**Oracle® Fusion Middleware**

What's New for Oracle Data Visualization Desktop

E76890-14

June 2019

# What's New for Oracle Data Visualization Desktop

Here's an overview of the new features and enhancements we've added to Data Visualization Desktop.



## Release 12.2.5.3 — June 2019

**New Features**

| Feature | Description |
|---|---|
| Tooltips improvement | Use the **Tooltips** field to adjust a visualization's tooltips content, or to turn a visualization's tooltips off. See Modify a Visualization's Tooltips. |
| Select alias table | You can select an alias table when creating or updating Essbase data sets. See Create Data Sets from Essbase Cubes. |
| Configure currency symbols | You can dynamically populate a currency symbol in visualizations based on the configured currency. See Set Currency Symbols for Visualizations. |

## Release 12.2.5.2 — April 2019

**New Features**

| Feature | Description |
|---|---|
| Add notes | Add, edit, and adjust notes on a canvas.<br>See Add Notes. |

| Feature | Description |
| --- | --- |
| Enhanced column operations | Quickly reorganize items in the Projects, Data, and Machine Learning pages by sorting the items based on their attributes.<br>See Sort the Items in a Page. |
| Data flow improvements | Employ improvements to data flows including:<br>• Transform Data in a Data Flow<br>• Schedule a Data Flow<br>• Create and Customize an Essbase Cube in a Data Flow<br>• Copy, Paste, and Skip Rules<br>• Designation Change Rules for Generation Columns |
| Map improvements | Employ improvements to maps in data visualizations including:<br>• Create Cluster Layers on a Map Visualization<br>• Represent Point Data With Custom Icons on a Map<br>• Select Points or Area on a Map<br>• Represent Line Data Using Size and Color on a Map |
| Connection improvements | • Create connections to the Snowflake Data Warehouse.<br>See Create Connections to Snowflake Data Warehouse. |
| Specify filters for relative time periods | Display data for a specified time period based on the current date and time using the relative time filter on a Date or Date/Time column.<br>See Apply Relative Time Filters. |
| Upload larger data files | Upload files with a maximum size of 250 MB. The number of data columns allowed in a single file is 250 columns.<br>See About Adding Spreadsheets or Other Files. |
| Connect to on-premises databases | Visualize data in on-premises databases using the **Use Remote Data Connector** option. See Supported Data Sources (to find out supported remote database types, look for databases with a Y in the 'Remote Connection to Data Sets' column). |

# Release 12.2.5.1 — January 2019

### Creating Connections

| Feature | Description |
| --- | --- |
| Autonomous Data Warehouse connection enhancements | You can more easily create a connection to Oracle Autonomous Data Warehouse because key connection details are prepopulated from the selected client credentials zip file.<br>See Create Connections to Oracle Autonomous Data Warehouse. |
| Autonomous Transaction Processing connections | You can create connections to Oracle Autonomous Transaction Processing.<br>See Create Connections to Oracle Autonomous Transaction Processing. |

# Release 12.2.5.0 — September 2018

### Creating and Working With Projects

| Feature | Description |
|---|---|
| Preparing data | You can use data transformation and enrichment recommendations to prepare your data before visualizing it. See Preparing Your Data Set in a Project. |
| Visualization types | You can create Grid Heatmap, Picto, 100% Stacked Bar, Horizontal 100%, 100% Area, and Correlation Matrix visualizations. |
| Map layers and backgrounds | • You can select a map background to use in a project. See Using Different Map Backgrounds in a Project.<br>• You can display multiple data series (different sets of dimensions and metrics) on a single map visualization in a project. See Applying Multiple Data Layers on a Single Map Visualization.<br>• You can use a heatmap as a data layer type on a map visualization to identify the density or high concentration of point values or metric values associated with the points. See Creating Heatmap Layers on a Map Visualization.<br>• You can make map backgrounds available to users. See Making Map Backgrounds Available to Users. |
| Inspect object properties | You can use inspectors to view and edit the properties of standalone objects in the Home, Data, Projects, and other top-level pages. See Viewing and Editing Object Properties. |

