that you want to filter on by moving the **Min** and **Max** sliders in the histogram.

4. Click outside of the filter to close the filter panel.

Apply Top Bottom N Filters

Use the Top Bottom N filter to filter a measure or attribute and display its highest or lowest values.

1. To apply the Top Bottom N filter to the canvas and all visualizations in the workbook:

   a. On the Home page, select a workbook, click the **Actions menu**, and then select **Open**.

   b. In the Data panel of the visualization, select the attribute or measure that you want to filter on and drag and drop it to the filter bar.

   c. In the filter bar, click the filter, then click **Top Bottom N**. You can only convert a range filter to Top Bottom N filter.

2. To apply the Top Bottom N filter to a specific visualization in the workbook:

   a. In the canvas, select the visualization that you want to filter.

   b. In the Data Panel, locate the attribute or measure that you want to filter on and drag and drop it to the Filter drop target in the Grammar Panel.

   c. In the filter bar, click the filter, then click **Top Bottom N**.

3. To apply the Top Bottom N filter to an on-canvas filter:

   a. With the canvas selected, go to the Data Panel and click **Visualizations**, then click the **List Box** filter.

    b. In the Data Panel, locate the attribute or measure that you want to filter on, and drag and drop it to the List Box visualization that you just created.

4. To configure a Top Bottom N filter, click the filter, then:

- To change between top to bottom, click **Method** value and click Top or Bottom.

- To specify the number of rows that are displayed, click the **Count** field and enter the number of rows.

- To change which attribute or measure column to limit by, click the **By** field and select an attribute or measure or custom calculation included on the canvas. Or click **Plus (+)** to locate and select the attribute or measure or metric that you want to limit by

5. Click outside of the filter to close the filter panel.

Filter Data in a Workbook

Use filters in a workbook to focus in on the data that you're interested in. For example, you might filter by Month and visualize data only for January, February, and March.

You can apply filters to one visualization, all visualizations in a canvas, or all canvases in a workbook.

1. On the Home page, select a workbook, click the **Actions menu**, select **Open**, then click **Edit**.

2. Navigate to a canvas, and display the Visualize pane.

3. Use the filter bar to update existing filters.
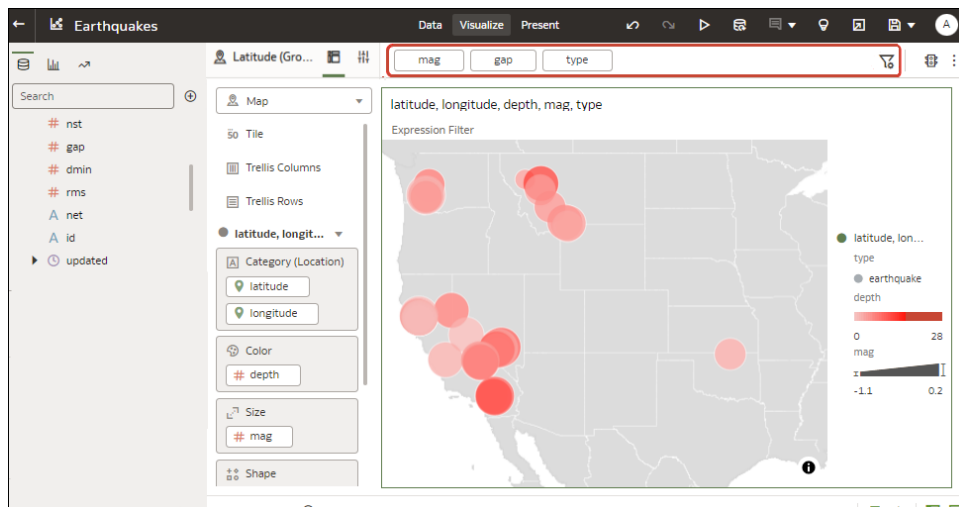
4. To change the default filter options, click the **Filter Bar Menu** icon on the filter bar ( ), and use the options displayed.

