Sales and Fusion Service

Creating and Administering Analytics

Sales and Fusion Service
Creating and Administering Analytics

F77875-11

Author: Jiri Weiss

Contents

Get Help

There are a number of ways to learn more about your product and interact with Oracle and other users.

Get Help in the Applications

Some application pages have help icons to give you access to contextual help. If you don't see any help icons on your page, click your user image or name in the global header and select Show Help Icons. If the page has contextual help, help icons will appear.

Get Training

Increase your knowledge of Oracle Cloud by taking courses at *Oracle University*.

Join Our Community

Use *Cloud Customer Connect* to get information from industry experts at Oracle and in the partner community. You can join forums to connect with other customers, post questions, suggest *ideas* for product enhancements, and watch events.

Share Your Feedback

We welcome your feedback about Oracle Applications user assistance. If you need clarification, find an error, or just want to tell us what you found helpful, we'd like to hear from you.

You can email your feedback to *oracle_fusion_applications_help_ww_grp@oracle.com*.

Thanks for helping us improve our user assistance!

1 About This Guide

Related Guides for Analytics

Here's a list of guides that contain information related to what's covered in this guide.

Title	Description
Implementing Sales for Redwood	This guide provides conceptual information and procedures used to implement the Redwood UX version of the sales application components and features. It's intended for sales application administrators as they implement, configure, and use administrative components of the sales applications.
Implementing Sales	This guide provides information on implementing the Classic UX version of the sales application components and features.
User's Guide for Business Intelligence Enterprise Edition	This guide provides detailed instruction on working with the broader set of BI tools, which is helpful as you are working with data in your application.
Security Reference for Sales and Fusion Service	You can review the information in this guide to decide how to assign roles and privileges to specific users depending upon who you want to see what information in your analytics.

Related Topics

Analytics Terminology

These are some of the words that might be unfamiliar to you as you read through this guide.

Term	Description
Analytic/Analytics	The broader term used for information pulled from business databases displayed in a way that's meaningful to you. Analytics can include analyses, reports, and dashboards of any form.
Analysis/Analyses	The specific term for one or more analytics that are shown visually on your desktop or mobile devices.
Analytic Work Area	Analytic work areas are pages in the application that you use every day that show analytics related to the work area records. You can configure some work areas to be specific to one or many user roles. You can also configure work areas to show detailed information on a specific record.

Term	Description
Column	The term column in the context of reporting is used to describe the data that populate your analytics. The columns are attributes of the subject area dimensions and you drag the columns to the palette as you build your analytics.
Fact Folders/Facts	The Fact folders contain filters to count or measure the information in your analytics. Facts are pieces of information that are calculated using standard operators such as addition, subtraction, and so on.
Infolet	An infolet is a small container or "widget" on the sales pages that hold an analytic. You can configure the infolet shape and size.
Key Performance Indicator (KPI)	Key Performance Indicators are values that analytics provide to help organizations get a snapshot of information in a particular context.
Navigator	Navigator is represented by an icon with four parallel white lines on the Home page. When you click the Navigator icon you go to a page that shows all the options for users to manage and monitor their sales activities. Administrators see options for managing the application.
Oracle Business Intelligence Answers (BI)	BI is a major work area for analytics administrators. You view, edit, and create analytics and subject areas in BI.
Report	A report is a type of analytic used primarily for published presentation. Types of reports might be financial documents, human resource spreadsheets, and so on. The wizard for building a report walks you through a series of options for formatting the layout of the report.
Sandbox	A sandbox is a testing stage you use to add and view changes to the interface without actually implementing your changes to a live site.
Home Page	The landing page for the application, also called the springboard.
Sales Icon	The Sales Icon links to a page that contains icons with links to all of the major work areas for sales users.
Subject Area	Subject areas are the building blocks of your analytics. You begin building your analytics by choosing an appropriate subject area. Technically, subject areas are a grouping of database inputs called data objects that relate to each other in a particular context.

2 Best Practice and Performance

Prerequisites for Working with Analytics

Before you start working with analytics, you need to complete some general setup steps to ensure that your data shows correctly.

General System Requirements

Be sure to check your system requirements before you start working with analytics. To see system requirements for Oracle Sales Cloud applications go to: *Oracle System Requirements*

Application Setup Requirements

To run analytics, your company information needs to be set up and defined. If this information isn't set up correctly, you might have problems getting your analytic data to present correctly.

Ensure that you have:

- Entered the required company and corporate currency information. See: *Enter Company Information and Currency*
- Set up your accounting calendar. See: *Create and Review the Accounting Calendar*
- Set up your sales resource hierarchy. See: *Overview of Importing Sales Resources*
- Created the sales catalog. See: *Overview of the Sales Catalog*

Use Setup Assistant to quickly walk through these initial setup steps. See: *Overview of the Setup Assistant*

Role Requirements for Sales Pages

The sales pages aren't visible until administrators enable the Sales Pages in Set System Options. To view these pages all users need to have the following privileges: View Sales Homepage pagination dot one, View Sales Homepage pagination dot two, View Sales Homepage pagination dot three, View Sales Homepage pagination dot four, View Sales Homepage pagination dot five.

Currency Setup Requirements for Running Analytics

Your application supports several currency types. Before you can run analytics that have currency values, you need to define what currency you want to use. If your analytic currency values return zero or not what you expect, check your currency preferences.

Best Practices and Analytics Resources

Here are some links to best practice and analytic resources. Note that some linked resources require that you login or sign up to access.

- *BI Reports and Analytics Resource Center (Oracle CX Sales and Fusion Service) (Doc ID 1624768.1)*
- *Oracle Fusion Transactional Business Intelligence and BI Cloud Connector Performance Recommendations (Doc ID 2679006.1)*
- *CX Sales Report Sharing Center*

Oracle Transactional Business Intelligence Technical Reference Library

When you are creating analytics and working with subject areas on an advanced level, this Help Center site does a deep dive into the very technical aspects of working with OTBI analytics. *OTBI Library*

Best Practices for Extending Subject Areas Using Joins in BI

There are many subject areas that come prebuilt with your application. These prebuilt subject areas are used in the prebuilt reports that also come with your application. You will likely want to extend existing subject areas or build your own subject areas at some point to meet your particular business requirements. This link takes you to a document that you should read first to get started with extending subject areas in BI. You will need to login to access MOS support. Here is the link: *MOS article 2348001.1*

Deep Linking Resources

Deep page linking lets your users drill down on a record without leaving the page. You can add deep page linking for records in most custom objects in CX Sales in Business Intelligence. When users click the custom object name, or any record with an associated ID value, it opens up a separate window to provide further detail on that record. You will need to login to access MOS support. Here is the link: *MOS article 2145842.1*

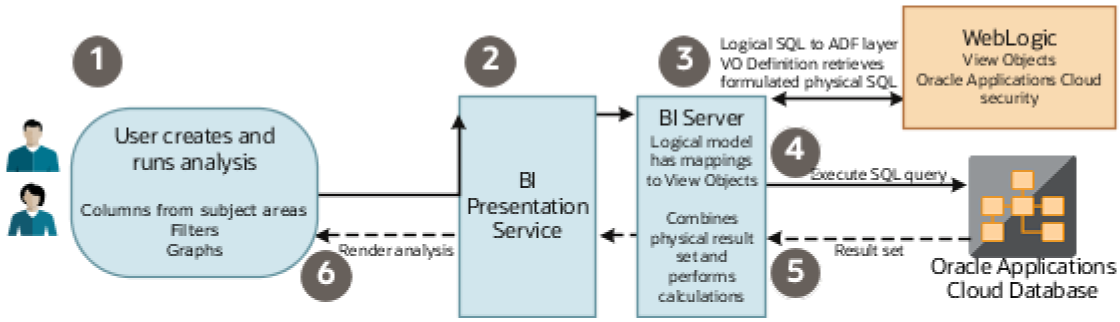
Queries and Performance

When an analysis runs, database aggregation and processing is prioritized so that there's as little data as possible sent to the BI Server for more processing. When creating analyses, you should reinforce this principle to maximize performance.

Here's what happens when a query runs, in three phases:

1. SQL compiles
2. Database SQL runs
3. Data set is retrieved and displayed in an analysis

Here's the query architecture with the steps that happen when a query runs.



<table>
<tr><th>Phase</th><th>Step</th><th>Description</th></tr>
<tr><td>1</td><td>1</td><td>You create an analysis with columns from one or more subject areas, add appropriate filters and graphs, and then run it.</td></tr>
<tr><td>1</td><td>2</td><td>The BI Presentation Service receives the request and sends a logical SQL statement based on subject areas and columns to the BI Server.</td></tr>
<tr><td>1</td><td>3</td><td>The BI Server does these things:
1. Correlates the logical SQL with view objects and view links mapped in the metadata repository.
◦ The SQL goes to the WebLogic ADF layer to get view object and view link SQL definitions.
◦ Oracle Applications Cloud security is applied to these SQL definitions.
2. Aggregates the view object query to create physical database SQL.</td></tr>
<tr><td>2</td><td>4</td><td>The database query, including the aggregations and data security, runs in the database.</td></tr>
<tr><td>2</td><td>5</td><td>The aggregated data set is returned to the BI Server, which merges the results and applies any additional calculations or filters.</td></tr>
<tr><td>3</td><td>6</td><td>The final data set is returned to the BI Presentation Service, where it's formatted for display and shown in the analysis.</td></tr>
</table>

How You Maximize Performance

The way you design an analysis affects how the BI Server builds the physical query, which determines how much processing is focused in the database to maximize performance. You should also consider some other factors while creating ad-hoc analyses.

Here are some key things you can do to improve how your analyses perform:

- Select only required subject areas and columns. What you select determines which view objects and database tables are used in the database query. Any unnecessary table means more queries and joins to process.
- Add proper filters to use database indexes and reduce the result data returned to the BI Server.

- Remove unnecessary visual graphs.
- Remove unused data columns. Any columns not used in visual graphs are included in the physical SQL execution, which may increase database query processing overhead.

Here are some of the factors that can hurt query performance, and what you can do to improve it.

Factor	Description	Suggestions
Security	Analyses may perform well for a user with broad security grants, but worse for those with more restrictions.	Review and simplify your security. Minimize the number of roles and don't use complex custom queries to enforce data security.
Cross-subject areas	Analyses including two or more subject areas can impact performance.	Review your analyses to see if you can remove some of the subject areas in the queries. Are all of the subject areas required? When you built the analysis, did you notice a performance impact while adding a particular subject area?
Hierarchies	Hierarchies, particularly large ones, can impact performance. Queries on trees and hierarchical dimensions such as manager can have an impact on performance. The BI Server uses a column-flattening approach to quickly fetch data for a specific node in the hierarchy. But there's no pre-aggregation for the different levels of the hierarchy.	Remove hierarchies to see if performance improves. It's also important to carefully craft any query to apply enough filters to keep the result set small.
Number of attributes	Analyses often use a large number of columns that aren't required.	Reduce the number of columns in the criteria as much as possible.
Flexfields	Using too many flexfields in analyses can hurt performance in some cases.	Remove flexfields to see if the performance improves. Avoid flexfields in filters.
Data volumes	Analyses that query large volumes of data take longer. Some may query all records, but only return a few rows, requiring a lot of processing in the database or BI Server.	Consider adding filters in your analysis, especially on columns with indexes in the database. Avoid blind queries because they're run without filters and fetch large data sets. All queries on large transactional tables must be time bound. For example, include a time dimension filter and additional filters to restrict by key dimensions, such as worker. Apply filters to columns that have database indexes in the transactional tables. This ensures that a good execution plan is generated for the query from the BI Server.
Subquery (NOT IN, IN)	Filtering on IN (or NOT IN) based on the results of another query means that the subquery is executed for every row in the main query.	Replace NOT IN or IN queries with union set operators or logical SQL.

Factor	Description	Suggestions
Calculated measures	Calculating measures can involve querying a lot of data.	Use the predefined measures in your subject areas wherever possible.
Filters	Analyses with no filters or filters that allow a large volume of data may hurt performance.	Add filters and avoid applying functions or flexfields on filter columns. If possible, use indexed columns for filters. Refer to OTBI subject area lineage for your offering, which documents indexed columns for each subject area.

Review further guidelines about analysis and reporting considerations in My Oracle Support(Doc ID 2679006.1).

Diagnose Performance Using Subject Areas

This example illustrates how you could use the OTBI Usage Real Time and Performance Real Time subject areas to understand usage and performance, so that you can diagnose performance bottlenecks and understand whether analyses are running slowly or could be optimized.

The OTBI Usage Real Time subject area monitors usage trends for OTBI by user, analysis and dashboard, and subject area. The OTBI Performance Real Time subject area monitors usage as well as analysis execution time, execution errors, and database physical SQL execution statistics.

In this example, you create an analysis to determine the current number of users accessing OTBI so that you can determine system load, and a histogram analysis that identifies trends in long-running queries.

Analyze the Number of Users

1. In the Reports and Analytics work area, click **Create** and select **Analysis**. Select the OTBI Usage Real Time subject area and click **Continue**.
2. In the Select Columns page, expand your subject area and folders. Select **User Count** from the Facts - Usage Metrics folder and click **Next**. Because you aren't including a dimension in the analysis this provides a total of all users.
3. In the Select Views page, select a Table view and click **Next**.
4. In the remaining pages, click **Next** to accept the defaults.
5. In the Save page, enter a name for the analysis, select a catalog folder to save it in, and click **Submit**. The result is a single-column table with the number of users on the system. To refine this analysis, you could add the Report Name and Report Path columns from the OTBI Report folder to the analysis to determine which reports are in use.

Analyze Query Performance

1. In the Reports and Analytics work area, click **Create** and select **Analysis**. Select the OTBI Performance Real Time subject area and click **Continue**.
2. In the Select Columns page, expand your subject area and folders. Select Report Name from the OTBI Report folder and click **Add**.
3. Add Total Execution Time from the Derived Metrics folder in the Facts - Performance Tracking folder two times.

