

## What's New for Oracle Analytics Server

Here's an overview of new features and enhancements added recently to improve your Oracle Analytics Server experience. It's organized by the release a specific feature or capability became available.

### What's New in 5.9

#### General

| Feature   | Description  |
|---|--|
| Deploy Oracle Analytics Server on Oracle Cloud                  | You can deploy Oracle Analytics Server on Oracle Cloud Infrastructure using a quick-deploy template available on Oracle Cloud Marketplace. See <a href="#">Deploy Oracle Analytics Server Using Oracle Cloud Marketplace</a> .   |
| Customized time-zone setting                                    | Properties that affect the date and time of the system are commonly used in analytics. These properties can drive functions such as rolling periods and date differences, and you can use them to determine when to send notifications. Oracle Analytics provides the ability to use these date-time properties in SQL functions. For instance, you can query for a value this minute and compare that same value to what happened 10 minutes earlier. The <b>Default Time Zone for Date Calculations</b> setting allows you to configure your time zone. See <a href="#">Format Options</a> . |
| Propagate shared folder permissions to associated artifacts     | To allow you to effectively manage shared content among users, you can select whether to grant permissions to other users when saving content in shared folders or moving content among shared folders. See <a href="#">Assign Shared Folder and Project Permissions</a> .   |
| Show database model full details in Oracle Analytics inspectors | Oracle Analytics provides explainability about your registered Oracle machine learning models. Outputs describe how the Oracle machine learning model computes the predicted results for each record in the data set and allow you to aggregate these results. See <a href="#">Inspect Registered Oracle Machine Learning Models</a> .   |

| Feature  | Description  |
|--|--|
| Show database model full details in Oracle Analytics inspectors - Visualize Database Views | Visualize a registered Oracle machine learning model's views to better understand the model and iteratively improve the model's overall accuracy. See Visualize a Registered Oracle Machine Learning Model's View.   |
| Data Action: Support single/multi selection  | You can restrict the invocation of a data action to work only for a single value by setting <b>Supports Multiple Selection</b> to Off. You set this when the selection of multiple data points will result in an error (for example, with some third-party REST APIs). See Use Data Actions to Connect to Canvases, External URLs and External Containers. |
| Data Action: Avoid passing duplicate filters   | When you create a data action using multiple data points to filter another canvas, and you return to the original canvas and invoke the data action using different data points, the new expression filter replaces the previous filter on the target canvas. See Create Data Actions to Connect Visualization Canvases.                                   |

## Visualization

| Feature  | Description  |
|--|--|
| Ability to add new map backgrounds                     | You can add a map hosted on a web server as a map background using the Web Map Service (WMS) protocol and XYZ tile layers. See Add Map Backgrounds.  |
| Apply no sort to data                                  | In visualizations, data is always sorted by default. You can use the <b>Sort By None</b> option to "unsort" or return the data to its original order. See Sort Data in Visualizations.   |
| Area chart visualization                               | In addition to the stacked area and 100% stacked area, you can visualize data in an area chart. See Change Visualization Types.  |
| Improved chrome density in the data panel              | The data panel across all visualization editors uses horizontal tabs instead of vertical tabs, and the density of the tree content is increased. See Build a Visualization by Adding Data from Data Panel.   |
| Improved progress bar behavior                         | The blue bars that were previously visible across the screen when data was refreshed have been removed. The data refresh experience is more subtle. Hover the mouse pointer over a visualization to see refresh details or to cancel. See Refresh Data in a Project. |
| Pass filters between the filter bar and visualizations | Filters for a canvas or project are defined on the top bar, and filters for a visualization are defined on the grammar. You can move a filter from one scope to another. See Change the Scope of Filters Between the Main Filter Bar and Visualizations.             |
| Respect the canvas aspect ratio when exporting         | You can select to maintain the canvas aspect ratio, ensuring that the outcome is closest to your intent. See Print a Visualization, Canvas, or Story.  |
| Sort by multiple columns                               | You can select multiple sort columns for a visualization. You can create nested sorts based on a combination of the attributes and measures in the visualization. See Sort Data in Visualizations.   |