5. To change an existing filter, click the filter on the filter bar.
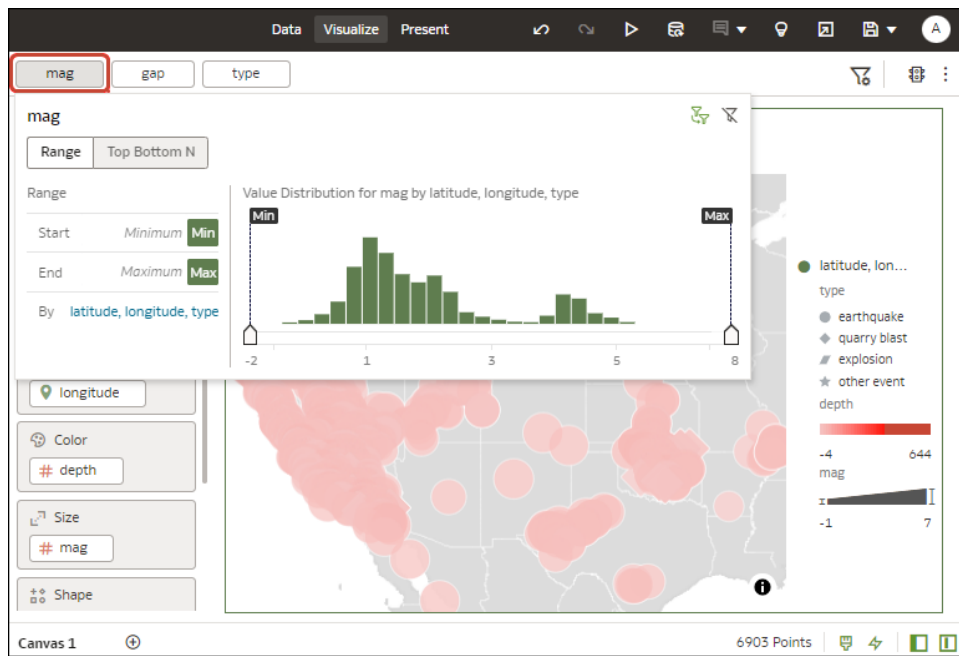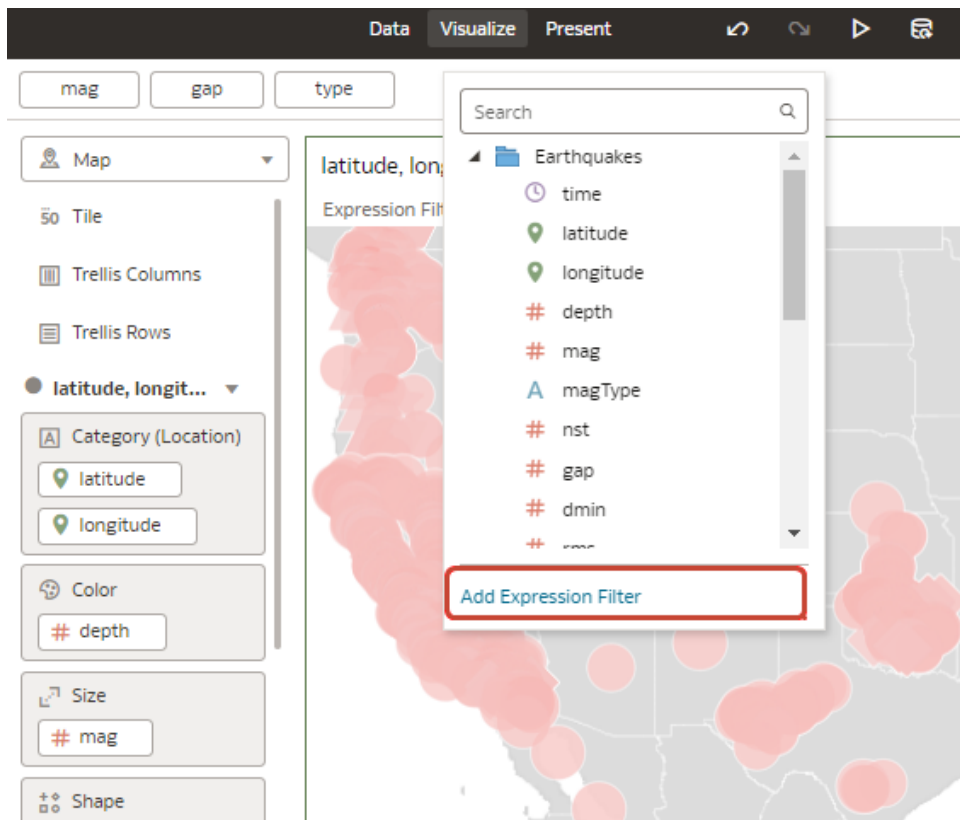
Use the options to configure that filter (for example, you might set the range, or disable the filter).
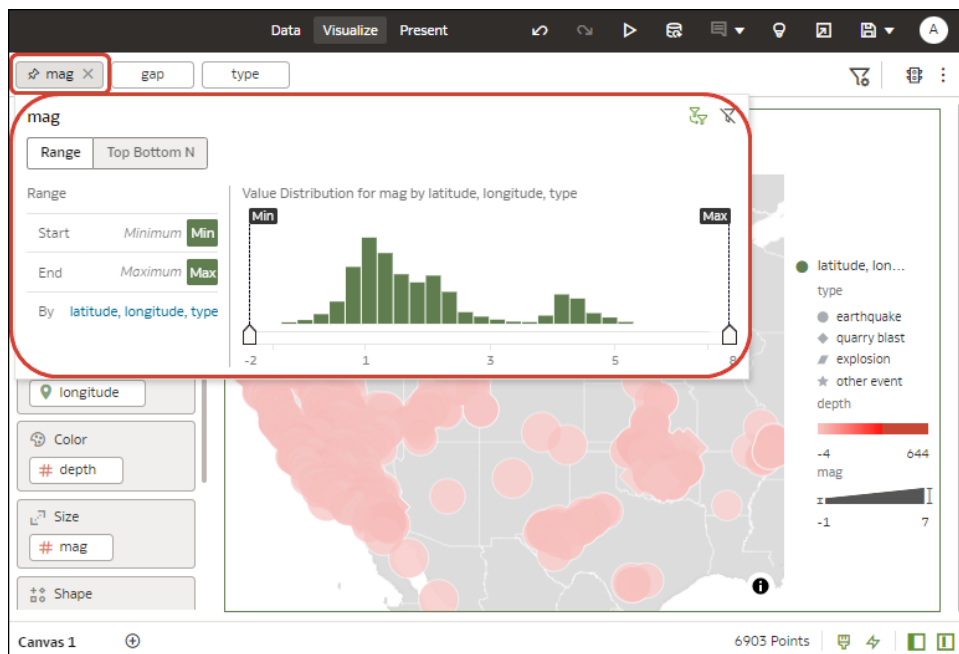
6. To add a filter, hover over the filter bar, click **Add Filter** (+), and select a data element to filter.
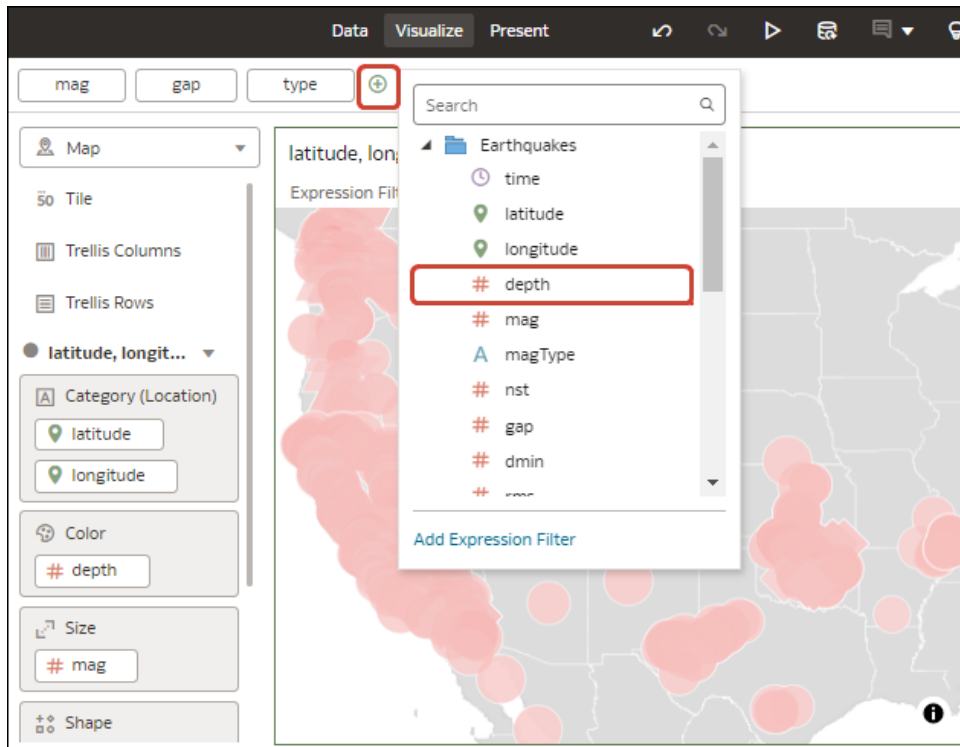
7. To add a complex filter using an expression (for example, field1 + field 2 > 100), hover over the filter bar, click **Add Filter** (+), then click **Add Expression Filter**.

8. To apply a filter to all canvases in a workbook, hover over the filter, and click **Pin to All Canvases** (the Pin icon).
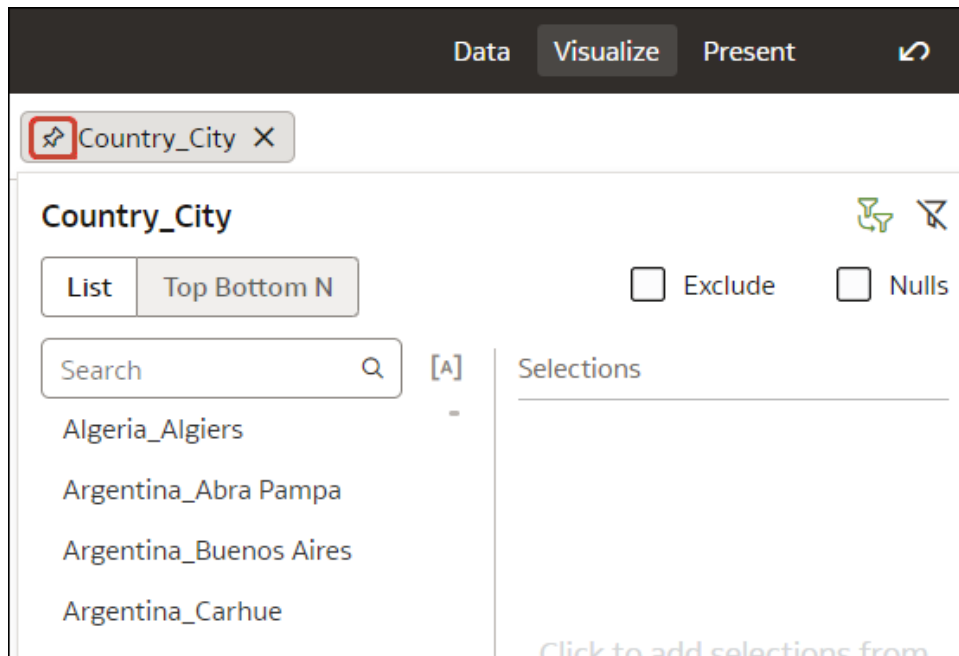
9. To filter on a visualization element, right-click the element and select **Use as Filter**.
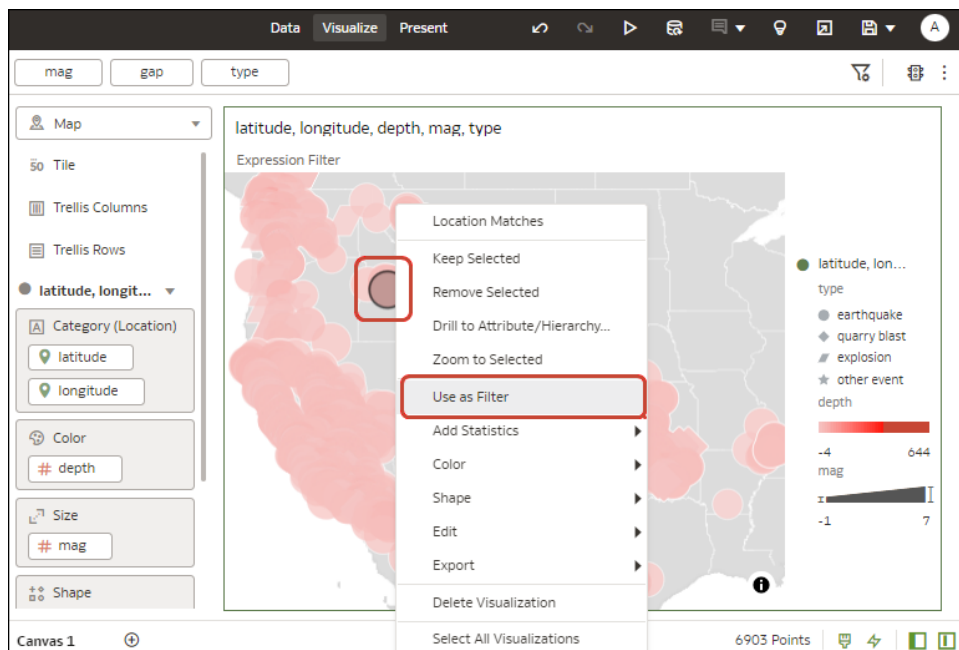
The **Use as Filter** icon turns green when activated. ⊤