### Managing Data

| Feature | Description |
|---|---|
| Data flow enhancements | • You can branch a data flow and create multiple outputs or connections. See Branching Out a Data Flow into Multiple Connections.<br>• You can add parameter prompts to reuse a data flow across multiple sources or to use different criteria to process and select data. See Applying Parameters to a Data Flow.<br>• You can modify or select the database name, the attribute or measure, and the aggregation rules for each column of the output data set before running or executing a data flow. See Saving Output Data from a Data Flow. |
| Saving changes automatically | You can use the Auto Save option to automatically save your updates to a visualization project without repeatedly clicking **Save**. See Saving Your Changes Automatically. |
| Opening objects using keyboard shortcuts | You can use keyboard shortcuts to open artifacts in a new tab or window. See Keyboard Shortcuts for Data Visualization. |
| Replacing a data set in a project | You can replace a data set by re-mapping columns used in a project to columns from a different data set. See Replacing a Data Set in a Project. |
| Duplicating a data set | You can duplicate an uploaded data set listed in the Data Sets page to help you further curate (organize and integrate from various sources) data in projects. See Duplicating Data Sets. |

## Release 12.2.4 — October 2017

### Machine Learning

| Feature | Description |
| --- | --- |
| Use machine learning to make predictions and intelligent suggestions | You can use machine learning (ML) algorithms to show patterns and uncover insights in your data sets, and then add them to your visualizations.<br>• Use the Machine Learning catalog to manage your ML scripts and models.<br>• Use data flows to train ML models using custom or built-in scripts.<br>• Use data flows to score and predict data sets using ML models.<br>• Self-service ML for diagnostics analytics of attributes (explain).<br>• Create a custom scenario for attributes by applying ML models to a data set.<br>See Working with Machine Learning. |

### Managing Data

| Feature | Description |
| --- | --- |
| Connect to more databases | You can connect to several new data sources:<br>• Oracle Autonomous Data Warehouse<br>• Oracle Big Data Cloud Service<br>• Oracle Talent Management Cloud<br>See Connecting to Database Data Sources. |
| Data flow enhancements | • Merge the rows from two data sets. See Merging Rows in a Data Flow.<br>• Create bins from a measure. See Creating a Binning Column.<br>• Use binning attributes to group your data. See Creating a Group.<br>• Use cumulative aggregate functions to group your data. See Adding Cumulative Values to a Data Flow.<br>• Calculate additional rows with forecasted values by applying a Time Series Forecast calculation. See Adding a Time Series Forecast to a Data Flow.<br>• Detect sentiment for a given text column by applying a sentiment analysis to your data flow. See Adding a Sentiment Analysis to a Data Flow.<br>• Use filters to restrict your data. See Adding Filters to a Data Flow.<br>• Transform your data using custom scripts. See Applying Custom Scripts to a Data Flow.<br>• Build data sets from a predefined sequence. See Creating a Sequence.<br>• Load data into an Essbase cube. See Creating an Essbase Cube. |

### Creating and Working With Projects

| Feature | Description |
|---|---|
| Improved narration and storytelling features | When you use the improved narrate feature it makes presenting your data stories even easier. See Building Stories. |
| Include links to related content in your project | Enhance visualizations by offering links to related content under a handy **Data Actions** menu. See Working with Data Actions. |
| Numeric values in file-based data sources uploaded as measures | When you upload a file based data source, columns containing numeric values are imported as measures with the Number data type. |
| More display formatting options for numbers and dates | You can select from a wide range of number and date formats to choose the best display format for data in your visualizations. See Adjusting the Display Format of Date or Time Columns. |
| New properties area in the Data Panel | For quick and easy access, the properties of objects you select are displayed in the Data Panel. See Adjusting Visualization Properties. |
| Improved sharing | Use the  to share a visualization, canvas, or story with others, as a file, by email, a printed page, and on cloud.<br>You can also share a project or folder only in DVA format, as a file, by email, and on cloud.<br>See Importing and Sharing. |
| More options to copy, paste, and duplicate | It's often quicker to copy visualizations than starting from scratch. You can paste within the same canvas and between canvases in the same project.<br>Use the duplicate option to make copies of an object within the same canvas or to duplicate the entire canvas.<br>See Adjusting the Canvas Layout. |
| Add unrelated data sets to the same project | Your projects can contain visualizations from multiple, unrelated data sets; that is, the data sets don't have to be joined. |
| Date and time intelligence | You can seamlessly transition through different levels of time hierarchies or granularities with ease. |
| Data warning indicator | Warning signs  indicate possible issues with your data. If you don't want to see any warnings in your projects you can hide them. Warnings never display in printed or shared output. See Visualization Data Warning Notification. |
| Background maps | Use background maps to enhance your geographical visualizations. See Enhancing Visualizations with Map Backgrounds. |
| Coloring maps using attribute column values | You can use color features to interpret the measure columns and attribute values in projects that include map visualizations. See Interpreting Data Measure and Attribute Values by Color in Map Visualizations. |