4. Add Report Row Count from the Query Execution Metrics folder. Click **Next**
5. Add Report Count from the Usage Metrics folder. Click **Next**
6. In the Select Views page, select a Pivot view and click **Next**
7. In the remaining pages, click **Next** to accept the defaults.
8. In the Save page, name the analysis Performance Histogram, select a My Folders, and click **Submit**.
9. Click **Browse Catalog** and, in the catalog, navigate to My Folders and click Edit for your analysis.
10. Select the Criteria tab. Click the Options button and select **Sort Ascending** for the first Total Execution Time column.
11. Click the Options button for the second Execution Time and select **Edit Formula**. In the Edit Formula dialog box, select **Custom Headings** enter **Total Execution Time Bin**, and enter the following statement in the Column Formula to bin by ranges of execution time, ranging from less than five seconds to greater than five minutes.:

```
CASE WHEN "Derived metrics"."Total Execution Time" <= 5 THEN 'Less than 5
Seconds' WHEN "Derived metrics"."Total Execution Time" BETWEEN 5 AND 30 THEN
'Between 5 and 30 Seconds' WHEN "Derived metrics"."Total Execution Time"
BETWEEN 30 AND 60 THEN 'Between 30 and 60 seconds' WHEN "Derived metrics".
"Total Execution Time" BETWEEN 60 AND 120 THEN 'Between 60 and 120 seconds'
WHEN "Derived metrics"."Total Execution Time" BETWEEN 120 AND 300 THEN
'Between 120 and 300 seconds' ELSE 'Greater than 300 seconds' END
```

12. In the Results tab, click **Edit View** for the pivot table.
13. In the Layout pane of the Pivot Table editor:
    - Move the Total Execution Time Bin column to the Rows section.
    - Move Report Count to the Measures section.
    - Move the rest of the columns to the Excluded section so they aren't shown in the pivot table.
14. Click **Done**.
    You can present this information as a graph or table to view how many reports are running too long. Those with the highest usage and the longest execution times can then be prioritized.

How to Tune Performance for Reports

SQL query tuning can improve the performance of reports. Diagnose issues and an explain plan. Here are some factors that can slow down query performance, and some suggestions for improvement.

Factor	Description	Suggestions
Filters	Reports with no filters or filters that allow a large volume of data may hurt performance.	Use filter conditions to limit data.
Joins	Reports that join a lot of tables can run slowly.	Remove any unnecessary joins.
Data volumes	Reports with no filters or filters that allow a large volume of data may hurt performance.	Add filter conditions to limit data, preferably using columns with database indexes. Use caching for small tables.

Factor	Description	Suggestions
Indexes	Filters that use database indexes can improve performance.	Use SQL hints to manage which indexes are used.
Sub-queries	Sub-queries can impact performance.	• Avoid complex sub-queries and use Global Temporary Tables where necessary. • Avoid too many sub-queries in where clauses if possible. Instead, rewrite queries with outer joins.
Aggregation	It helps performance to prioritize aggregation in the database.	• Use Oracle SQL Analytical functions for multiple aggregation. • Use CASE statements and DECODE functions for complex aggregate functions.

Row Limits in Analyses

It's recommended that you use Analytics Publisher reports to export large data sets, as there are analysis row limits.

- There's a limit of 65,000 records for analyses. When you run an analysis that contains more rows than that, the results are limited to 65,000 rows.
- Exports to Excel are limited to 25,000 rows and 50,000 cells.

Analysis and Report Limits

Limits on analysis and reports prevent long-running queries.

Examples include:

- Analytics row limits
- Query time limits
- Report Memory Guard limits

Note that when you're reporting on HTML content, for example, Message Body of an SR Message is a report column, you can observe that HTML tags are displayed in the report, in addition to the desired content. In order to display the content correctly without the tags, set the Column Properties > Data Format to **Treat Text as HTML** for the column. Select **Save** as the system-wide default for that particular column (not the default for this data type). Once you do this, any time a report is created that contains this column, it will automatically display HTML content correctly.

> **Note:** When you export data in a CSV format, dates are exported in raw format and converted to UTC time zone.

This table describes the limits that constrain queries.

Application	Context	Limit	Description	Limit Setting
Analytics Answers	Analysis	Query Time Limit - Minutes	Time (in minutes) allowed for a query to return from the database.	10
Analytics Answers	Analysis	Rows Retrieved By SQL Query	Maximum rows retrieved by a logical SQL query.	75,000
Analytics Answers	Analysis	Rows Exported - CSV/Tab/XML - All Data - Export On Demand	Maximum data rows exported from the analysis into CSV, Tab Delimited and XML formats. This limit is enforced when the user exports directly from the analysis.	65,000
Analytics Answers	Analysis	Rows Exported - CSV/Tab/XML - All Data - Export Through Agent	Maximum data rows exported from the analysis into CSV, Tab Delimited and XML formats. This limit is enforced when you export using a scheduled agent.	25,000
Analytics Answers	Table	Maximum Rows Used To Populate Table	Maximum rows that can returned from an analysis query when populating the table. Anything higher than this results in failure to render the table.	75,000
Analytics Answers	Table	Rows Exported - Excel/PDF - Per View - Export On Demand	Maximum rows exported from a view to formats like PDF, Excel and Powerpoint. This limit is enforced when the user exports directly from the analysis.	25,000
Analytics Answers	Table	Rows Exported - Excel/PDF - Per View - Export Through Agent	Maximum rows exported from a view to formats like PDF, Excel and Powerpoint. This limit is enforced when you export using a scheduled agent.	25,000
Analytics Answers	Table	Cells	Maximum number of data cells in a table view.	1,000,000
Analytics Answers	Table	Sections	Maximum number of sections available for the view.	25
Analytics Answers	Table	Default Rows Per Page In View	Default rows displayed per page in the view. This can	25

Application	Context	Limit	Description	Limit Setting
			be increased in the view properties.	
Analytics Answers	Table	Maximum Rows Per Page In View	Maximum rows that can be displayed per page in the view.	500
Analytics Answers	Table	Prompt Values	Maximum number of values allowed in Table Prompt. Exceeding this value results in 'Exceeded configured maximum number' error.	1,000
Analytics Answers	Pivot Table	Maximum Rows Used To Populate Pivot Table	Maximum number of rows that can be returned from an analysis query when populating the pivot table. Anything higher than this results in failure to render the pivot table.	40,000
Analytics Answers	Pivot Table	Rows Exported - Excel/ PDF - Per View - Export On Demand	Maximum rows exported from a view to formats like PDF, Excel and Powerpoint. This limit is enforced when the user exports directly from the analysis.	25,000
Analytics Answers	Pivot Table	Rows Exported - Excel/ PDF - Per View - Export Through Agent	Maximum rows exported from a view to formats like PDF, Excel and Powerpoint. This limit is enforced when you export using a scheduled agent.	25,000
Analytics Answers	Pivot Table	Cells	Maximum populated cells of data in the view.	1,000,000
Analytics Answers	Pivot Table	Sections	Maximum sections available for the view.	25
Analytics Answers	Pivot Table	Default Rows Per Page In View	Default rows displayed per page in the view. This can be increased in the view properties.	25
Analytics Answers	Pivot Table	Maximum Rows Per Page In View	Maximum rows that can be displayed per page in the view.	500
Analytics Answers	Pivot Table	Prompt Values	Maximum number of values that can be	1,000

Application	Context	Limit	Description	Limit Setting
			returned in a Pivot prompt. Exceeding this value results in 'Exceeded configured maximum number' error.	
Analytics Answers	Pivot Table	Columns In Export	Maximum exportable columns.	300
Analytics Answers	Chart	Sections	Maximum sections available for the view.	25
Analytics Answers	Chart	Slider Values	Maximum amount of values available on the slider.	150
Analytics Answers	Chart	Rows Displayed	Maximum amount of data points available on the chart.	2,000
Analytics Answers	Chart	Prompt Values	Maximum number of values listed in the view prompt. Exceeding this value results in 'Exceeded configured maximum number' error.	1,000
Analytics Answers	Simple Trellis	Maximum Rows Used To Populate Simple Trellis	Maximum rows that can returned from an analysis query when populating the simple trellis. Anything higher than this results in failure to render the simple trellis.	40,000
Analytics Answers	Simple Trellis	Cells	Maximum populated cells of data in the view.	1,000
Analytics Answers	Simple Trellis	Sections	Maximum sections available for the view.	10
Analytics Answers	Simple Trellis	Default Rows Per Page In View	Default rows displayed per page in the view. This can be increased in the view properties.	10
Analytics Answers	Simple Trellis	Maximum Rows Per Page In View	Maximum rows that can be displayed per page in the view.	100
Analytics Answers	Simple Trellis	Column In Export	Maximum exportable columns.	75

Application	Context	Limit	Description	Limit Setting
Analytics Answers	Simple Trellis	Prompt Values	Maximum number of values listed in the view prompt. Exceeding this value results in 'Exceeded configured maximum number' error.	1,000
Analytics Answers	Simple Trellis	Rows Exported - Excel/ PDF - Per View - Export On Demand	Maximum rows exported from a view to formats like PDF, Excel and Powerpoint. This limit is enforced when the user exports directly from the analysis.	6,500
Analytics Answers	Simple Trellis	Rows Exported - Excel/ PDF - Per View - Export Through Agent	Maximum rows exported from a view to formats like PDF, Excel and Powerpoint. This limit is enforced when you export using a scheduled agent.	100
Analytics Answers	Advanced Trellis	Maximum Rows Used To Populate Advanced Trellis	Maximum rows that can returned from an analysis query when populating the advanced trellis. Anything higher than this results in failure to render the advanced trellis.	40,000
Analytics Answers	Advanced Trellis	Cells	Maximum populated cells of data in the view.	5,000
Analytics Answers	Advanced Trellis	Sections	Maximum sections available for the view.	25
Analytics Answers	Advanced Trellis	Default Rows Per Page In View	Default rows displayed per page in the view. This can be increased in the view properties.	10
Analytics Answers	Advanced Trellis	Maximum Rows Per Page In View	Maximum rows that can be displayed per page in the view.	100
Analytics Answers	Advanced Trellis	Columns In Export	Maximum exportable columns.	150
Analytics Answers	Advanced Trellis	Prompt Values	Maximum number of values listed in the view prompt. Exceeding this value results in 'Exceeded configured maximum number' error.	1,000

Application	Context	Limit	Description	Limit Setting
Analytics Answers	Advanced Trellis	Rows Exported - Excel/ PDF - Per View - Export On Demand	Maximum rows exported from a view to formats like PDF, Excel and Powerpoint. This limit is enforced when the user exports directly from the analysis.	10,000
Analytics Answers	Advanced Trellis	Rows Exported - Excel/ PDF - Per View - Export Through Agent	Maximum rows exported from a view to formats like PDF, Excel and Powerpoint. This limit is enforced when you export using a scheduled agent.	100
Analytics Answers	Treemap	Prompt Values	Maximum number of values listed in the view prompt. Exceeding this value results in 'Exceeded configured maximum number' error.	1,000
Analytics Answers	Treemap	Cells	Maximum populated cells/ tiles of data in the view.	5,000
Analytics Answers	Treemap	Sections	Maximum sections available for the view.	50
Analytics Answers	Narrative	Rows	Maximum records available in the view.	40,000
Analytics Answers	Ticker	Rows	Maximum records available in the view.	40,000
Analytics Answers	Dashboard	Rows Exported - Excel/ PDF - Per View - Export On Demand	For tables, pivot tables and trellis views, if the view is set to "Fixed headers with scrolling content", rows visible on the dashboard are exported, and no more. For example, if a table is showing five rows before scrolling, five rows are exported, even if the table has more rows. If the view is set to "Fixed headers with scrolling content", an export of the number of rows specified in the view's "Rows Per Page" parameter is attempted. This setting doesn't override other row or cell limits, so setting this to a	

Application	Context	Limit	Description	Limit Setting
			very high row limit only guarantees the standard view's export limits are honored when exporting from a dashboard. The "Rows Per Page" setting can be higher than the actual limit of rows that can be viewed per page in Analytics Answers. Even if the higher row limit doesn't apply at runtime, it applies at export. For example, if the table limit is 500 rows per page, but you set it to 25,000, an attempt is made to export 25,000 rows.	
Analytics Answers	Dashboard	Rows Exported - Excel/ PDF - Per View - Export Through Agent	The same rules apply as for Export on Demand, but the exports are subject to limits enforced when exporting data through agents.	
Analytics Publisher	Memory Guard	Maximum report data size for online reports	Maximum data size allowed for online report viewing. When a report data size exceeds the value, the report receives an 'XML Output generated exceeds specified file size limit' error.	300MB
Analytics Publisher	Memory Guard	Maximum report data size for offline (scheduled) reports	Maximum data size allowed for scheduled reports. When a report data size exceeds the value, the report receives an XML Output generated exceeds specified file size limit error.	500MB
Analytics Publisher	Memory Guard	Free memory threshold	Minimum value for free JVM space. If the report data size exceeds the threshold, then the report is paused to wait for free memory to become available. The report waits for the time specified in the property Maximum Wait Time for Free Memory to Come Back Above Threshold Value. If the free memory doesn't rise back above the minimum in the wait period specified, the report request is rejected.	500MB

Application	Context	Limit	Description	Limit Setting
Analytics Publisher	Memory Guard	Maximum report data size under the free memory threshold	Maximum single report data size allowed when free JVM memory is under the specified threshold value set in Free memory threshold. For example, assuming the default setting of 500MB, if the data generated for a single report exceeds one-tenth of the value set for Free memory threshold, or 50MB, then processing is terminated.	Free memory threshold/10
Analytics Publisher	Memory Guard	Maximum Wait Time for Free Memory to Come Back Above the Threshold	Maximum time in seconds that a request to run a report waits for free JVM memory to exceed the threshold value. If the free memory becomes available within the time specified, the request proceeds immediately. If free memory is still below the threshold value after the time specified, the request is rejected. For online requests, the larger this property value, the longer the browser will wait for a request to run.	30
Analytics Publisher	Memory Guard	Process timeout for online report formatting	For online reports, the maximum time in seconds that a formatting process is allowed to run. If an online report formatting process exceeds the limit, the report errors.	600
Analytics Publisher	Data Model	Maximum data size limit for data generation	Maximum XML data size that can be generated from the execution of a data model. This setting applies to both online and scheduled report requests. When the size of the file generated exceeds the value, execution of the data model is terminated and an exception is generated.	500MB
Analytics Publisher	Data Model	Maximum sample data size limit	Maximum file size of a sample data file that can be uploaded to the data model editor.	1MB

Application	Context	Limit	Description	Limit Setting
Analytics Publisher	Data Model	DB fetch size		20
Analytics Publisher	Data Model	SQL Query Timeout (in seconds)		600

Localize Catalog Captions

As an administrator, you can localize the names of reporting objects, or captions, that users create in the catalog. For example, you might localize the names of dashboards and analyses into Spanish and French.