Create Filters on a Visualization

Use filters in a visualization to focus in on the data that you're interested in. For example, you might filter by Month and visualize data only for January, February, and March.

1. On the Home page, select a workbook, click **Actions**, select **Open**, then click **Edit**.

2. Select the visualization that you want to add a filter to.

3. Drag and drop data elements from the Data Panel to the filter bar.
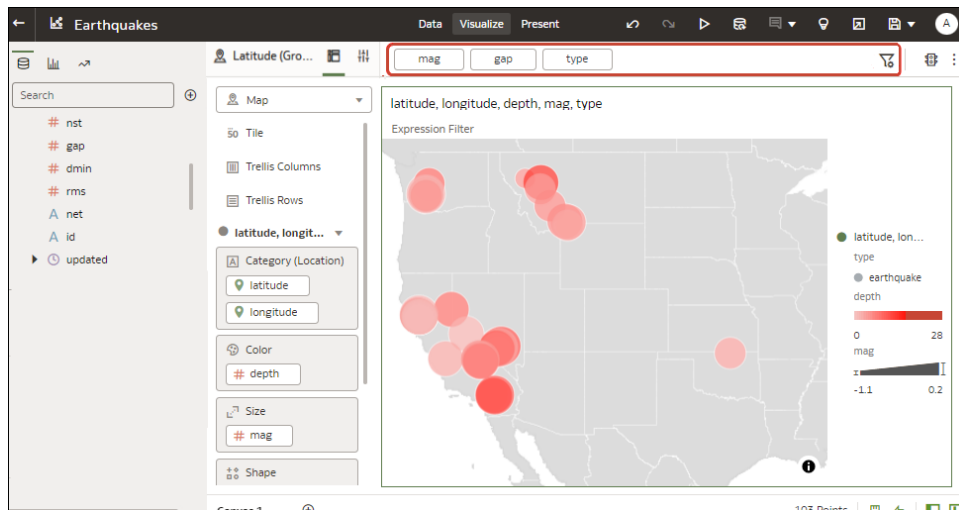
To use data elements of a dataset as a filter in the visualization of another dataset, join the datasets before using the data elements as filters.

4. Click the filter to display filtering options to enable you to focus in on the data you want to analyze.
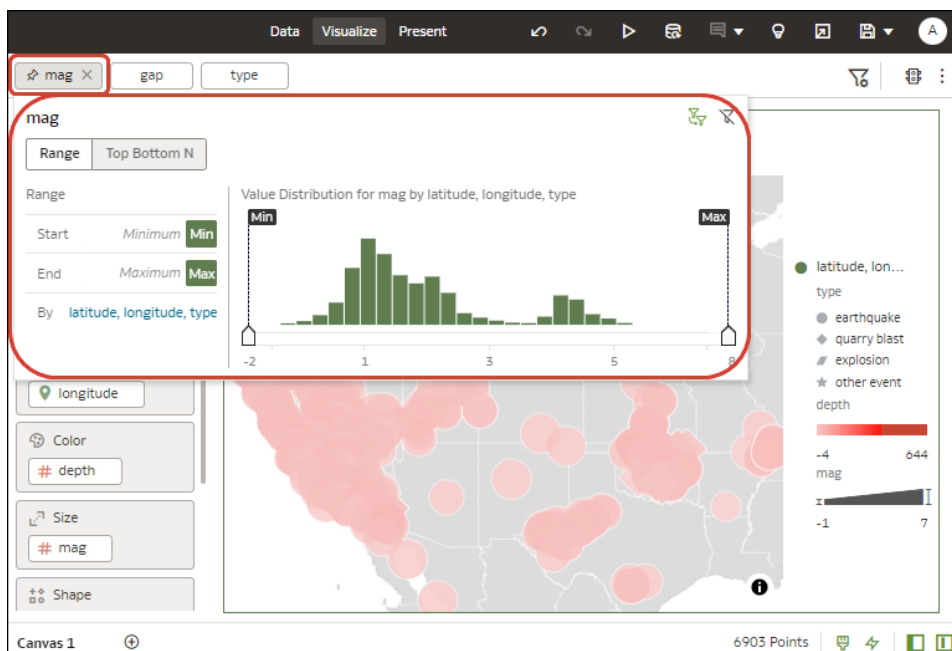
How Datasets Interact with Filters

There are several ways that datasets can interact with filters in a workbook.

Various factors affect the interaction of datasets and filters in workbooks:

- The number of datasets within a workbook. See How the Number of Datasets Affects Filters.

- The datasets that are blended or not blended (for a workbook with multiple datasets).

- The data elements (columns) that are matched between blended datasets.

You can use the Data Diagram in the Data page of a workbook to:

- See blended and not-blended datasets.

- Blend or connect multiple datasets by matching the data elements in the datasets.

- Disconnect the datasets by removing matched data elements.

About Automatically Applied Filters

By default, filters are automatically applied. However, you use **Auto-Apply Filters** options to turn this behavior off if you want to manually apply the filters.