### Other Enhancements

| Feature | Description |
|---|---|
| Brand new home page | Improved design that's simple to navigate and easy to use. Personalize your home page to suit the way you want to work. |

| Feature | Description |
|---|---|
| Publish a project to Oracle Analytics Cloud | You can publish a project that you create in Data Visualization Desktop to an instance of Oracle Analytics Cloud that is using the same version or a later version of Data Visualization. You can choose to include the project's data and connection credentials. See . |

# Release 12.2.3 — June 2017

### Creating and Managing Data Sets

| Feature | Description |
|---|---|
| Connect to new data sources | New connection types are available with limited support, and are marked as **Beta** in the product: OData, Oracle Docs, JDBC, and ODBC. |
| Data Source editor | Previously in Data Visualization Desktop, you used the Data Source dialog to create or edit data sources. The Data Source dialog is replaced by the Data Source editor, which provides the same functionality but is more dynamic and easier to use. See Using the Data Source Editor. |
| CSV and text file delimiters | When uploading CSV and text files for data sets, you can override the auto-detected delimiter. Your choices are: Comma, Semicolon, Space, Tab, and Custom. If you select Custom, you then specify the delimiter used in your CSV file. |
| Subject areas as data sources | You can build data sources from Oracle Fusion Applications with Oracle Transactional Business Intelligence or Oracle BI EE subject areas. See Composing Data Sources from Subject Areas. |
| Data flow improvements | You can save a data flow as a database connection, which stores the data flow data to a database table. See Saving Data Flow Output Data to a Database.<br>You can merge two or more columns in a data flow to display as one column. See Merging Columns in a Data Flow.<br>The Data Flow editor layout is now easier to use. See Using Data Flows to Curate Data Sources. |

### Creating and Working With Projects

| Feature | Description |
|---|---|
| Visualization types | You can create box plot, horizontal box plot, and waterfall visualizations. |
| Apply top or bottom N filters | You can use the top or bottom N filter to filter a measure to display a subset of its largest or smallest values. See Applying Top or Bottom N Filters. |
| Date and time column improvements | You can convert a text column into a true date, time, or timestamp column. See Converting Text Columns to Date or Time Columns.<br>You can adjust the display format of a date or time column to show a different level of granularity. See Adjusting the Display Format of Date or Time Columns. |

| Feature | Description |
|---|---|
| Canvas duplication and multi-canvas reordering | You can duplicate an existing canvas on a visualization and use the duplicate canvas as a starting point for a similar canvas. You can also manually reorder the sequence of multiple canvases in a visualization. See Adjusting the Canvas Layout. |
| Support for event data at second or millisecond grain | Line visualizations can show a continuous datetime reading on the x-axis. You can analyze data at the second or millisecond grain. Previous versions of Data Visualization Desktop supported analyzing data at the day grain, only. |
| Custom map layers support | You can load and manage custom map layers in a project using geometric JSON files. See Adding Custom Map Layers. |

**Other Enhancements**

| Feature | Description |
|---|---|
| Custom Visualization Plug-in Upload | If you want to display data in a custom visualization that was created by another user or an Administrator, then you can upload and deploy the custom visualization's plug-in to your installation of Data Visualization Desktop. See Managing Custom Plug-ins. |

# Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

# Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

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E76890-14



This document describes new features and other notable changes for Oracle Data Visualization Desktop.