To localize object names in the catalog, export the captions from the catalog, localize them, and upload back to the catalog.

1. Export the default captions to an XML file.
2. Localize the downloaded XML file.
3. Upload the localized XML file.

After translated caption XML is uploaded, the new strings take effect once the cache refreshes. Translated strings are protected during an upgrade.

Export Captions from the Catalog

1. Click **Administration**.
2. Click **Export Captions**.
3. Click **Browse** and select the folder you want to localize in the catalog, then click **OK**.
4. Save the XML file.

Localize Your Captions

Translate the XML file into one or more languages.

Upload Localized Captions to the Catalog

After you have localized captions, upload the translated XML files, one for each language.

1. Click **Administration**.
2. Click **Import Captions**.
3. Click **Browse** and select the localized XML file, then click **OK**.
4. Use the Select Language option to select the language to which you have localized, then click **OK**.
5. Save the XML file.

To download, review, or delete imported captions files, use the **Manage Captions** option.

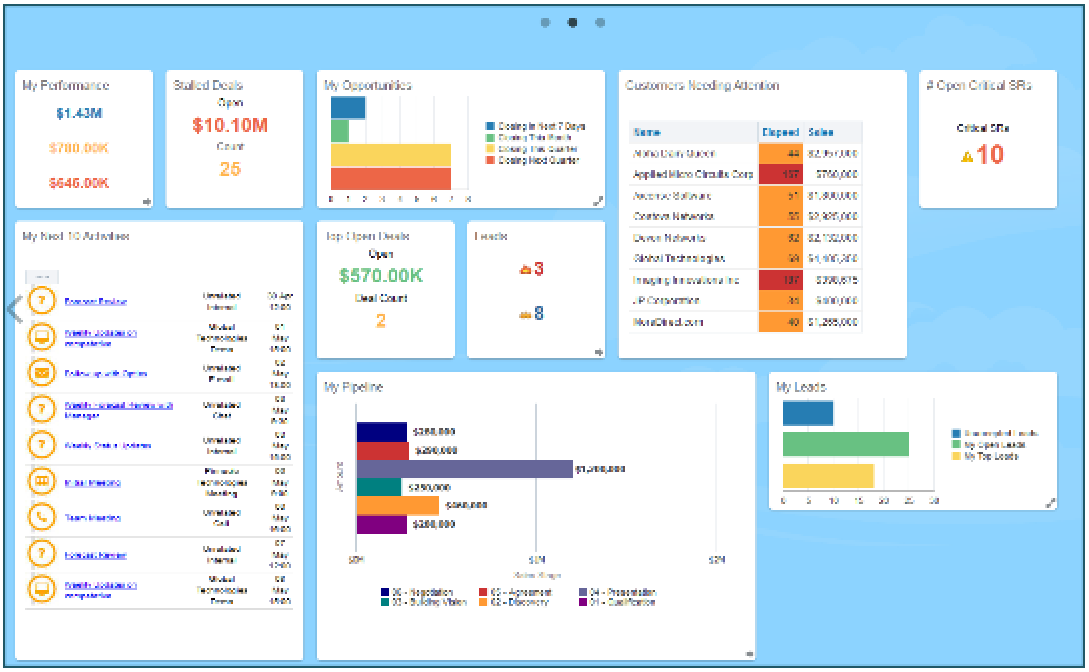
3 Analytics Access, Currency, and Display

Analytics for Your Sales Teams

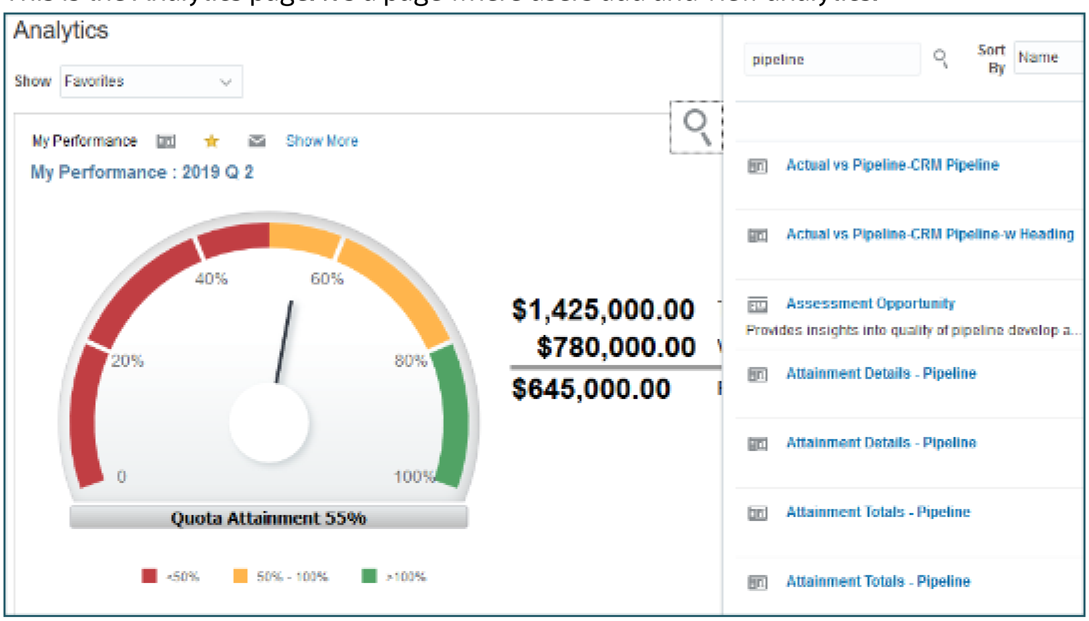
There are many ways to provide analytics for your team. Here are the work areas you can use for analytics.

Work Area Name	Description
Oracle Business Intelligence (BI)	You view, edit, and create analytics in BI. You also can view, edit, and create subject areas here.
Sales Infolet Page	This page comes prebuilt with infolets specific your user roles. You can do just about anything to change the way this page looks and which analytics show. To get to this page click the white navigation dot on the home page.
Sales Pages	You enable these pages for your users. These five blank pages are available for you to add analytics related to any area.
Object Pages	On these pages sales users work with opportunities, accounts, contacts, activities and so on. Administrators enable the tabs on these pages and add analyses to the tabs on the side or bottom of the page.
Analytics Page	This page is where sales users search for analytics they have permissions to view and can \make them favorites. Sales users also see analytics that administrators create specific to their role.

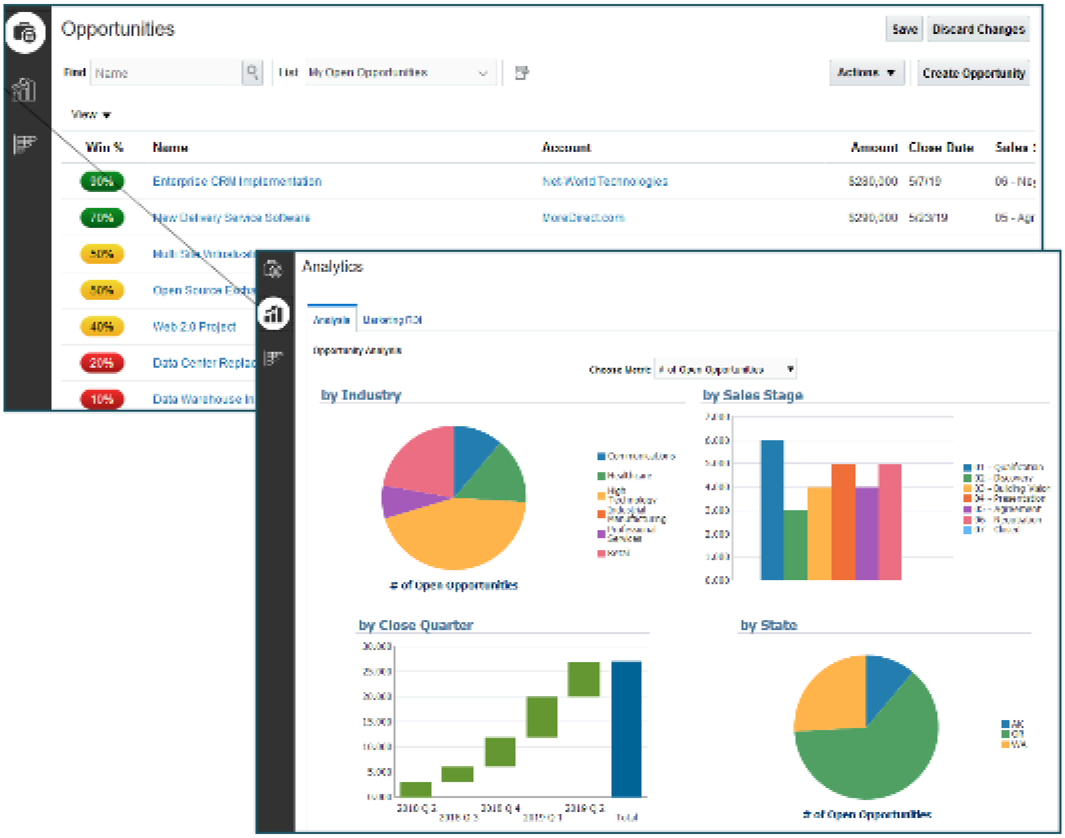
This is an example of an Infolet page.



This is the Analytics page. It's a page where users add and view analytics.



This is the Opportunities work area. Users can click the analytic icon and view analytics specific to a record. Administrators add analytics to this object page.



Business Intelligence Catalog

There are two major work areas for analytics administration. The main interface is where your users view the analytics. The second area is in Business Intelligence, where you create and manage analytics.

Navigate to the Catalog

1. Click **Tools** > **Reports and Analytics** in the Navigator.
2. In the Reports and Analytics work area, click the **Browse Catalog** button.

Objects in the Catalog

The catalog stores the BI objects in a folder structure of individual files, organized by product family.

BI objects and reports are organized in the following folder hierarchy:

- Shared Folders (parent)
- Product family (example: Financials)

- Product (example: Payables)
- Report groups (example: Invoices)
- Dashboard reports
- Data Models
- Report Components
- Analytics Publisher reports
- Prompts

The following table describes the common BI objects that you find in the catalog:

Catalog Object	Description	Location
Analysis	Analyses are used for infolets, the Sales pages, and on object pages such as Opportunities.	Analytics library
Dashboard	Dashboards organize analytical content and catalog objects, and present them in a meaningful way.	Reporting group folder
Dashboard Prompt	Dashboard prompts allow users to filter dashboard content using provided values.	Prompts folder
Filter	Filters are used in dashboards and analyses.	Prompts folder
Report	Reports are operational reports in printable format created in Business Intelligence Publisher.	Analytics library
Data Model	Data models are used by reports created in Business Intelligence Publisher.	Data Models folder
Sub-template	Sub-templates are used by reports created in Business Intelligence Publisher.	Reporting group folder

Analytics Security and Permissions

Some analytics might contain information specific to job roles that you don't want everyone to see. Access to data in subject areas, which in turn are used to build analytics are controlled by permissions.

The setup administrator has likely assigned you the role of Sales Administrator, or the Sales Administrator might have created a sub-role specifically for administering analytics, such as BI Administrator. As the person responsible for administering analytics, your permissions enable you to access and edit all of the analytics and analytic work areas. You have access to the BI catalogs, dashboards, and tools to create, edit, and add analytics to your team work areas. For more information, see Security Reference for Sales and Service.

Related Topics

BI Administrator Permissions

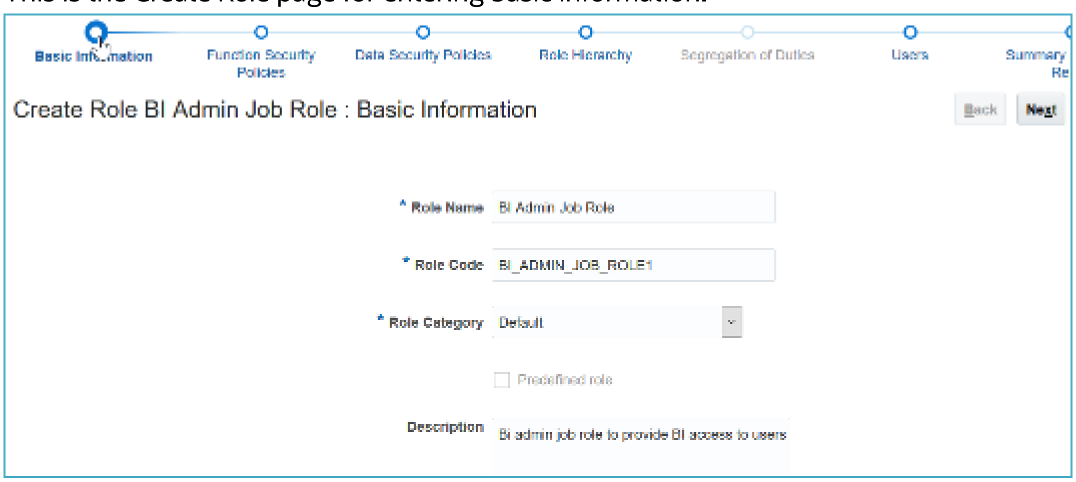
If you're an Administrator you have lots of permissions already. But you might want to perform high-level tasks in BI as well. To get these extra permissions you need the BI Administrator role. BI Administrators have access to these additional things:

- Catalog groups
- Privileges
- Sessions
- Publisher scheduling and delivery

Assign the BI Administrator Role

1. Sign in as a Security Manager. For example, IT_SECURITY_MANAGER.
2. Click **Tools** > **Security Console**.
3. Select the **Roles**.
4. Click **Create Role**.
5. Fill in the required information.