To display the **Auto-Apply Filters** options, click Filter Bar Menu icon ( ), then click **Auto-Apply Filters**. When the **Auto-Apply Filters** is turned on, the selections you make in the filter bar or filter drop target are immediately applied to the visualizations.
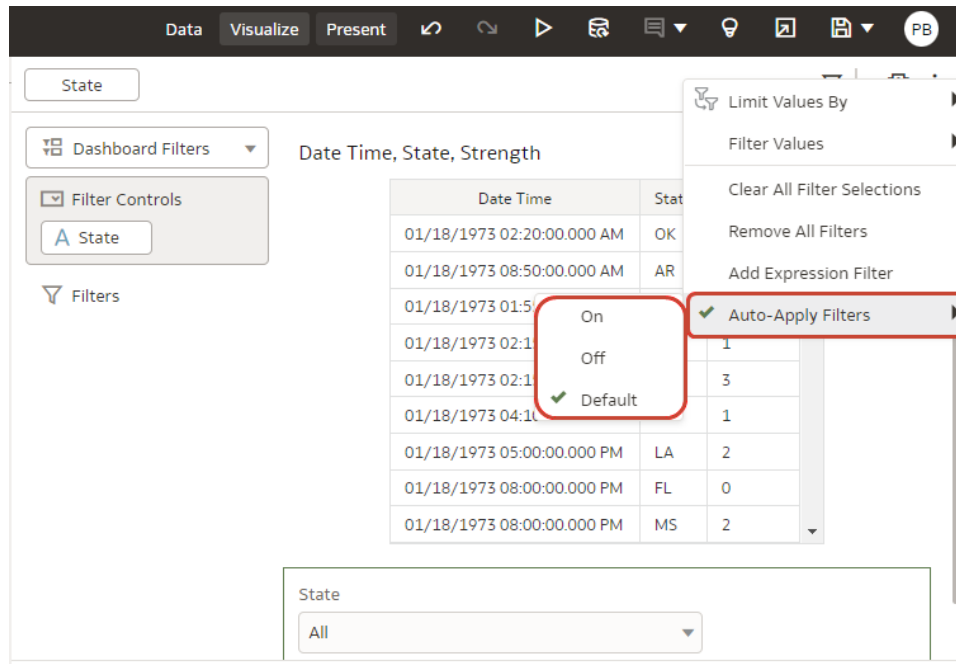
When **Auto-Apply Filters** is turned off, the selections you make in the filter bar or filter drop target aren't applied to the canvas until you click the **Apply** button in a filter panel.
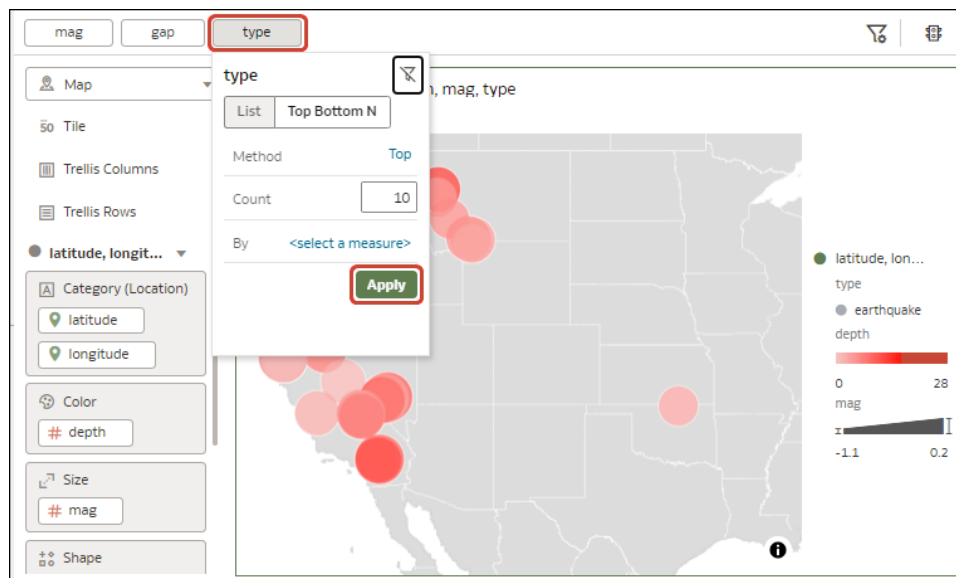
How the Number of Datasets Affects Filters

Filters can interact differently with visualizations depending on the number of datasets, whether the datasets are joined, and what the filters are applied to.

You can filter all visualizations in a canvas or individual visualizations. Use the **Limit Values** options to remove or limit how the filters in the filter bar restrict each other.
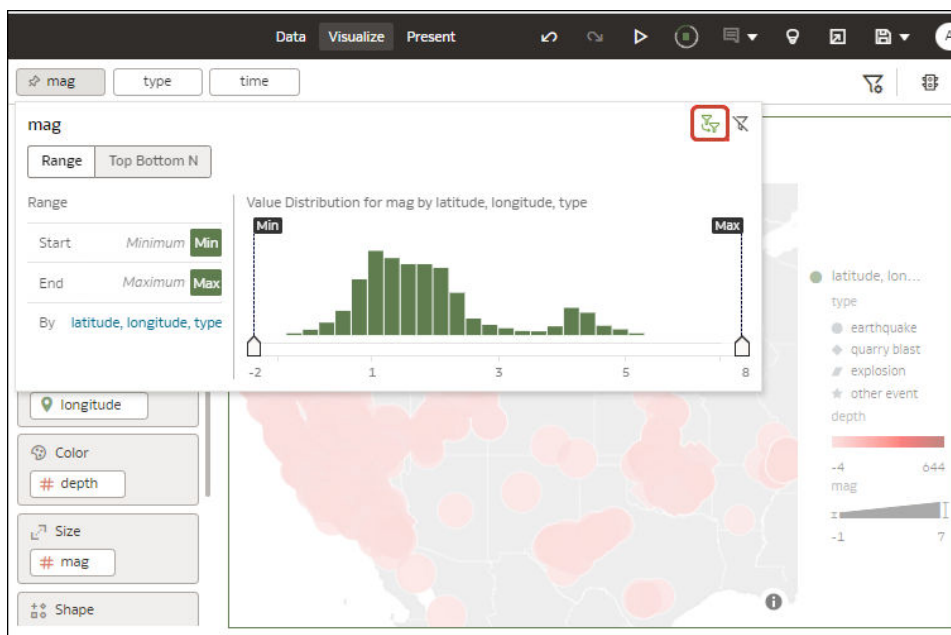
If there's a single dataset in a workbook

Single Dataset	Filter Interaction
Add a filter to the filter bar	It applies to all visualizations in the workbook.
Add a filter to a visualization	It is applied after filters on the filter bar are applied.
Add multiple filters	By default filters restrict each other based on the values that you select.

If there're multiple datasets in a workbook

Multiple Datasets	Filter Interaction
If you add filters to the filter bar.	• The filters apply to all the visualizations using the joined datasets. For visualizations using the not-joined datasets, you must add a separate filter to each dataset. • You can't specify data elements of a dataset as a filter of other datasets, if the two datasets aren't joined. • If a data element of a dataset is specified as a filter, but doesn't match the joined datasets, then the filter applies only to the visualization of that particular dataset, and does not apply to other visualizations of joined or not-joined datasets. • You can select **Pin to All Canvases** of a filter, to apply a filter to all canvases in the workbook.
If you hover over a filter name to see the visualization to which the filter is applied.	Any visualizations that don't use the data element of the filter are grayed out.
If you add filters to visualizations	• If you specify a filter on an individual visualization, that filter applies to that visualization after the filters on the filter bar are applied. • If you select the **Use as Filter** option and select the data points that are used as a filter in the visualization, then filters are generated in the other visualizations of joined datasets and matched data elements.

Apply Relative Time Filters

Use the relative time filter on a Date or Date/Time column to display data for a specified time period based upon the current date and time.

You can specify a relative time period as either an explicit number of past or future time units (for example 2 years), or you can specify a previous period. For example, Year To Date which includes data from 1-January this year to the current date, and Month To Date which includes data from the beginning of the month to the current date.

You can apply a Relative Time filter only to date columns that already exist in the data source, and not to derived columns such as Year, or Quarter. The Relative Time filter type supports Date (with no time of day portion) and DateTime (that is, TIMESTAMP with both date and time of day) column types.

The current date and time used in queries is the Oracle Analytics server host's date and time in the server's timezone (not the browser host's time or timezone). The starting day of the week (Sunday versus Monday) is based on the locale of the Oracle Analytics server which is set using the server configuration setting NLS_TERRITORY.

If your workbook doesn't have a visualization, create one.

1. On the Home page, select a workbook, click the **Actions menu**, and then select **Open**.

2. In the Visualize canvas, click the filter in the filter bar or canvas, then click **Relative Time**.

3. Select a **Type** that defines the range that you want to filter.

   - **Last** - You specify a **Period** to apply to the selected **Time Level** (Years, Quarters, Months, Weeks, Days, and includes Hours, Minutes, and Seconds if the column time is TIMESTAMP) relative to today's date, to display records for the date values for that period.
     Last filters that are based on a DateTime column and which have a grain of Day or longer (for example, Year, Quarter, Month, Week, Day), retrieve data from the same time of day on the starting day. For example, if the server date/ time is currently Thursday 3:15pm , a Last 2 Days filter on a DateTime column retrieves data with timestamps between Tuesday 3:15pm and Thursday 3:15pm in the server's timezone. Filter queries that are based on a DATE column type (which by definition have no time of day associated) only depend on the server host's date, not the time of day.

   - **Next** - You specify a future **Period** number to apply to the selected **Time Level** (Years, Quarters, Months, Weeks, Days, also Hours, Minutes, and Seconds if the column time is TIMESTAMP) relative to today's date, to display records for the date values for that period.