| <b>Feature</b>                                     | <b>Description</b>  |
|--|---|
| Trim spaces on text columns                        | You can easily trim or remove leading and trailing spaces on text columns using the transform options menu. See Transform Data Using Column Menu Options.   |
| Consistent legend properties across visualizations | The following visualizations have properties (such as location and fonts) added to their legend: Sankey, Network, Tree Diagram, and Chord.<br>See Adjust Visualization Properties.  |
| Image backgrounds for heat maps                    | Visualize data with heat map layers on your custom image maps. See Apply Map Backgrounds and Map Layers to Enhance Visualizations.  |
| Single header on all pages                         | The user interface in Oracle Analytics has been enhanced with a single header that helps to maximize your workspace. With the content density provided, you can realize the benefits of your viewing capability with a modernized user interface and improved navigation.   |
| Toggle "Use as Filter" on visualization            | Oracle Analytics allows you to interact with content in a dashboard to filter analyses on an individual basis. You can use top-level filters and on-canvas filters to allow your users to decide which filters should be passed and to where. Using breadcrumb details, you can easily see which filters are being applied where.<br>See How the Number of Data Sets Affects Filters. |
| Spark charts within performance tiles              | You can liven up your visualizations with spark charts added to tiles. See Examine Trends with Spark Charts.  |
| Responsive canvas layouts                          | You can use controls for setting vertical and horizontal scrolling of canvas reports and automatic responsive design across screen resolutions. See Adjust the Visualization Canvas Layout.   |
| On-canvas filters                                  | You can add on-canvas filters that allow users to choose, change, and apply filters to attribute columns within some or all of the visualizations on the canvas. See Add an On-Canvas Filter.   |
| Oracle machine learning models                     | You can register and use Oracle machine learning models to model, score, and output large data sets on the database. You can register and use Oracle machine learning models from Oracle Database and Oracle Autonomous Data Warehouse connections. See How Can I Use Oracle Machine Learning Models In Oracle Analytics?.  |
| Top/Bottom filters for attributes                  | Add a Top/Bottom filter for an attribute and then pick the measure. Previously you could only add the Top/Bottom filter for a measure and then pick the attribute. See Apply Top Bottom N Filters.  |
| Bridge reports                                     | You can use the Waterfall visualization to build a bridge report. A bridge report groups data by contributions of each member to the overall variation between values of categories. For example, show the respective contribution of various products to the total sales variation year by year. See Create a Project and Add Data Sets.   |
| Content paging rows setting                        | You can specify the maximum number of rows you want displayed for content paging in table and pivot table views in analyses and dashboards. See View Options.   |

| Feature  | Description   |
|--|---|
| Waterfall visualization enhancements                           | You can do the following with waterfall visualizations: <ul style="list-style-type: none"> <li>• Assign custom colors for increase and decrease values.</li> <li>• Configure data labels to show either actual values or variation values.</li> </ul>   |
| Improved usability of the Canvas Bar                           | As you create a project, you have many different tabs of analyses. Explore the improved content density of canvas names for better visibility and quick duplication of a canvas for iterative report creation and testing. As you duplicate or copy canvas tabs, new canvasses are added next to the original and not at the end of the list for ease of accessibility. |
| Create digitized custom map layers                             | Easily create custom interactive visualizations from any image. Upload images and create map layers that support defining areas on the images with no-code polygon definitions bound to data interactively. See <a href="#">Use an Image as a Map Background and Draw Map Layer Shapes Onto the Image</a> .   |
| Enhanced map rendering and ability to disable gestures         | The performance of map rendering is enhanced including data truncation warnings when using large data sets. You can lock the display of a map and disable interactive gestures for a better experience.   |
| Copy calculation expressions to the Clipboard                  | Access a simple menu option to copy an entire expression to the Clipboard without opening the formula editor.   |
| Duplicate calculations   | Quickly copy and duplicate custom calculations to make backup copies, and to test syntax scenarios quickly.   |
| Flexible and persistent cell sizing in tables and pivot tables | Enhance the clarity of tables and pivot tables. You can control the size of columns and rows for specific data points that need more attention or more room for visibility.   |
| Data Actions to Publisher reports                              | Create data actions to navigate easily to a Publisher report. See <a href="#">Use Data Actions to Connect to Oracle Analytics Publisher Reports</a> .   |
| Database Advanced Analytics functions in data flows            | You can consume advanced analytics functions from Oracle Autonomous Data Warehouse and Oracle Database. These include Dynamic Clustering and Dynamic Anomalies, Unpivoting of columns and rows, and Smart sampling. See <a href="#">Add Analytic Functions to a Data Flow</a> .   |
| Waterfall chart enhancements                                   | You can do the following with waterfall visualizations: <ul style="list-style-type: none"> <li>• Assign custom colors for increase and decrease values.</li> <li>• Configure data labels to show either actual values or variation values.</li> </ul>   |
| Consistent legend properties across visualizations.            | The following visualizations have properties (such as location and fonts) added to their legend: Sankey, Network, Tree Diagram, and Chord.<br><br>See <a href="#">Adjust Visualization Properties Adjust Visualization Properties</a> .   |
| Spatial functions in data modeling.                            | In the Expression Editor, you can use spatial functions when you model data using Oracle Analytics Developer Client Tool to help you perform geographical analysis. See <a href="#">Spatial Functions</a> . You can't use these spatial functions in self-service mode for visualization projects.  |