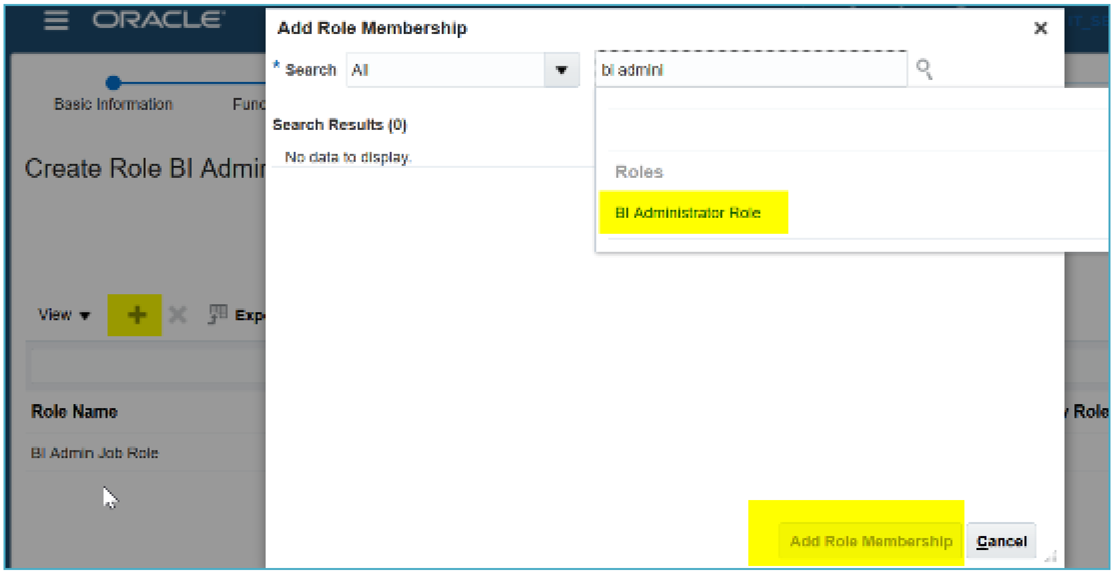
   This is the Create Role page for entering basic information.



6. Click **Next** until you come to the Role Hierarchy page.
7. Click the Plus icon to bring up the Add Role Membership page.

8. Search All for BI Administrator Role.

   This is the Add Role Membership page for creating roles.



9. From the search result select BI Administrator Role and click **Add Role Membership**.
10. Click **Next** until you get to the Users page.
11. Add the users that you want to have the BI Administrator role. You can assign the BI administrator role to users later too.
12. Click **Next**.
13. Click **Save and Close**.

Assign Additional Users

After the BI Administrator role is created you can assign additional users to the same role.

1. Sign in as a Security Manager. For example, IT_SECURITY_MANAGER.
2. Click **Tools** > **Security Console**
3. Select the **Users** tab.
4. Search for the user to be assigned the BI Administrator role.
5. Select the user and choose **Edit**.
6. Click **Add Role**.
7. Search for the BI Administrator role you created in the steps for Assigning the BI Administrator Role.
8. Click **Done**.
9. Click **Save and Close**.

Related Topics

- Assigning access permissions

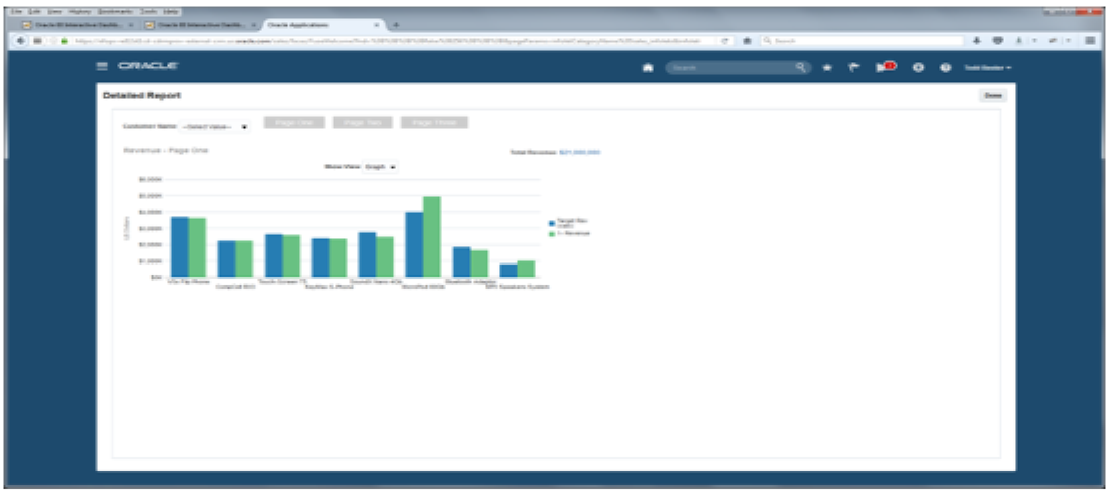
Optimize Analytics Display

Why Use Responsive Sizing?

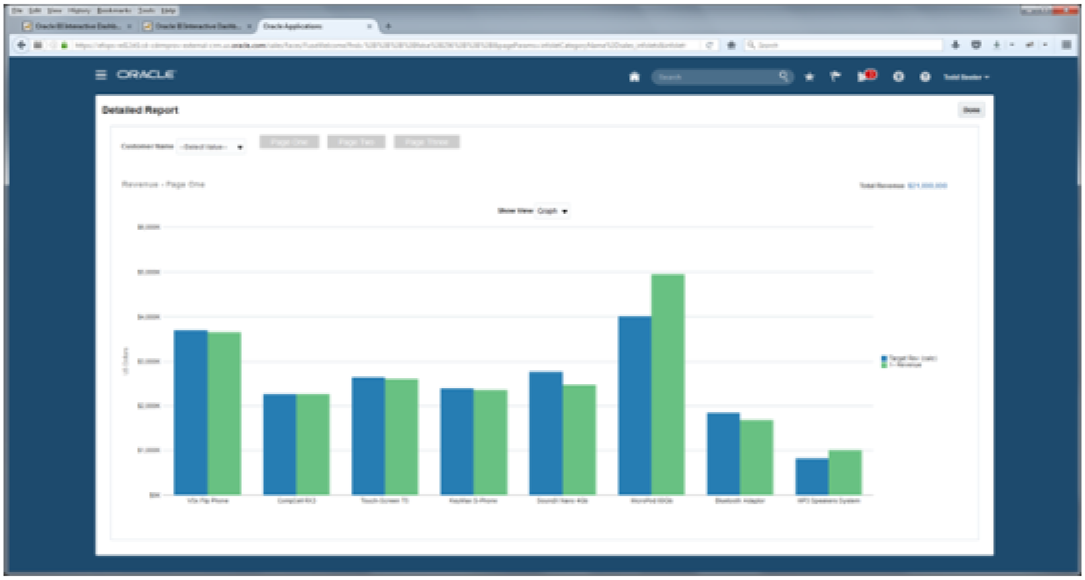
Responsive sizing ensures that analytics are displayed on your laptop, mobile, or tablet browser in the best possible way. By default you can configure analytics to fit any format, but that doesn't make them responsive to your browser resolution.

When you enable responsive sizing, you ensure the analytic size adjusts to the screen size on your device. This ensures that you view an analytic in as much screen space as possible without distorting the image. Not only does the window adjust to maximize the screen display on the device, but it enables a scroll in the cases where the analytic rows extend beyond the screen size.

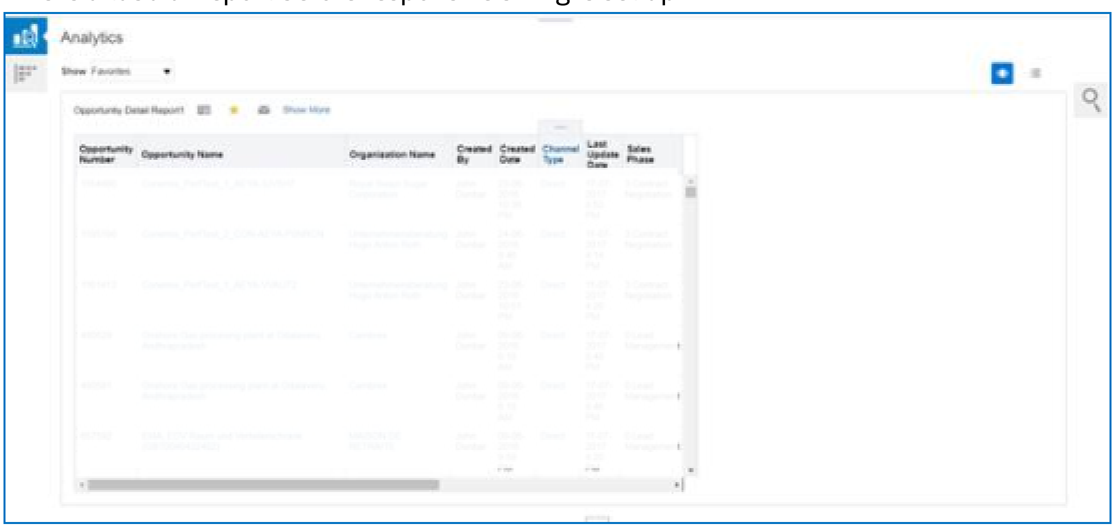
This is an analytic before responsive sizing is set up.



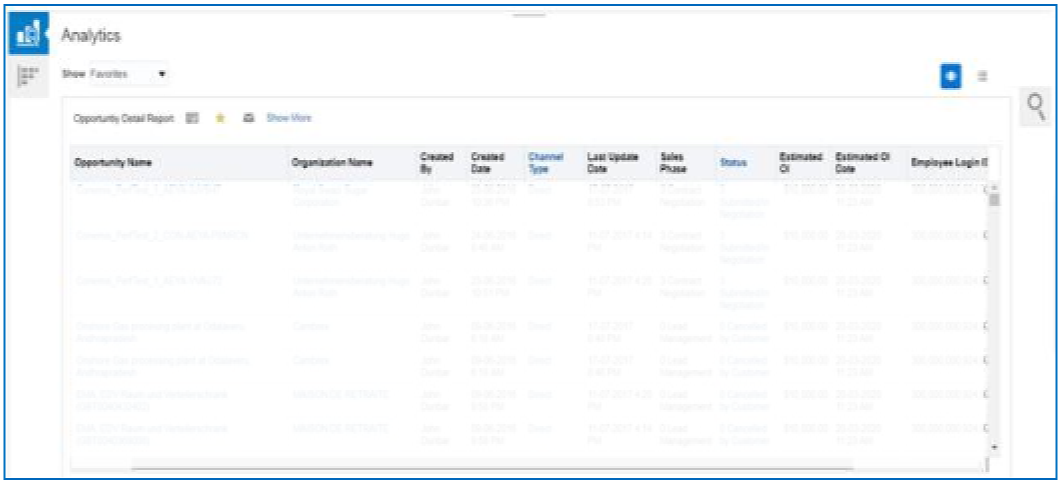
This is an analytic fully sized to fit the screen with responsive sizing.



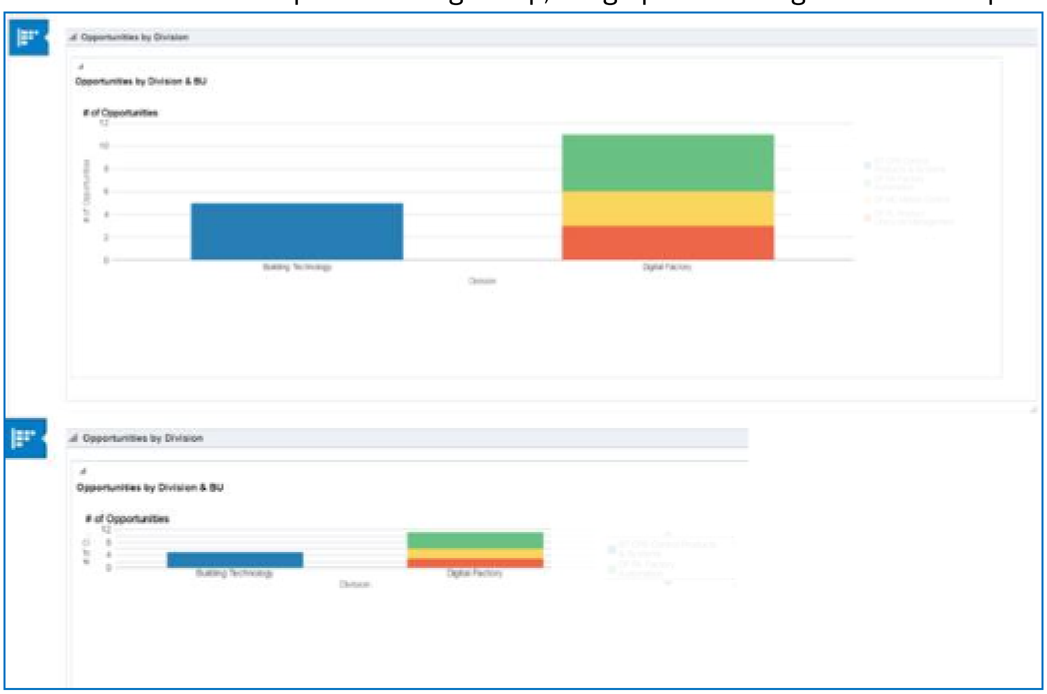
This is a tabular report before responsive sizing is set up.