   - **To Date** - You specify a past **Time Level** (Year, Quarter, Month, Week, Day, also includes Hour, and Minute if the column time is TIMESTAMP) relative to today's date, that you want to apply to the date values in the visualization. A To Date filter retrieves data from the beginning of the chosen period, for example, Month to Date retrieves data from midnight of the first day of this month up until the current date and time (that is, Today or Now).

4. Click outside of the filter to close the filter panel.

Move Filter Panels

You can move filter panels from the filter bar to a different location on the canvas.

When you expand filters in the filter bar, it can block your view of the visualization that you're filtering. Moving the panels makes it easy to specify filter values without having to collapse and reopen the filter selector.

1. On the Home page, select a workbook, click the **Actions menu**, and then select **Open**.

2. In the Visualize page, place the cursor at the top of the filter panel until it changes to a scissors icon, then click it to detach the panel and drag it to another location on the canvas.
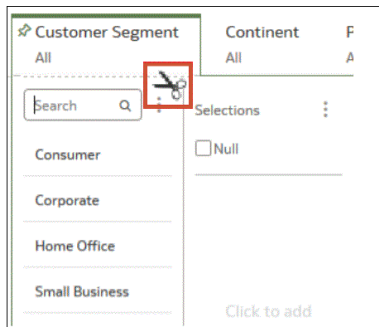
3. To reattach the panel to the filter bar, click the reattach panel icon.
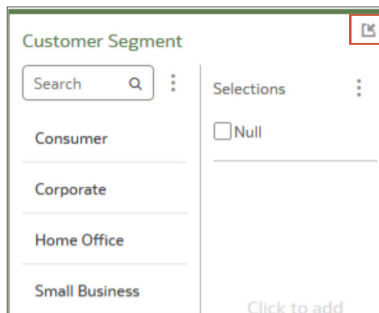
4

Work with Data

You can work with data in a variety of ways to ensure the information you need to present is easy to find.

Topics:

- Manage Data
- Search Data
- Analyze Data

Manage Data

After you add data to a project or visualization, you need to know how to adjust it to meet your needs.

Topics:

- Typical Workflow to Manage Added Data
- Manage Datasets
- Delete a Dataset
- About Reloading a Dataset's Data
- Reload an Individual Table in a Dataset
- Duplicate a Dataset
- Rename a Dataset and Change Its Description
- Use a Subject Area as a Dataset
- Update Details of Data that You Added
- Inspect a Dataset's Properties

Typical Workflow to Manage Added Data

Here are the common tasks for managing the data added from data sources.

Task	Description	More Information
Refresh data	Refresh data in the dataset when newer data is available. Or refresh the cache for Oracle Applications and databases if the data is stale.	Reload an Individual Table in a Dataset
Update details of added data	Inspect and update the properties of the added data.	Update Details of Data that You Added
Manage datasets	See the available datasets and examine or update a dataset's properties.	Manage Datasets

Task	Description	More Information
Renaming a dataset	Rename a dataset listed on the datasets page.	Rename a Dataset and Change Its Description
Duplicate datasets	Duplicate a dataset listed on the datasets page.	Duplicate a Dataset

Manage Datasets

You can update and delete the data that you added from various data sources.

You can use the Datasets page to examine dataset properties, access permissions, and free up space by deleting datasets that you no longer need.

1. Go to the **Data** page, then **Datasets** section.

2. Click the **Actions menu** of a dataset or right-click the dataset that you want to manage, and click **Inspect**.

3. Optionally, use the **Inspect** option to review dataset columns and change the dataset properties. For example, you can change the Name and Description.

4. Optionally, use the **Inspect** option to change whether to treat dataset columns as measures or attributes.

   You can't change how a column is treated if it's already matched to a measure or attribute in the semantic model.

5. Optionally, use the **Inspect** option to specify the access permissions that users and roles have for the data.

   You're allowed to set permissions on some data sources, such as uploaded datasets. See Control Share of Data You Added.

6. Optionally, use the **Inspect** option to change the Data Access for a database table. The default is **Live** because database tables are typically large and shouldn't be copied to cache. If your table is small, then select **Automatic Caching** and the data is copied into the cache if possible. If you select **Auto**, then you have to refresh the data when it's stale.

7. Optionally, download a dataset created from a Microsoft Excel file by right-clicking the dataset and selecting **Download File**. Note that the columns in the download

match the columns in the file that you originally uploaded. Any derived columns that you added in the Visualize editor's Prepare canvas aren't included in the dataset download.

8. Optionally, update data for a dataset created from a Microsoft Excel file or Oracle Applications by right-clicking the dataset and selecting **Reload Data**.

If you have Full Control permissions, you can grant permissions to others and delete uploaded datasets, but be careful not to delete a data file that is still a data source for projects. See Delete Data that You Added.

Delete a Dataset

Delete a dataset when it's no longer needed or you need to free up space on your system.

You can delete datasets that you have Full Control permissions to.

> **Note:**
>
> Deleting a dataset permanently removes it and breaks any workbooks that use it. When you choose to delete a dataset, Oracle Analytics won't list workbooks that use the dataset. Before you delete a dataset you must be sure that it isn't used in any workbooks.

1. On the Home page, click **Navigator** and then click **Data**.
2. Click the **Datasets** tab.
3. Locate the dataset that you want to delete, click **Actions**, and then click **Delete**.

About Reloading a Dataset's Data

You can reload a dataset that uses one file as its source, when one or more tables in the dataset are cached, or when the dataset is created from running a data flow. Or you can reload a datasets's files and tables individually.

Reloading data ensures that workbooks and visualizations contain current data. The most current data is displayed in workbooks and visualizations after the dataset reload is complete and you refresh the workbooks. See Refresh a Workbook's Data.

How you reload data depends on the dataset's data source type.

Data from External Connections

When you reload data for a dataset with an external connection, the dataset's SQL statement is rerun and the current data for the tables with the **Data Access** field set to **Automatic Caching** is loaded into cache.

If your dataset contains one or more tables with the **Data Access** field set to **Automatic Caching**, then you can use the **Data** page to reload the tables in the dataset. To reload individual tables, use the **Dataset** editor. You can also set up a schedule to reload your dataset's tables as often as once per hour. See Schedule a Dataset Reload.

Reload Excel, CSV, or TXT File

When you reload a Microsoft Excel file (XLSX or XLS), you must ensure that the newer spreadsheet file contains a sheet with the same name as the original file. And the sheet must

contain the same columns that are in the dataset. The data reload fails if the file you load is missing columns.

When you reload a CSV or TXT file, make sure that it contains the same columns that are in the dataset. A reload will fail if the file you load is missing columns.

Scheduling a reload isn't available for datasets that contain only Excel, CSV, or TXT files.

To reload a dataset that uses one file as its source, use the **Data** page or **Dataset** editor. If a dataset uses two or more files, then use the **Dataset** editor to manually reload each file. If a dataset uses a combination of files and external connections, then use the **Dataset** editor to manually reload each file.

Oracle Fusion Cloud Applications Suite

You can reload data and metadata for Fusion Applications Suite data sources. If the Fusion Applications Suite data source uses logical SQL, reloading data reruns the dataset's SQL statement.

Reload an Individual Table in a Dataset

Use the Dataset editor to reload data for an individual dataset table that uses a connection. Reloading queries the table's data source and loads the current data into cache.

If you want to reload a table that uses a file as its source, then see Reload a Dataset's Files.

The Reload option is available for any dataset table with the **Data Access** field set to **Automatic Caching**.

Typically you reload all of the dataset's tables at the same time so that the data is consistent across all tables. But sometimes it makes sense to reload only one of the dataset's tables. For example, where you know that the data has changed in a fact table but not in any of the dimension tables.

Reloading doesn't update the table's Profile data preview information. To see the most current data in the data preview, you must re-profile the table after you reload the table.

1. On the Home page, click **Navigator** and then click **Data**.

2. Click the **Datasets** tab.

3. Locate the dataset that you want to open, click **Actions**, and then click **Open**.

4. In the **Table Page Tabs**, locate the table that you want to reload, and click its arrow.

5. Click **Reload Data**.

Duplicate a Dataset

You can duplicate any dataset that you have access to. Duplicating a dataset and modifying the copy can be faster than creating and building a dataset from scratch.