## Data Sources

| Feature                               | Description   |
|---------------------------------------|---|
| Impersonation for Kerberos connection | When creating a connection to Hive, you can include the Kerberos authentication type and impersonation details. See <a href="#">Create a Database Connection with Kerberos Authentication</a> . |
| Enrichments for live data sets        | You can leverage enrichments for live data sets along with cached or file-based data sets.<br>See <a href="#">About Data Preparation</a> .  |

## Data Preparation

| Feature   | Description  |
|---|--|
| Support for database text tokenization in data flows                        | An advanced text-analytics technique is applied to user data to identify and list the words most frequently appearing within a text data-column. See <a href="#">Support for database text tokenization in data flows</a> .  |
| Support for Database Frequent Item Set (Market Basket) in data flows        | Discover relationships in your data by identifying sets of items that often appear together. This data mining technique is known as association rule learning, affinity analysis, and market basket analysis. See <a href="#">Support for database text tokenization in data flows</a> . |
| Database Advanced Analytics functions in data flows                         | You can consume advanced analytics functions from Oracle Autonomous Data Warehouse and Oracle Database. These include Dynamic Clustering and Dynamic Anomalies, Unpivoting of columns and rows, and Smart sampling. See <a href="#">Add Analytic Functions to a Data Flow</a> .          |
| Data preparation - enhanced search and replace                              | Perform advanced search and replace and pattern matching using powerful regular expressions (also referred to as <code>regex</code> ). See <a href="#">Transform Data Using Replace</a> .  |
| Additional Model Training Output for Clusters                               | Create more powerful cluster analyses using extended fields that assist in visualizing the output of your model with network charts to see your output (that is, Explainable AI). See <a href="#">Train a Clustering Model in a Data Flow</a> .  |
| Enhanced Oracle Enterprise Performance Management Cloud (EPM) data modeling | Take advantage of the preinstalled Analytic Data Modeling (ADM) driver to create enhanced reports. See <a href="#">Overview to Integration with Planning, Close and Tax Reporting on Oracle EPM Platform</a> .   |

## Oracle Analytics Publisher

| Feature                              | Description  |
|--------------------------------------|--|
| Use self-service analytics data sets | You can use data from self-service analytics data sets to create pixel-perfect reports or to burst reports. See <a href="#">Create a Data Set Using a Visualized Data Set</a> and <a href="#">Use a Visualized Data Set to Add a Bursting Definition to Your Data Model</a> .<br><br>This feature isn't available when you install Oracle Analytics Publisher as standalone. |

| Feature                                       | Description  |
|---|--|
| XML data pruning                              | Data extraction from data sources often includes additional XML elements that aren't used by the report layout. If you enable XML data pruning, Publisher removes the unnecessary data elements and builds the XML structure using only the data fields that are mapped to the layout fields. Data pruning improves performance, especially for extremely large data extractions.<br>See Data Model Properties and Set Output Options. |
| Dynamic images from Content Server in reports | Use the RTF and XPT templates to include dynamic images from Content Server. See About Images.   |
| XML data chunking for large data sets         | If you enable XML data chunking for processing large data sets, then: <ul style="list-style-type: none"> <li>You don't need to specify page numbering in the template. The consolidated PDF output includes the page numbers.</li> <li>You can use the XSL template.</li> </ul> See XML Data Chunking.   |
| Additional data model validation messages     | Incorporated additional rules and improved query validation messages in the data model help report authors follow best practices.<br>See Data Model Validation Messages.   |

## 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.

Oracle Analytics What's New for Oracle Analytics Server, Release 5.9.0  
F24234-03

Copyright © 2021, 2021, Oracle and/or its affiliates. All rights reserved.

This document describes new features and other notable changes for Oracle Analytics Server.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, then the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs (including any operating system, integrated software, any programs embedded, installed or activated on delivered hardware, and modifications of such programs) and Oracle computer documentation or other Oracle data delivered to or accessed by U.S. Government end users are "commercial computer software" or "commercial computer software documentation" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, reproduction, duplication, release, display, disclosure, modification, preparation of derivative works, and/or adaptation of i) Oracle programs (including any operating system, integrated software, any programs embedded, installed or activated on delivered hardware, and modifications of such programs), ii) Oracle computer documentation and/or iii) other Oracle data, is subject to the rights and limitations specified in the license contained in the applicable contract. The terms governing the U.S. Government's use of Oracle cloud services are defined by the applicable contract for such services. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle, Java, and MySQL are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Inside are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Epyc, and the AMD logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information about content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services unless otherwise set forth in an applicable agreement between you and Oracle. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services, except as set forth in an applicable agreement between you and Oracle.