This is a tabular report after responsive sizing is set up. Note how the report now uses all the available screen space.



This shows how with responsive sizing set up, the graph size changes in size to respond to the browser size.



Things to Keep in Mind

You can't opt into responsive sizing globally. And Prebuilt analytics can't be set for responsive sizing unless you make a copy. There are a few steps to opt in for each analytic you want enabled.

If you have multiple BI objects on a page, responsive sizing doesn't work. But you can embed a dashboard, or layout quadrant, which can then express multiple analytic objects with responsive sizing. For table views, if it has a large number of columns it will scroll.

You need to set every analytic that you want to be responsive. In some cases you configure the page the analytic is on. This summarizes the pages and steps for setting responsive sizing.

Page Name	Setup Requirements
Object Landing or Object Edit Page tabs	• In BI, set analytic dimensions, and if the analytic is in a dashboard set the dashboard dimensions as well. • Working in a sandbox, edit the container parameter and display options.
BI Dashboards	• In BI, set analytic dimensions, and if the analytic is in a dashboard set the dashboard dimensions as well. • In BI, set column and container properties so that dashboard container is larger than the analytic container.
Sales and Service Pages	• In BI, set analytic dimensions, and if the analytic is in a dashboard set the dashboard dimensions as well. • Working in a sandbox , edit the container parameter and display options.

These ares the pages that are available for responsive sizing.

Views that can be resized	Views that can be partially resized	Views that can't be resized
Columns / Sections • DVT graphs • Map • Tree map view • Table, pivot table • Trellis • Title • View selector	Ticker - horizontal only	• Gauge • Some graph prompts • Performance tile • Funnel • Filter • All others

Responsive Sizing In Analytics and Dashboards

To create or edit a table with responsive sizing you provide the view and container dimensions. The dimensions can't be blank.

These are the component levels to set for analytics sizing:

- Level 1 -View container (Set in BI)
- Level 2 - View (Set in BI)

For dashboards, four levels of layout sizing are needed:

- Level 1 - Dashboard container (Set in dashboard)
- Level 2 - Dashboard section (Set in dashboard)
- Level 3 - View container (Set in BI)
- Level 4 - View (Set in BI)

These are the sizing specifications for analytic components.

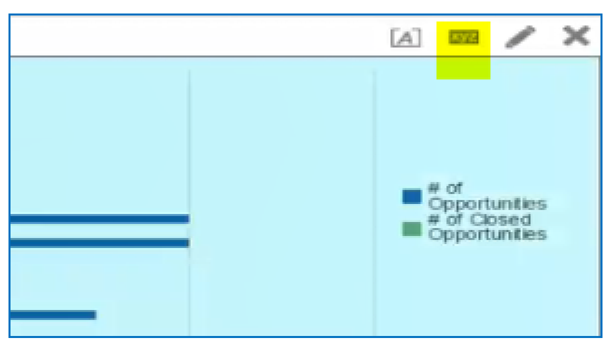
Object	Key	Original	Tight Sizing	Loose Sizing
Dashboard Column		880 x 390 (Min Size)	880 x 436	900 x 550
Top Section		Not set	610 x 55	650 x 80
Prompt, Link, Link, Link	n/a	n/a	n/a	n/a
Bottom Section		Not set	845 x 370	880 x 450
Title Container		Not set	415 x 33	415 x 40
Title	n/a	Not set	410 x 28	240 x 40
Table Container		Not set	415 x 33	415 x 40
Table: not specifiable	n/a	n/a	n/a	n/a
View Container		Not set	835 x 306	850 x 320
Graph	#FFFFFF	830 x 265	830 x 265	830 x 280
List (Table)	#FFFFFF	850 x 222	850 x 222	850 x 222

These are the browser and related container sizes.

Browser (variable sizes)	Content container (fixed sized)
1094 x 939	933 x 737
1302 x 939	1192 x 737
1468 x 939	1350 x 737
1790 x 939	1509 x 737

Set View Dimensions

1. In the results view of your analytic, click **View Properties**.

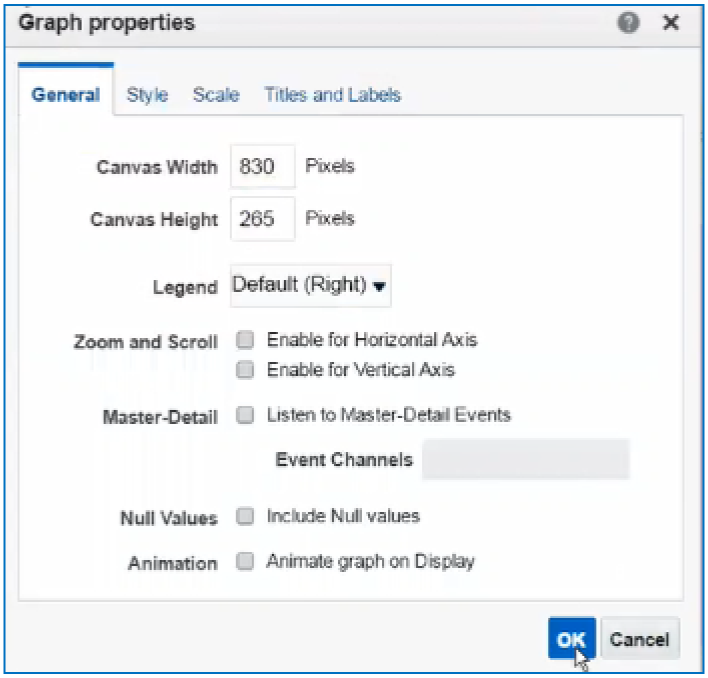


This shows the View Properties selection for an analytic.

2. Choose the **General** tab.
3. Set the height, and width of the analytic canvas. You must define the size of the analytic to fit the size you have available in the container that holds the analytic. It doesn't matter which device you use to view the analytic, as long as you have set the size of the analytic in your window in BI to maximize the space available in the

container. Setting the height and width ensures that the view of this analytic is responsive on all devices. The default is set to not define a size. You need to define a size for responsive sizing to be set.

This shows the General tab for graph properties, and the canvas width and height options.

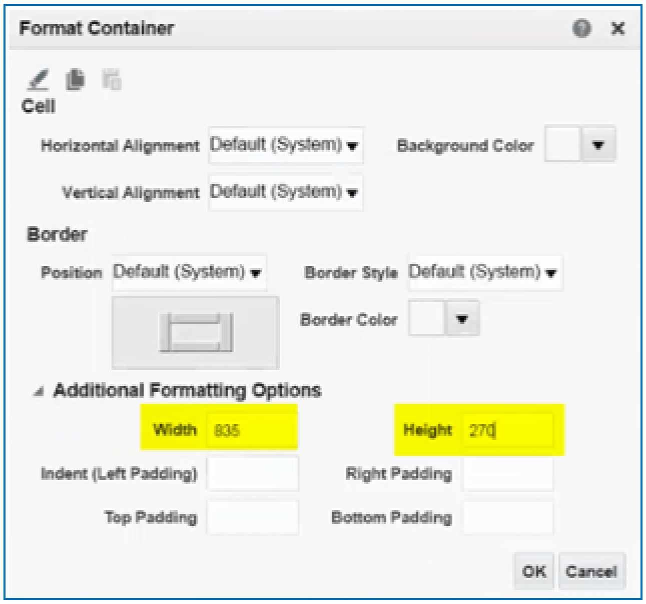


Set Analytic View Container Dimensions

1. In the results view of your analytic click **Format Container**.

2. Adjust the sizing to make sure the container is larger than the canvas. Since we previously set canvas size to 830 and 265, we set the container to a larger size at 835 and 270. Note that if you also add title containers, the size needs to match the size set for the analytic container.

   This shows the Width and Height options for the Format Container dialog.

Set the Dashboard Container Dimensions

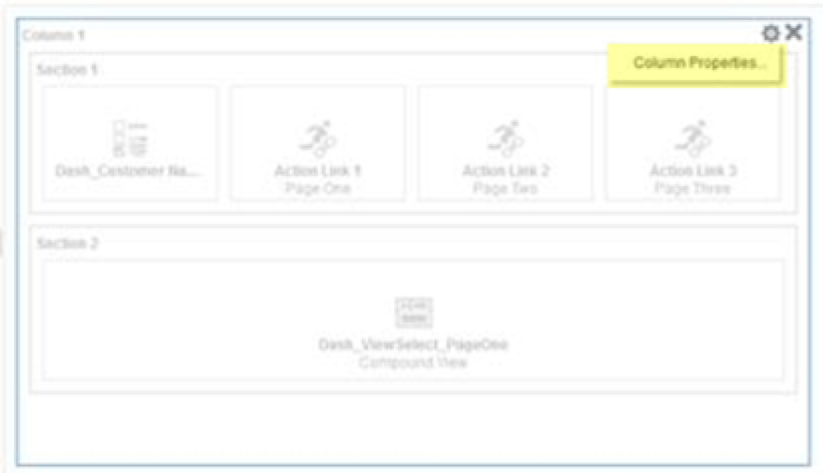
If your analytic is in a dashboard you set the dashboard for responsive sizing. For BI dashboards that hold analytics you set each container component on a dashboard to be responsive.

Set the properties for width and height for the container components to be larger than the properties set for your analytic. In this case, since we previously set our analytic container to 830 and 265, we set our dashboard container to a size larger than the dimensions set for the analytic container.

To set the dashboard container dimensions:

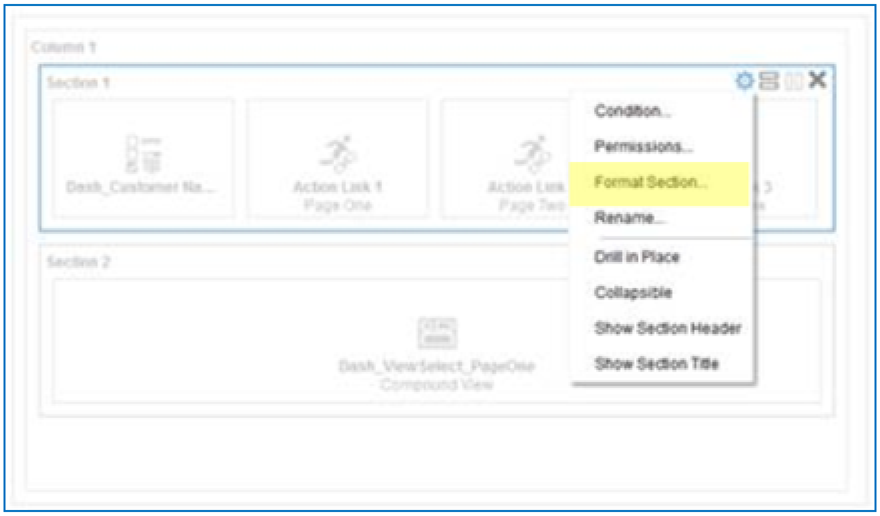
- Select the container. Click **Column Properties**.

  This shows the Column Properties option for a dashboard container.

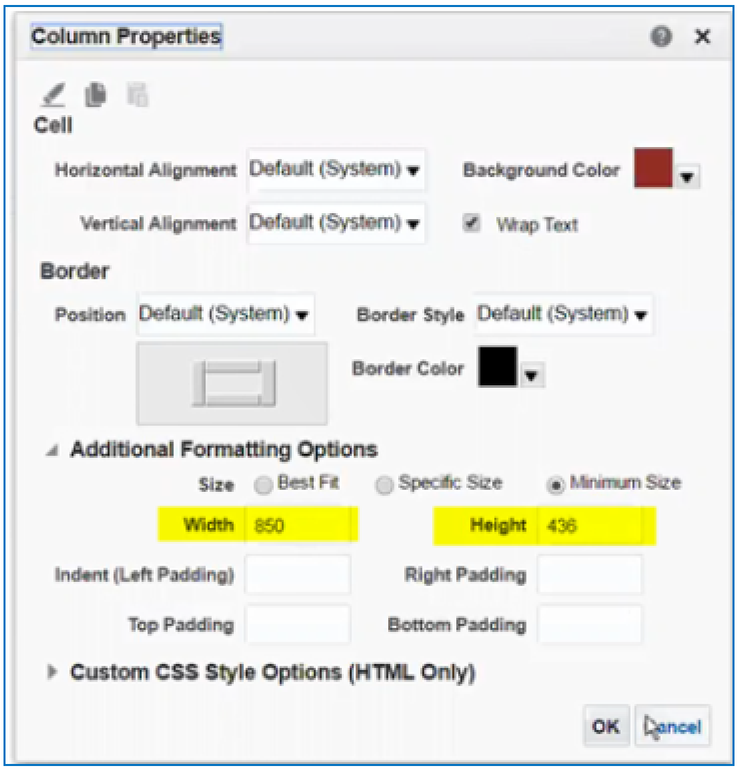


- Select the column. Click **Format Section**.

  This shows the Format Section option for a container in a dashboard.



  This shows the Height and Width options for Column Properties of a dashboard.