You're the owner of the duplicate dataset. The default name of the duplicate dataset is the copied dataset's name appended with Copy. For example, SAMPLE_REVENUE-Copy.

1. On the Home page, click **Navigator** and then click **Data**.

2. Click the **Datasets** tab.

3. Locate the dataset that you want to duplicate, click **Actions**, and then click **Duplicate**.

Rename a Dataset and Change Its Description

You can rename and change the description of any dataset that you have Full Control or Read-Write access to.

Renaming a dataset doesn't affect a workbook's reference to the dataset, and any workbooks using the dataset display the new name and continue to work as designed. When you add a dataset to a workbook, the workbook connects to the dataset by the dataset's fixed object ID, which was assigned when the dataset was created and saved, and not by its name.

1. On the Home page, click **Navigator** and then click **Data**.

2. Click the **Datasets** tab.

3. Locate the dataset that you want to rename, click **Actions**, and then click **Inspect**.

4. Click the **General** tab.

5. Go to the **Name** field and rename the dataset.

6. Go to the **Description** field and update the dataset's description.

7. Click **Save**.

Use a Subject Area as a Dataset

A workbook can contain one or more subject areas. You can also create workbooks that contain subject areas and any other type of data source, for example a spreadsheet or database data source.

You must have permission to use a specific subject area to create a workbook. If you don't have permissions to the specific subject area, that subject area isn't available for you to use in a workbook, as a dataset, or analysis.

You can't use Oracle Analytics to modify subject areas. For example, you can't exclude a column, change a column's data type or aggregation rule, or change the column from a measure column to an attribute column. You must use enterprise reporting and modeling tools to make changes to subject areas.

Create a Dataset from an Analysis in Fusion Applications Suite

You can create a dataset based on analyses from applications in Oracle Fusion Cloud Applications Suite. For example, Oracle Fusion Cloud Financials with Oracle Transactional Business Intelligence.

Oracle Analytics doesn't automatically join tables created from analyses. You need to manually join these tables.

Don't create or use an Oracle Applications connection to connect to your local Oracle Analytics instance. Using a connection to your instance to create datasets from local subject areas or analyses results in data caching issues and errors in visualizations. Instead, use the Local Subject Area connection type to create a dataset from a analyses stored in your Oracle Analytics instance.

1. On the Home page, click **Create** and then click **Dataset**.

2. In the Dataset editor, go to the **Connections** pane and browse or search for an analysis.

3. Drag and drop one or more analysis to the **Join Diagram**.

4. In the **Join Diagram**, locate the table that you want to join, hover over it to select it, and then click and drag and drop it on to the table that you want to join it to. Open the Join editor to inspect or update the join type and conditions.

5. Click **Save Dataset**.

6. Optional: Change the default name "New Dataset" displayed top left.

Create a Dataset from a Subject Area in Fusion Applications Suite

You can create a dataset from subject areas stored in an applications in Oracle Fusion Cloud Applications Suite. For example, Oracle Fusion Cloud Financials with Oracle Transactional Business Intelligence.

When you drag and drop a subject area to the **Join Diagram**, by default Oracle Analytics doesn't include any columns in the dataset table. You must specify which columns to include in the table.

Oracle Analytics doesn't automatically join tables created from subject areas. You need to manually join these tables.

Don't create or use an Oracle Applications connection to connect to your local Oracle Analytics instance. Using a connection to your instance to create datasets from local subject areas or analyses results in data caching issues and errors in visualizations. Instead, use the Local Subject Area connection type to create a dataset from a subject areas stored in your Oracle Analytics instance.

1. On the Home page, click **Create** and then click **Dataset**.

2. In the Create Dataset dialog, select a connection to the application you want to analyze.

   Oracle Applications connections have this icon:

3. In the Dataset editor, go to the **Connections** pane and browse or search for a subject area.

4. Drag and drop one or more subject areas to the **Join Diagram**.

5. To add columns to a table, go to the **Table Page Tabs**, click a subject area table, and use the **Transform Editor** to specify which columns to include in the table. Click **OK**.

6. In the **Join Diagram**, locate the table that you want to join, hover over it to select it, and then click and drag and drop it on to the table that you want to join it to. Open the Join editor to inspect or update the join type and conditions.

7. Click **Save Dataset**.

8. Change the default name "New Dataset" displayed top left.

Update Details of Data that You Added

After you add data, you can inspect its properties and update details such as the name and description.

1. Go to the Data page and select **Datasets**.

2. Select the dataset whose properties you want to update and click the **Actions menu** or right-click, then select **Inspect**.

3. View the properties in the following tabs and modify them as appropriate:

   • General

   • Data Elements

   • Search

   • Permission

Inspect a Dataset's Properties

Access and view information to learn about the dataset, such as when it was created, when it was last modified, if the dataset is indexed for searching, who can access the dataset, and a list of its data elements.

Your permissions determine which of the dataset's properties you can view and update.

1. On the Home page, click **Navigator** and then click **Data**.

2. Click the **Datasets** tab.

3. Locate the dataset that you want to inspect properties for, click **Actions**, and then click **Inspect**.

4. Click the tabs to navigate and inspect the dataset's properties.

5. Click **Close**.

Search Data

When you are looking for a piece of information to include in a presentation, you can search data, projects, and visualizations for the information you need.

Topics:

• Search Tips

Search Tips

Use these tips to help you find your content.

• **Searching in Non-English Locales** - When you enter criteria in the search field, what displays in the drop-down list of suggestions can differ depending upon your locale setting. For example, if you're using an English locale and enter *sales*, then the drop-down list of suggestions contains items named *sale* and *sales*. However, if you're using a non-English locale such as Korean and type sales, then the drop-down list of suggestions contains only items that are named *sales* and items such as *sale* aren't included in the drop-down list of suggestions.

• **Searching for New Objects and Data** - If you create or save a workbook or create a dataset and then immediately try to search for it, then it's likely that your search results won't contain matches. If this happens, refresh your browser. If you still can't find the new object or data, then wait a few minutes for the indexing process to run, and retry your search. Users can access only the data they've been given permission to access.

Analyze Data

Use analytics to draw meaningful conclusions and expand meaningful information about your data.

Topics:

• Add Statistical Analytics to Visualizations

- Create Calculated Data Elements in a Workbook
- Interpret Data Values with Color and Size in Map Visualizations

Add Statistical Analytics to Visualizations

Statistical analytics enable you to highlight clusters or outliers, add forecasts, and show trend and reference lines in your workbooks.

1. On the Home page, select a workbook, click the **Actions menu**, and then select **Open**.

2. Make sure that you have the required data in your visualization for the type of analytics you want to add.

   For example, for a forecast, you need at least one time dimension and a measure or metric.

3. In the Data Panel or Grammar Panel, click the **Analytics** icon ↗
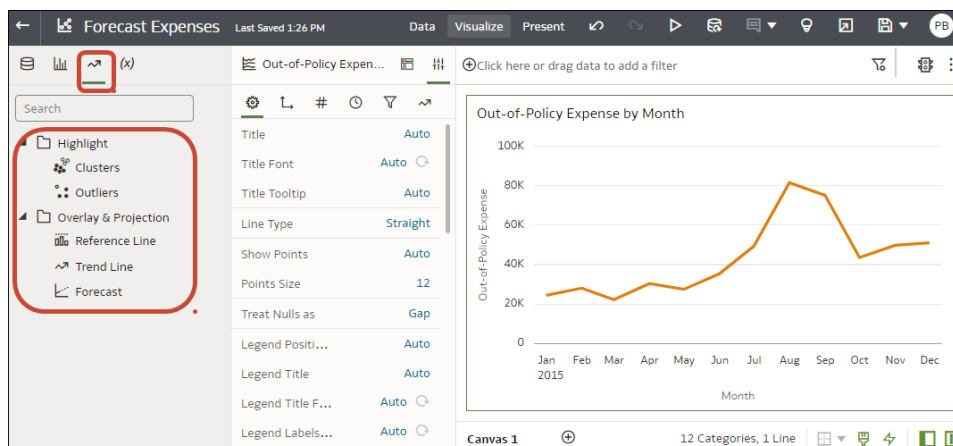
   AAA Description of (3)

4. Drag and drop the analytic you want from the **Analytics** pane to a visualization.

5. To configure the analytic, use the Analytics pane on the Grammar panel.

   For example, if you add a Forecast, you can change the model type or the number of periods to forecast.