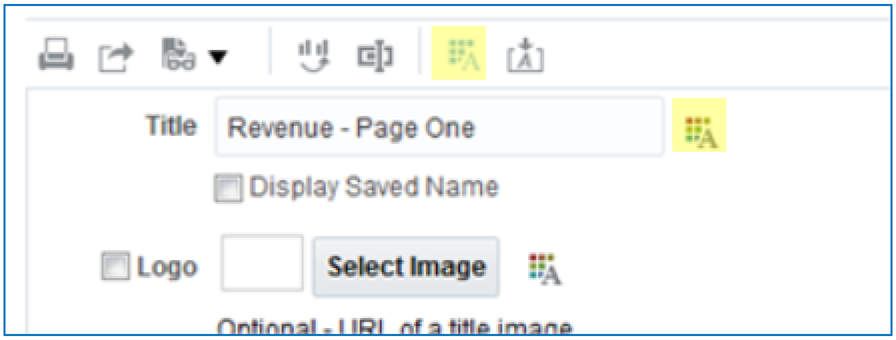


Compound View and View Editors

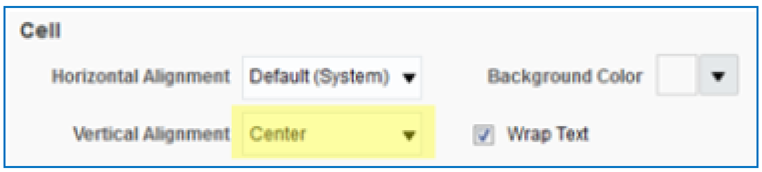
Compound views are also available for setting up responsive sizing.

This shows the edit container option.

This shows options for setting the text properties in the fields. Set title cell properties using the A icon to the right of the field.



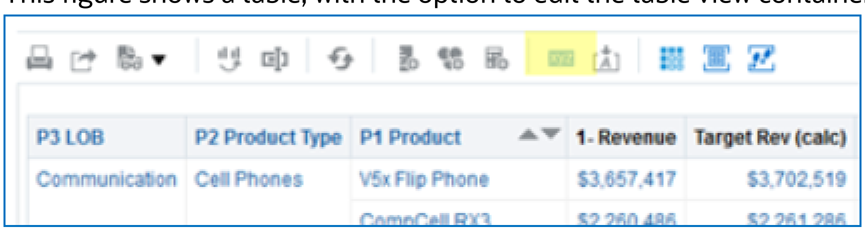
In the Cell property dialog set the vertical alignment to Center to set the title to float vertically in the resized container. This setting is recommended.



For tables, set the following:

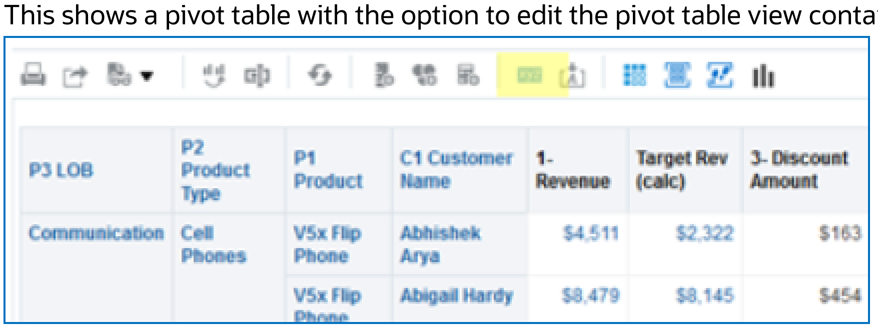
- Select "Fixed headers with scrolling content" to add sizing values.
- Set Vertical Alignment = "Center" in the Table's view container if you want the table to float vertically in the middle of the resized container.

This figure shows a table, with the option to edit the table view container properties.



For pivot tables select "Fixed headers with scrolling content" to add sizing values.

This shows a pivot table with the option to edit the pivot table view container properties.



Responsive Sizing on Interface Pages

Analytics and analytic interface components all must have the sizing set for responsive sizing to work.

Set the Analytics Tabs on Interface Pages

Once your analytic is set with the proper sizing, the next step is to add the analytic to your interface and set the layout specifications.

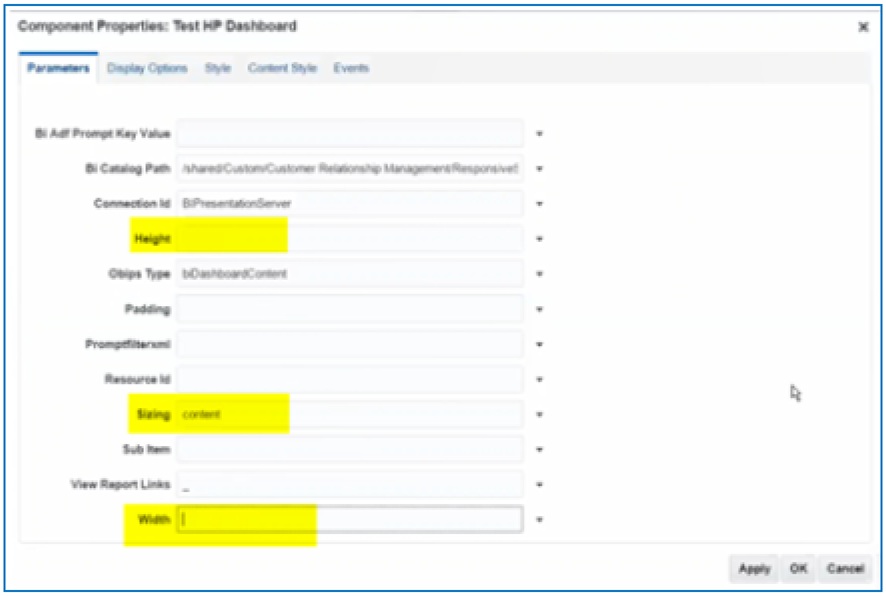
1. Add the analytic to the object tab.
2. Open a sandbox.
3. Under Setting and Actions choose **Edit Pages**.
4. In the Edit Pages dialog, select internal.
5. Click **OK**.
6. Navigate to the page to set up.
7. Click **Change Layout**.
8. Navigate to the analytic and click Add.
9. Click **Edit**.

   This shows the edit option for a dashboard container.

10. Under the Parameters tab, change the sizing to "content" and remove any height and width values so that the field is empty.

    This shows the Height and Width options as well as the Sizing option.

11. Click the Display Options tab.
12. Click the Advanced tab.
13. Under Stretch Content, set the value to "false".

Best Practices For Sizing

Traditional BI Content typically doesn't have all these sizes specified. The following are some recommendations for getting the best sizing results.

- **Use original content as a guide and size from the inside out.**, Start adding sizes for views first. Follow this by adding sizes to view containers. Save the report then make adjustments to Dashboard Sections, and then Dashboard Columns. When tweaking dashboard containers, set their size to the specific size then tweak to minimize scroll bars.

  An inspector tool like Firebug can make this process much easier by allowing temporary edits in place. You can then go back and add the values in the dialog. Add 20 pixels to dashboard container heights as this gets deducted by the dashboard code (presumably to reserve space for the collapsible icon).

  When you're done tweaking, set the dashboard, columns, and sections to the minimum size setting. This setting removes the overflow behavior and prevents scroll bars from appearing on BI content.

- **Measure pixels in original content to obtain starting size values**. Use a pixel measuring tool (like Measure or others) to measure pixels on the screen to find starting sizes for views. Similarly, measure pixels on the screen to help figure how many pixels to add or deduct for components that can't be resized within views. For example, the View Selector widget needs approximately 40 pixel height.
- **Build in padding sizes**. BI styles typically have some padding built in to their CSS. The BI resizing code works best when taking this into account. Moving from sections to columns, try adding 3 pixels per border. For example, if you have two sections in a single dashboard column, they contribute four borders. So make the column value 12 pixels larger than the sum of the sections. When working up from views to view containers, try adding the same 3 pixels per border. Note that the 3 pixel padding recommendation is suitable for the Alta style. Custom styles may need more or less padding to be built into the math. You can validate the dashboard

behavior using the specific size setting. In general, more padding is safer but could contribute marginally to less predictable behavior.

- **Make sure the math works out**. BI builds up the sizing map based on nested layout objects. Resizing falls apart if any parent container size is sized smaller than the content that it contains. For example, if a graph size is 300 x 200 and its view container is 350 x 250, then section and column containers must be larger than 350 x 250. If the section were set to 300 x 200, for instance, resizing wouldn't work.

This shows a dashboard with an analysis that has a compound layout with titles and two views to choose from. Colors added to highlight the layout components.

Currency Settings for Analytics

Currency and Exchange Rate Settings for Analytics

You can choose how currency is shown in your application. If you're running analytics on your application data, you can specify currency and exchange rate details in BI.

Currency can be set in different regional currency types, depending on where you do business and what currency types you want to see.

There are three ways you set up currency:

- **User Currency** - Set by the business user in Regional settings. This setting applies to the entire application interface for that user only. The available currency options are set by your application administrator.
- **Analytics Currency** - Set by the business user in BI in My Account settings in the Reports area. The setting applies to that user only and is only relevant for analyses.
- **Corporate Currency** - Set by the application administrator. This setting applies to all users in that company.

Note: The time zone preferences that you set in your fuse simplified user interface are inherited and used as the time zone setting for your existing and new analytics.

Set General User Currency

User currency settings determine the currency used as the default for what you see in your application. User currency applies to your entire interface for your signed-in session.

1. Navigate to **Tools**, **Set Preferences**.
2. Select **General Preferences** > **Regional**.
3. Select the preferred currency to be used. Available currencies include those set up for your company by your application administrator.

Set Analytics Currency

The analytics currency settings determine the currency type that's displayed in all your analytics. It also determines how and when your currency conversion rates are calculated.

1. Click **Navigator Tools Reports and Analytics**.
2. Click **Browse Catalog**.
3. Click **My Profile** and select **My Account**.
4. In the Preference tab, select your choice in **Currency**.

This shows the currency display options for users:

Currency Display Type	Description
Entered Currency	Currency used on a transaction.
<Application> Currency	Currency set up in each respective Cloud application as the common Corporate currency used company-wide.
User Preferred Currency using Simple Currency Management	Conversion to User Preferred Currency is performed at the time your run the report, and is calculated from the Corporate currency based on the last time the record was updated and saved or closed.
User Preferred Currency using Advanced Currency Management	Conversion to User Preferred Currency happens on the date your run the report, and uses the currency indicated on the record.

Set a Global Currency Conversion Profile

Set a global currency conversion method for all your users by creating a currency profile. Only administrators can create currency profiles.

1. In Setup and Maintenance, go to **Manage Administrator Profile Values**.
2. Enter the following values:

- **Profile Option Code** : BI_DEFAULT_CURRENCY_CONVERSION_METHOD
- **Profile Display Name** : BI Default Currency Conversion Method
- Application
- Module
- **Start Date** : Provide previous day's date to proceed to next step to define values.

3. Click **Save** and **Close**.
4. In the Manage Profile Options dialog box, you see your new profile. Check the Enabled box for Site.
5. Click **Save** and **Close**.

Related Topics

- How do I update existing setup data?

Define Currency Profile Values

After you create your currency profile, the last step is to define the profile value. This step defines which currency management option is assigned to that profile.

1. In the Setup and Maintenance work area, use **Manage Administrator Profile Values**.
2. In Profile Option Code search for your profile: BI_DEFAULT_CURRENCY_CONVERSION_METHOD.
3. In Manage Administrator Profile Values, Click **Add** (+ icon).
4. Select **Site** as the Profile level.
5. Enter "User Preferred Currency 2" in Profile Value.
6. Click **Save and Close**.

How User Preferred Currency Exchange Works

The simple and advanced user-preferred currency choices determine how and when your currency exchange rates are calculated. For both simple and advanced currency management, when you save or close a report, the exchange rate is set at that time.

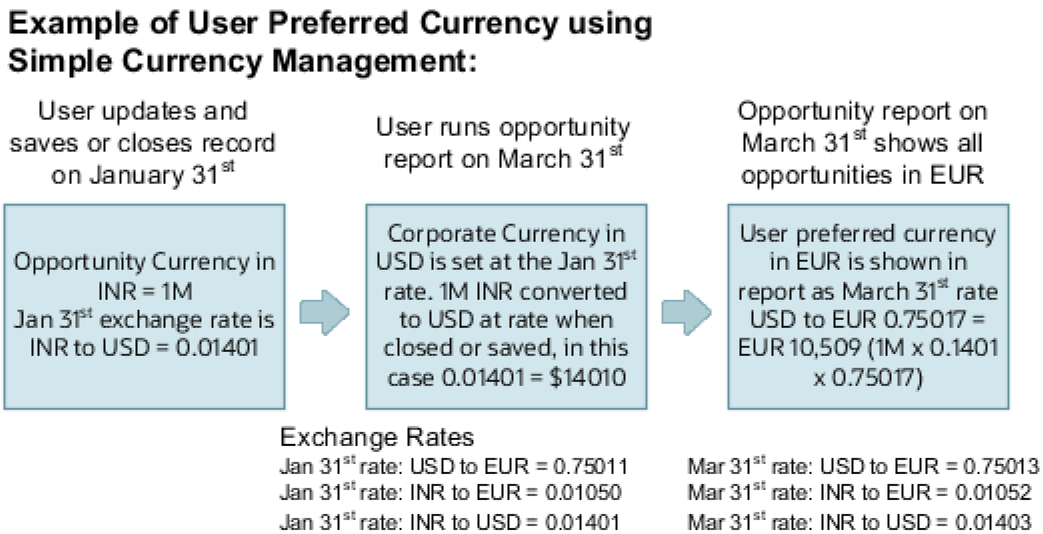
The option you choose impacts how quickly your reports are generated at run time. Each case includes trade-offs, as detailed in the examples.

User Preferred Currency using Simple Currency Management

The advantage of this option is performance - the application doesn't have to look up the rate for each transaction because when you close or save a record, the application converts it to your corporate currency at that day's rate. When you run the opportunity report, the application multiplies that value by your preferred currency exchange rate for the date you run the report. This eliminates the need for the application to cycle through each record, and calculate the corresponding exchange rate to your preferred exchange rate at the time that record was closed or last saved. It simply takes the value on record for the original transaction exchange to corporate currency, and multiplies it by your preferred currency exchange rate at the time your run the report.

As an example of user preferred currency using simple currency management, a user updates and saves or closes an opportunity record with associated revenue of one million Indian Rupees on January 31st with an exchange rate of 0.01401 Rupees to one US Dollar. The user then runs an opportunity report in US Dollars on March 31st. In the report, the US Dollar Corporate Currency is set at the January 31st rate it was saved at, in this case reporting as $14,010, or one million multiplied by 0.01401. Finally, an opportunity report on March 31st in Euros uses the March 31st conversion rate for US Dollars to Euros of 0.75017 to convert the recorded US Dollar amount into Euros, in this example one million multiplied by 0.01401, which is the January 31st Rupee to US Dollar exchange rate, multiplied by 0.75013, which is the March 31st rate for Euros. This requires less processing, because the January 31st Rupee to US Dollar exchange rate, while not exact on March 31st, is used as the basis for the calculation of the March 31st opportunity revenue conversion to Euros at the later exchange rate.

The following figure describes an example of user preferred currency using simple currency management.

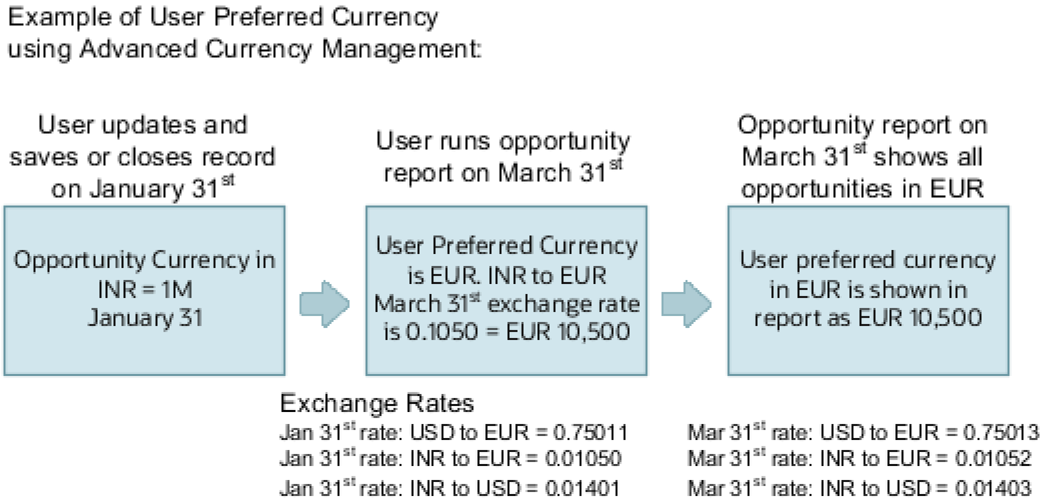


User Preferred Currency using Advanced Currency Management

This option provides a more precise exchange rate, since it goes through each record to determine the rate on the date the record was updated or closed. The downside of this option is performance. Your reports will take longer to run. The application has to cycle through each record and match currency exchange rates to the date the record was closed or updated and saved.

As an example of user preferred currency using advanced currency management, a user updates and saves or closes an opportunity record with associated revenue of one million Indian Rupees on January 31st, when an exchange rate of 0.01050 Rupees to one Euro applies. The user then runs an opportunity report on March 31st. In the report, the User Preferred Currency of Euros is applied, using the January 31st Rupee to Euro rate of 0.01050, requiring calculation during report processing to resolve the opportunity to 10,500 Euros. Note that running the opportunity report on March 31st doesn't change the calculation and the close date of January 31st is used.

The following figure describes an example of user preferred currency using advanced currency management.



Why do I see amounts of zero in analyses?

Currency exchange rates might not be set up correctly. For example, you set EUR as your preferred currency in general preferences, and corporate currency is USD. Amounts are displayed in EUR after conversion from USD at the current exchange rate.

4 Subject Areas

Listing of Prebuilt Subject Areas

There are dozens of standard subject areas that you can use right out of the box to build your analytics. This list includes subject areas for other applications as well.

You can review the subject area in the *Oracle CX Sales and Fusion Service Subject Areas for Transactional Business Intelligence* guide.

Note that you can view the subject area objects and attributes in your application by going to BI, choosing the **New Analysis** wizard which lets you choose a subject area. Then the editor for building a new analytic opens with the subject area dimensions and attributes expandable under the subject area name.

How Subject Areas Work

Subject areas are the building blocks of your analytics. There are subject areas that come prebuilt with your application, and over 100 analytics built from the included subject areas. Let's look a little closer at how subject areas work.

All of the electronic activity that happens each day in your company is stored and can be used to look at current and historical data, as well as predict future trends and outcomes. This information is saved and grouped and packaged as objects. The objects hold information called attributes which are pieces of information related to that object. For example, an object called Customer would hold information related to that customer, such as name, address, phone number, company and so on.

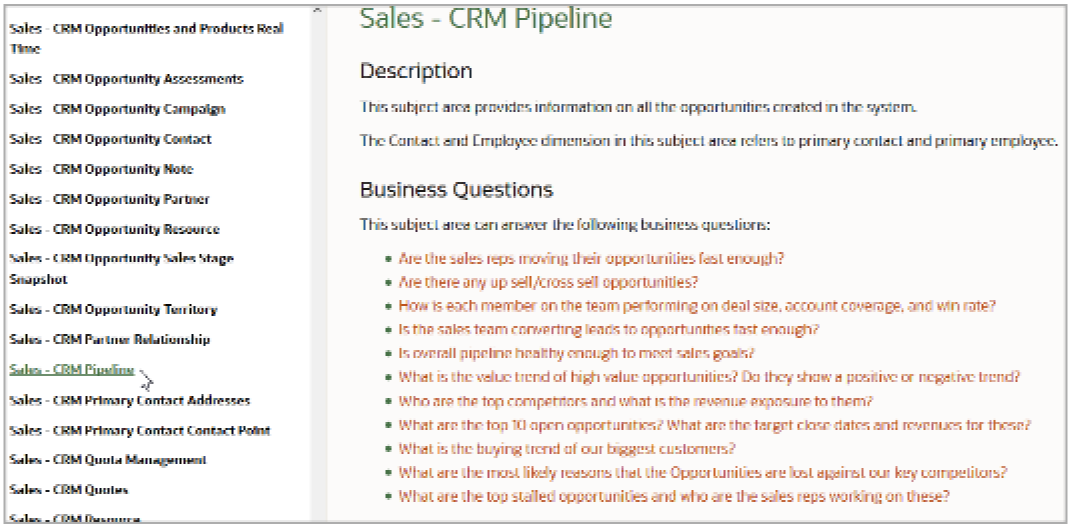
Object attributes are organized in columns which are used to provide real-time transactional reporting.

You can use the prebuilt subject areas to build your own analytics. Or you can build your own subject areas and use them for building or editing analytics. Most importantly, the focus of a subject area is to provide a way for you to gain access to key insights about your organization.

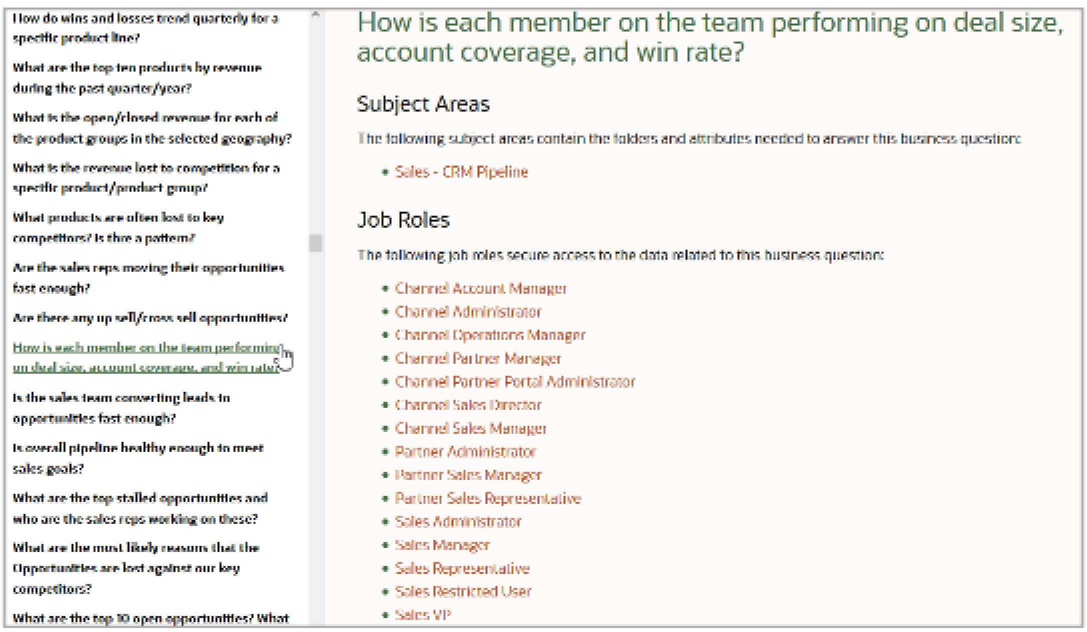
Choosing the Right Subject Area for Your Analytics

We provide a wide variety of subject areas to provide insight on a lot of different business activities. So how do you know which subject area is right for you?

The questions in the *subject area guide* provide a starting point for you in terms of what information this subject area provides. Do any of these questions reflect what insights you're looking for on a particular area of your business? Maybe they come close, but not exactly what you're looking for.



If you click on one of the business questions you're taken to a page that details the roles that have access to the data that supports analytics around that question.



Here are some more examples of subject areas and the business questions they can answer.

Subject Area Name	Example Business Questions
Sales - CRM Pipeline	• Are my sales representatives moving their opportunities fast enough. • How is each member on my team performing on deal size, account coverage, and win rate? • Is my team converting leads to opportunities fast enough? • What are the most likely reasons that we lose against our key competitors? • What are the top 10 open opportunities?

Subject Area Name	Example Business Questions
Sales - CRM Forecasting	• What are my forecasts and closed revenues for this quarter? • Are revenues closed in time for their forecast figures? • Does the forecast versus pipeline show a healthy picture? • What were my forecast revenues for the same period last year?
Sales - CRM Sales Activity	• Is there any work load balancing issues on my team? • I want to rebalance my team workloads. Based on upcoming activity levels what are my resource levels? • Are there accounts that are being heavily pursued? • How can I identify neglected but strategic accounts?

Related Topics

Multiple Subject Area Reporting

Overview of Cross-Subject Area Joins

You can create analyses that combine data from more than one subject area, or cross-subject area analyses. Review guidelines for creating these joins in MyOracle Support (Doc ID 1567672.1). Cross-subject area analyses can be classified into three broad categories:

- Using common dimensions.
- Using common and local dimensions.
- Combining more than one result set from different subject areas using set operators such as union, union all, intersection and difference.

Common Dimensions

A common dimension is a dimensional attribute that exists in all subject areas in the analysis. These dimensions are considered common dimensions between subject areas and can be used to build a cross-subject area report.

Common and Local Dimensions

A local dimension is available only in one of the combined subject areas in a cross-subject area query.

Related Topics

- Create a Cross-Subject Area Analysis

Reporting Using Data from More than One Subject Area

You can create analyses that combine data from more than one subject area using three different methods. This section discusses these methods and how the results vary depending on which method you use.

Oracle Transactional Business Intelligence organizes reporting data elements such as dimensions and facts by business function in subject areas. Each subject area contains a collection of dimensional attributes and measures relating to the one-dimensional STAR model and grouped into individual folders. The term STAR refers to the semantic model where a single fact is joined to multiple dimensions.

You can combine results in reporting using one of the three following methods:

- Reporting that combines queries from multiple subject areas.
  - Using common (conformed) dimensions.
  - Using local and common (confirmed) dimensions.
- Reporting that uses set operations (Union or Union All for example) to combine more than one result set from the same or different subject areas.
- Reporting that uses logical SQL using the Advanced tab.

A **Common dimension** is a dimension that exists in all subject areas that are being joined in a report. For example, the Customer dimension is the common dimension for the **Sales - CRM Pipeline** and **Marketing - CRM Leads** subject areas.

A **Local dimension** is a dimension that is available in one or more of the subject areas, but is not available in all of the subject areas being joined. For example, Product is a local dimension for the **Sales - CRM Pipeline** subject area, and Activity is a local dimension for the **CRM - CRM Activity Real Time** subject area.

Create a Cross-Subject Area Analysis

To create a cross-subject area analysis, include a measure from each subject area to support the join if it uses a local dimension. You can hide the measure in the results if you don't want it to appear in your analysis.

How to Create a Cross-Subject Area Analysis

1. In the Reports and Analytic work area, click **Browse Catalog**.
2. Click **New** and select **Analysis**
3. Select a subject area.
4. In the Criteria tab, expand the dimensions and add a column to the analysis.
5. In the Subject Areas region, click **Add/Remove Subject Areas**.
6. In the Subject Area region of the Criteria tab, expand the dimensions and add a column to the analysis.
7. If the column is a local dimension, add a measure from the subject area. In any join query, you must add at least one measure from all subject areas involved, otherwise unexpected results or errors might occur. If it's preferable to hide the measure in your analysis, select its Column Properties, and in the Column Format tab of the Column Properties dialog box, select the **Hide** check box and click **OK**.

8. If you're using a local dimension, in the Advanced tab, navigate to the Advanced SQL Clauses section, select **Show Total value for all measures on unrelated dimensions**, then click **Apply SQL**.
9. Click the **Results** tab to see the analysis results.
10. Click the **Criteria** tab again to return to the analysis definition.

Related Topics

- Overview of Cross-Subject Area Joins

Examples of Reporting Using Data from More than One Subject Area

The simplest and fastest way to generate a report is to use a single subject area. If the dimension attributes and fact metrics that you're interested in are all available from a single subject area, then you should use that subject area.