Add Statistics
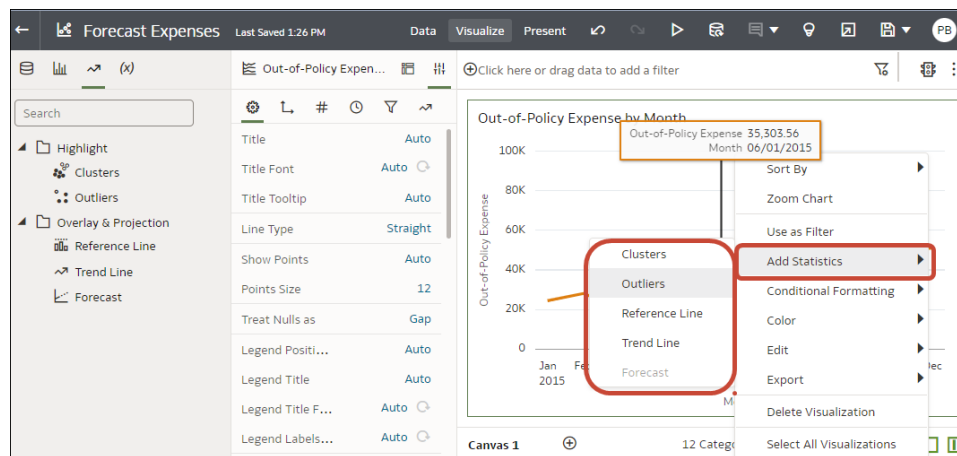
Create Calculated Data Elements in a Workbook

A calcuated data element provides reusable functions that you can add to multiple visualizations in a workbook. For example, you might use a BIN function to classify AGE values into four buckets: 0 to 20, 21 to 40, 41 to 60, and 60 plus.
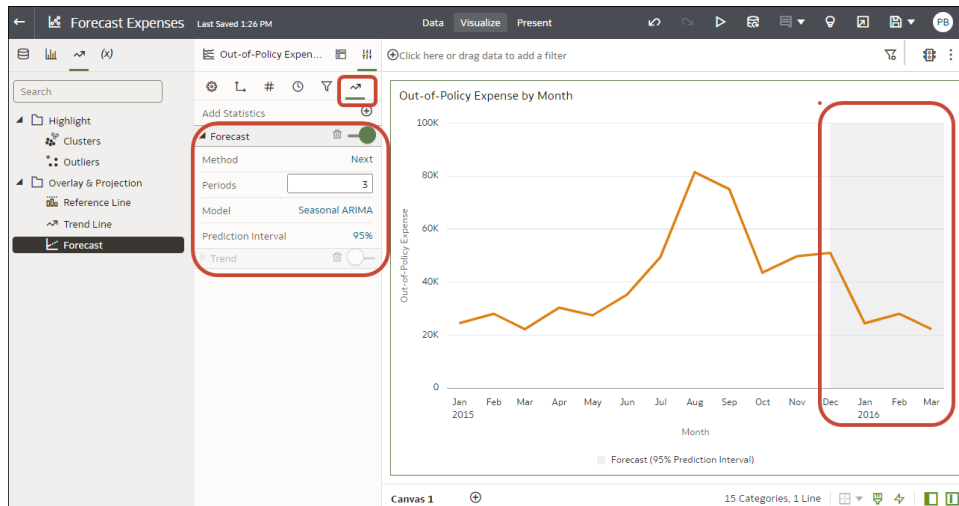
Calculated data elements are stored in the dataset's My Calculations folder and not in the workbook. Workbooks have a My Calculations folder for each dataset used (whether joined or not-joined).

1. On the Home page, select a workbook, click the **Actions menu**, and then select **Open**.

2. Select a canvas to work in.

3. Navigate to the bottom of the Data Panel, right-click **My Calculations**, and click **Add Calculation** to open the New Calculation dialog.

4. Enter a name.

5. Optional: Enter a description.

The description displays in the tooltip when you hover over a calculation.

6. In the expression builder pane, compose and edit an expression.

   You can drag and drop a column into the expression builder pane only if the column is joined to the dataset.

7. Click **Validate**.

8. Click **Save**.

Interpret Data Values with Color and Size in Map Visualizations

You can use the color and size of a shape such as a polygon or a bubble, to interpret values in a map visualization.

1. On the Home page, select a workbook, click the **Actions menu**, and then select **Open**.

2. Select a column and render it in a map view, doing one of the following:

   - Right-click a map-related column in the Data Element pane and click **Pick Visualization**, then select **Map**.

   - Drag and drop a map-related column from the Data Element pane to the blank canvas, or between visualizations on the canvas. On the visualization toolbar, click **Change Visualization Type** and select **Map**.

3. Drag and drop columns to the following sections on the Visualization Grammar Pane.

   - Use **Color** to change the color for geometries displayed in the corresponding map layer (for example, polygon fill color, bubble color) based on the values.

   - Use **Size (Bubble)** to change color bubble size based on the measure column values. To change the size of the color bubble you've to drag and drop measure columns only. The size shows the aggregated measure for a specific geographic location in a map visualization.

   - Use **Trellis Columns / Rows** to Compare multiple map visualizations based on the column values using filters.

In the map visualization, you can also use the following to interpret measure columns and attribute values:

- **Legend** - If a measure column or an attribute has multiple values, then the legend is displayed that shows values by size or color.

- **Tooltip** - If you hover the mouse pointer over a color bubble or data point, then the values are displayed in a tooltip.

5
Mobile Capabilities

You can review decks and collaborate with colleagues using Oracle Fusion Analytics Warehouse with your mobile device.

Topics:

- Using Oracle Fusion Analytics Warehouse on Mobile Devices
- About Warnings for Data Issues in Visualizations

Using Oracle Fusion Analytics Warehouse on Mobile Devices

You can view your Home page, decks, and cards using a browser on your mobile device with nearly the same functionality as you have at your computer.

Due to the smaller screen sizes of mobile devices, you can't perform certain functions such as manipulating decks, drilling down to complex detailed views such as analyses, or authoring KPIs.

About Warnings for Data Issues in Visualizations

You see a data warning icon when the full set of data associated with a visualization isn't rendered or retrieved properly. If the full set of data can't be rendered or retrieved properly, then the visualization displays as much data as it can as per the fixed limit, and the remaining data or values are truncated or not displayed.

A

Frequently Asked Questions

- How do I check which release of
- Why are my Oracle Fusion Analytics Warehouse bookmarks different?
- How do I import an Oracle Analytics project file into Oracle Fusion Analytics Warehouse
- How do I change the layout of the cards in a deck?
- Can I add customized filters to the decks?
- How do I replace a KPI on a card?
- How do I know if a card has links?
- Can I change the calculations in a KPI?
- Can I customize the axis name on a card?
- Can I change the number representation format on a card?
- Can I add data labels in a bar graph?
- Alternative Features

Oracle Fusion Analytics Warehouse

How do I check which release of Oracle Fusion Analytics Warehouse I'm using?

From the Console page, select **Release Updates**. You'll see the version number for the application platform, semantic model, and content.

Why are my Oracle Fusion Analytics Warehouse bookmarks different?

The URLs for various parts of Oracle Fusion Analytics Warehouse change from time to time. Refresh your bookmarks if they appear to be out of synchronization with the interface.

How do I import an Oracle Analytics project file into Oracle Fusion Analytics Warehouse?

1. Download the .dva file to your computer.
2. Log in to Oracle Fusion Analytics Warehouse.
3. Click **Import Project/Flow**.

How do I change the layout of the visualizations in a deck?

Adjust the magnification of your browser window.

Can I add customized filters to the decks?

Deck level filters apply to all visualizations on a deck. They won't apply to other custom decks, meaning they can't be pinned to other decks. See Filter Data by Deck.

How do I replace a business metric on a visualization?

While you can't replace a business metric on a visualization, you can customize it. See Edit a KPI.

How do I know if a visualization has links?

When you click the **Actions** menu on the visualization, look for a linked report at the bottom of the menu.

Can I change the calculations in a business metric?

Yes. You can either create new business metrics, or copy out-of-the-box preconfigured business metrics and modify them. See Edit a KPI.

Can I customize the axis name on a visualization?

Yes. From the **Actions** menu, click **Customize**, then in visualization Settings, click **More Options** and change the **Subtitle**.

Can I change the number representation format on a visualization?

Yes. You can edit the business metric to change the **Measure** property to Number and disable **Abbreviate**.

Can I add data labels in a bar graph?

Yes. From the **Actions** menu, click **Customize**, then in visualization Settings, change the **Plot Area** values.

Oracle Analytics Cloud

Why do some users have read permissions that I didn't assign?

If you save or move a report, dashboard, or project containing an artifact (for example, a dataset) to a shared folder, and when prompted you share the related artifacts, then Oracle Analytics assigns the artifacts read permissions for the users who can access the report, dashboard, or project in the shared folder.

Without the read permission, users won't be able to access the correct content when they open the report, dashboard, or project.

Can I delete data files that I uploaded to my Cloud service?

Yes. You can delete data files from the Data Sources page. See Delete a Data Source Connection.. You can also delete data files in projects and analyses. See Delete a Dataset.

Can I delete data files uploaded by a deleted user from my Cloud service?

Yes. Reinstate the deleted user, then delete the dataset files.

Alternative Features

To align functionality across Oracle Fusion Analytics Warehouse and Oracle Analytics Cloud, some features have been removed or changed. See the details and workarounds below.

What happened to my large card view?

To create more consistent functionality across decks and detail pages (workbooks), the maximized large card view has been removed. You can link navigation from the regular card to drill-down content you create. You can add navigation links to KPI card menus that you can invoke contextually from card visualizations.

Can I add notes to my visualizations?

Yes. You can annotate Oracle Analytics Cloud workbooks using **Add Note**.

See Add Notes to a Visualization.

Where are my customized KPIs?

Customized KPIs have been removed. You can use **Save As** to create a unique KPI card from an Oracle-provided KPI, or a custom KPI created within your organization.

Where is Show Changes for KPIs?

The **Show Changes** feature has been removed. You can track changes across versions manually.

B

Troubleshooting

- When I log in, Oracle Fusion Analytics Warehouse doesn't load properly.
- I see a performance decrease when using Mozilla Firefox
- I can't access a particular analysis, dashboard, or project
- The analysis or project is running very slowly
- This card could not be rendered due to incorrect time configuration of the KPI. Contact the KPI Owner to fix the KPI
- This card could not be rendered due to missing mandatory driving dimension filter. Please add the filter in the deck or card to render this card.
- I can't access certain options from the Home page
- I see a performance decrease when using Mozilla Firefox
- My analysis or project times out
- I can't see data in an analysis or project
- I can't access a particular analysis, dashboard, or project
- I can't find an analysis, dashboard, or project
- The analysis or project is running very slowly

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.

I can't access a particular analysis, dashboard, or project.

You attempt to display an analysis, dashboard, or project and find that you don't have access.

Typically you can't access an analysis, dashboard, or project if you lack the appropriate permissions or application role for accessing it. Contact the owner of the analysis, dashboard, or project or your administrator for assistance in obtaining the proper permissions or application role.

The analysis or project is running very slowly.

You attempt to run an analysis or project and find that it takes a long time.

Various underlying circumstances can cause an analysis or project to run slowly. Contact your administrator and ask that he review log files associated with the analysis or project. After reviewing the log files with the administrator, make the appropriate adjustments in the analysis or project.

This card could not be rendered due to incorrect time configuration of the KPI. Contact the KPI owner to fix the KPI.

You'll see this error on the card if the underlying KPI isn't properly upgraded to select a **Column-driven**, **Gregorian**, or **Enterprise** calendar type.

1. From the **Home** page, click **Navigator** and select **KPIs**.

2. Click the KPI you want to change.

3. Update the Time section to use a **Column-driven**, **Gregorian**, or **Enterprise** calendar.

4. Click **Save**.

This card could not be rendered due to missing mandatory driving dimension filter. Please add the filter in the deck or card to render this card.

You need to apply a calendar to column-driven calendar KPIs. Apply a filter for the missing **Calendar Based On** column to the card or deck.

1. On the **Decks** page, select the deck that contains the card you want to change.

2. If needed, inspect the underlying KPI to identify the missing column filter.

3. To edit the deck filter, see Filter Data by Deck.

4. To edit the card filter, see Filter Card Data.

I see new filters with an asterisk on my decks or cards.

The dynamic calendar type uses a **Calendar Based On** column. This calendar type requires decks and cards to have a filter for the **Calendar Based On** column with a selected value. The new filters and asterisk suggest your KPIs upgraded to add a **Calendar Based On** column. Your decks and cards also upgraded so that they reference a filter for the driving column. You must add a value for this filter. The first value for that filter is selected at runtime.

You can select a different filter from the filter dialog. See Create a KPI.

I changed the Calendar Based On column in a KPI and some cards broke.

There's likely a mismatch between an existing required deck filter and the broken cards.

1. Delete the current required deck filter that has an asterisk.

2. Add a new filter that matches the KPI's **Calendar Based On** column.

I manually imported a KPI, and cards based on it are broken.

Your KPI likely isn't upgraded to properly reference time and calendars.

Edit the KPI to add the required time information. See Create a KPI.

My KPIs use a simple Gregorian calendar but I see a Calendar Based On column in the KPI definition or new filters with an asterisk on my decks or cards.

Your KPIs may have used a fiscal calendar prior to the upgrade, and now use a **Calendar Based On** column.

1. Edit the KPI to set the calendar type back to Gregorian. See Create a KPI.

2. Remove any leftover required filters from your decks.

I set a Calendar Based On column filter when I created a card, but it disappeared.

1. First, add the card to a deck.

2. Then customize the card to add the **Calendar Based On** filter.

I can't access certain options from the Home page.

Check with your administrator to ensure that you have the correct permissions to access the options that you need.

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.

My analysis or project times out.

You attempt to run an analysis or project and find that it times out. You see a message similar to this:

```
[nQSError: 60009] The user request exceeded the maximum query governing
execution time.
```

This message is displayed when an Oracle Analytics query spends more than the allotted time communicating with the data source. For performance reasons, the limit for a single query to run is 10 minutes.

Try running the query again. To prevent this error, avoid long running queries.

> **Note:**
>
> Note: For direct connections to Oracle Database, the query limit automatically extends to 60 minutes to accommodate occasional, longer running queries. To avoid excessive loads on the database, Oracle Analytics restricts the number of queries that are allowed to automatically extend at any one time. If your analysis or project connects to any other data source or connects to an Oracle Database indirectly through Data Gateway, the query limit is always 10 minutes; the limit doesn't extend beyond 10 minutes.

I can't see data in an analysis or project.

You open an analysis or project, but you don't see any data in it.

There might be some temporary issue with the database. Contact your administrator for assistance.

You might not have the permissions needed to access the data. Contact the object's owner or administer and ask them to check your access permissions. You'll need read permissions to the analysis or project and any artifacts included in the analysis or project (for example, a dataset).

I can't access a particular analysis, dashboard, or project.

You attempt to display an analysis, dashboard, or project and find that you don't have access.

Typically you can't access an analysis, dashboard, or project if you lack the appropriate permissions or application role for accessing it. Contact the owner of the analysis, dashboard, or project or your administrator for assistance in obtaining the proper permissions or application role.

I can't find an analysis, dashboard, or project.

Try searching the catalog. You can search for analyses, dashboards, or projects by name (full or partial) and by folder location. The search isn't case-sensitive. Searches of the catalog return only those objects that you have permission to see.

Contact your administrator if you still can't find an analysis, dashboard, or project and you suspect that it was deleted by mistake. Your administrator can restore earlier versions of the catalog from recent snapshots, if required.

The analysis or project is running very slowly.

You attempt to run an analysis or project and find that it takes a long time.

Various underlying circumstances can cause an analysis or project to run slowly. Contact your administrator and ask that he review log files associated with the analysis or project. After reviewing the log files with the administrator, make the appropriate adjustments in the analysis or project.