Combining Queries from Multiple Subject Areas

When you're reporting with multiple subject areas, keep in mind that if you use three subject areas for an analytic, your common dimensions must exist in all three subject areas. Joining on common dimensions gives you the benefit of including any metric from any of the subject areas in a single analysis.

While you can create an analysis joining any subject area to which you have access, only a cross subject area query that uses common dimensions returns data that's at the same dimension grain. This happens so that the data is cleanly merged, and the results is an analysis that returns exactly the data you want to see.

When a cross subject area analysis is generated, separate queries are executed for each subject area in the analysis and the results are merged to generate the final analysis. The data that's returned from the different subject areas is merged using the common dimensions. When you use common dimensions, the result set returned by each subject area query is at the same dimensional grain, so it can be cleanly merged and rendered in the analysis. The next topic shows an example of reporting using different subject areas with common dimensions.

Common Dimension Reporting

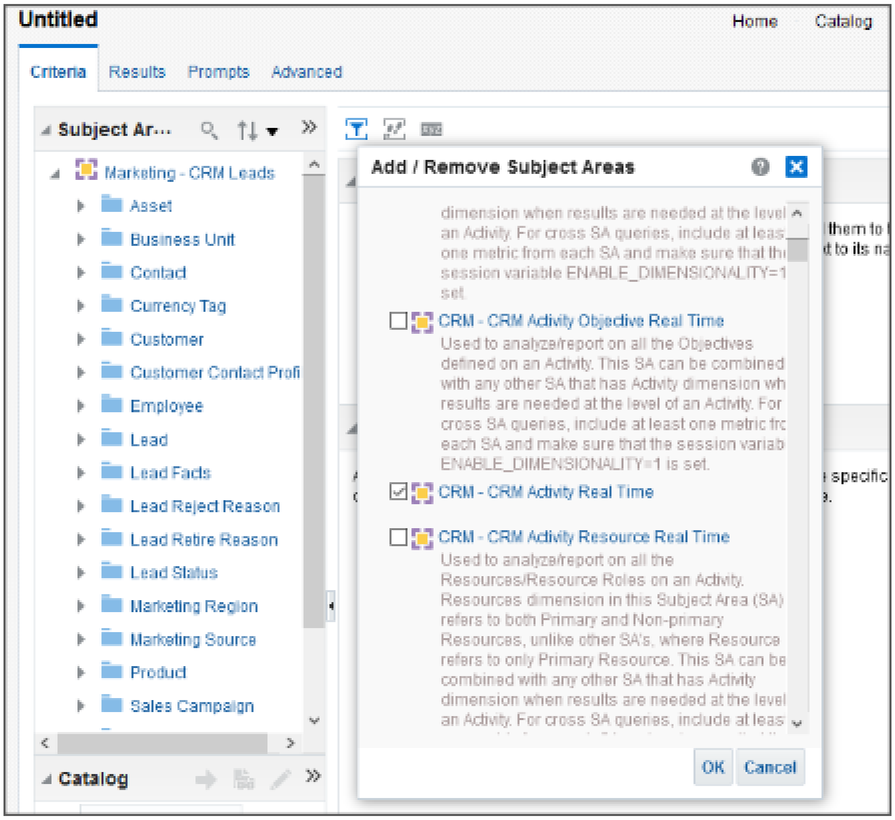
In this case, to use multiple subject areas for reporting, we are using common dimensions. We want to pull the number of Opportunities, number of Opportunity Revenue Lines, number of Leads, and number of Activities by Customer. The common dimension in all three subject areas used for this analysis is Customer and different fact metrics are pulled from each subject area.

We're using these subject areas:

- "Marketing - CRM Leads"
- "Sales - CRM Pipeline"
- "CRM - CRM Activity Real Time"

Start by creating an analysis using the Marketing - CRM Leads Subject area. You add the second and third subject area used in the cross-subject area analysis by clicking Add/Remove Subject Areas icon in the Subject Areas section.

This is the analysis editor showing the subject areas available to add to your new analytic.



For this example, Customer is the common dimension:

- "Marketing - CRM Leads"."Customer"
- "Sales - CRM Pipeline"."Customer"
- "Sales - CRM Sales Activity"."Customer"

These are the fact metrics:

- "Marketing - CRM Leads"."Lead Facts" ."# of Leads"
- "Sales - CRM Pipeline"."Facts". "Pipeline Detail Facts". "# of Opportunity Revenue Lines"
- "Sales - CRM Pipeline"."Facts"."Pipeline Facts". "# of Opportunities"
- "CRM- CRM Activity Real Time"."Facts"."Activity Facts"."# of Activities"

This is the Logical SQL for this example:

```
 SELECT
 0 s_0,
 "Marketing - CRM Leads"."Customer"."Corporate Account Name" s_1,
 "Marketing - CRM Leads"."Lead Facts"."# of Leads" s_2,
 "Sales - CRM Pipeline"."Pipeline Detail Facts"."# of Opportunity Revenue Lines" s_3,
 "Sales - CRM Pipeline"."Pipeline Facts"."# of Opportunities" s_4,
 "Sales - CRM Sales Activity"."Activity Facts"."# of Activities" s_5
FROM "Marketing - CRM Leads"
ORDER BY 1, 2 ASC NULLS LAST
FETCH FIRST 75001 ROWS ONLY
```

This shows the analytic results from combining common dimensions and facts from three subject areas.

Customer	Lead Facts	Pipeline Detail Facts	Pipeline Facts	Activity Facts
Corporate Account Name	# of Leads	# of Opportunity Revenue Lines	# of Opportunities	# of Activities

Table

Corporate Account Name	# of Leads	# of Opportunity Revenue Lines	# of Opportunities	# of Activities
24-7 ProFitness	15	0	0	0
360 Signs Gym	10	0	0	0
4M Technologies	0	0	0	276
6 October plast	0	0	0	20
A. C. Networks	2	0	0	36
AB12 Tecnologie	0	0	0	14
ABC Corporation Worldwide	1	0	0	6
ACME	0	0	0	2

Local and Common Dimension Reporting

This example reports on Customer, number of Opportunity Revenue Lines by Product, and number of Activities by Activity Type. Customer is the common dimension in both subject areas used for this query. Product is a local dimension to the Sales - CRM Pipeline subject area and Activity is a local dimension to CRM - CRM Activity Real Time. Different fact metrics are pulled from each subject area.

Note: Using local dimensions can impact the grain of the analysis resulting in repeated metrics for each of the rows.

We're using these subject areas:

- "Sales - CRM Pipeline"
- "CRM - CRM Activity Real Time"

Customer is the common dimensions:

- "CRM- CRM Activity Real Time"."Customer"
- "Sales - CRM Pipeline"."Customer"

These are the local dimensions:

- "Sales - CRM Pipeline".Product"
- "CRM - CRM Activity Real Time"."Activity"

These are the fact metrics:

- "CRM- CRM Sales Activity Real Time"."Facts"."Activity Facts"."# of Activities"
- "Sales - CRM Pipeline"."Facts"."Pipeline Detail Facts"."# of Opportunity Revenue Lines"

This is the logical SQL for this example:

```
SET VARIABLE ENABLE_DIMENSIONALITY=1;
SELECT
 0 s_0,
 "Sales - CRM Pipeline"."Customer"."Corporate Customer Unique Name" s_1,
 "Sales - CRM Pipeline"."Product"."Product Name" s_2,
```

```
     "Sales - CRM Sales Activity"."Activity"."Activity Type Code" s_3,
    "Sales - CRM Pipeline"."Pipeline Detail Facts"."# of Opportunity Revenue Lines" s_4,
     "Sales - CRM Sales Activity"."Activity Facts"."# of Activities" s_5
    FROM "Sales - CRM Pipeline"
    ORDER BY 1, 2 ASC NULLS LAST, 3 ASC NULLS LAST, 4 ASC NULLS LAST
    FETCH FIRST 75001 ROWS ONL
```

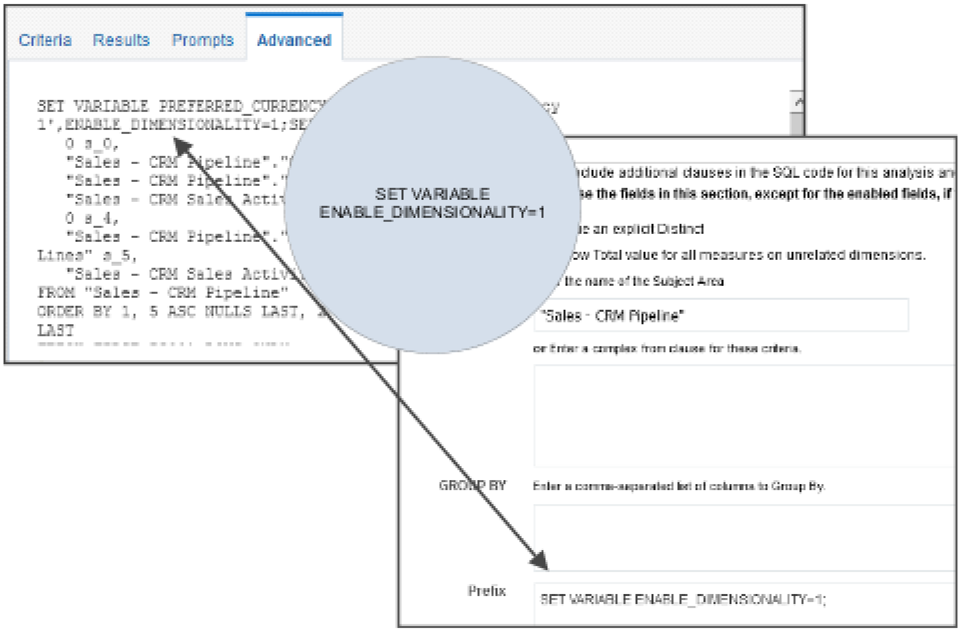
Here are the criteria and results of this local and common dimension query.

Customer	Product	Activity	Pipeline Detail Facts	Activity Facts
1 Corporate Customer Unique Name	2 Product Name	Activity Type Code	# of Opportunity Revenue Lines	# of Activities

Table

Corporate Customer Unique Name	Product Name	Activity Type Code	# of Opportunity Revenue Lines	# of Activities
	FIT 2300 Treadmill	CALL	4	6
Alcon Communications		CALL	0	100
Alexis Weatherhead		MEETING	0	1
Alexza Hotels	FIT 1000 Elliptical	CALL	1	4
		DEMO	1	5
		MEETING	1	1
	FIT 1100 Elliptical	CALL	1	4
		DEMO	1	5
		MEETING	1	1
	FIT 1200 Elliptical	CALL	2	4
		DEMO	2	5
		MEETING	2	1

When using common and local dimensions use `SET VARIABLE ENABLE_DIMENSIONALITY=1;`in the Advanced SQL tab and click Apply SQL. Alternatively, select the 'Show Total value for all measures on unrelated dimensions' and click Apply SQL



Guidelines for Reporting Using Cross-Subject Areas

To create a cross-subject area analysis, include a measure from each subject area to support the join if it uses a local dimension. You can hide the measure in the results if you don't want it to appear in your analysis. Note that the subject areas have to be from the same Oracle Cloud application.

Here are some general guidelines to follow when you are combining subject areas with common and local dimensions:

- Use a single subject area whenever possible. Single subject area analyses perform better and are easier to maintain.
- When joining two or more subject areas, make sure at least one attribute from a common dimension is used.
- When using common dimensions always choose attributes from the common dimension from a single subject area. For instance if you're using the Customer dimension to build a query between subject area 1 and subject area 2, then select all customer dimension attributes from either subject area 1 or from subject area 2. (Not some customer attributes from subject area 1 and some from subject area 2.) In some scenarios, the common dimension may have more attributes in one subject area than the other. In such a situation, you can only use the subset of common attributes for a cross-subject area query.
- Always include a measure from each subject you are using. You don't have to display measures or use them, but you should include them. You can hide a measure if not needed.
- When using common and local dimensions use `SET VARIABLE ENABLE_DIMENSIONALITY=1;` in the Advanced SQL tab and click Apply SQL button. Alternatively, select the 'Show Total value for all measures on unrelated dimensions' and click Apply SQL.

Using Set Operations to Combine More than One Result Set from the Same or Different Subject Areas

You can use set operations to combine more than one result from the same or different subject areas. This example creates a compound query that's a union of two result subsets from the same subject area.

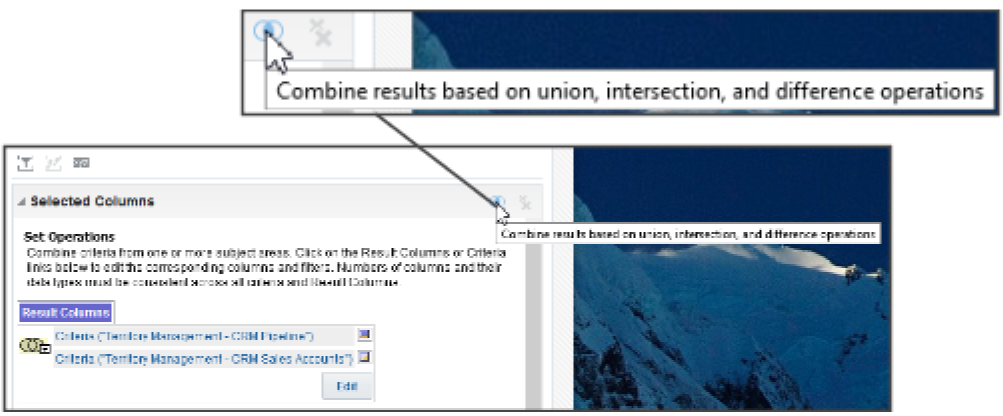
We're going to combine results from these two subject areas using the following facts:

- "# of Opportunity Revenue Lines" by "Territory" from the "Territory Management - CRM Pipeline" subject area (result 1)
- "# of Sales Accounts" by "Territory" from the "Territory Management - CRM Sales Accounts" subject area (result 2)

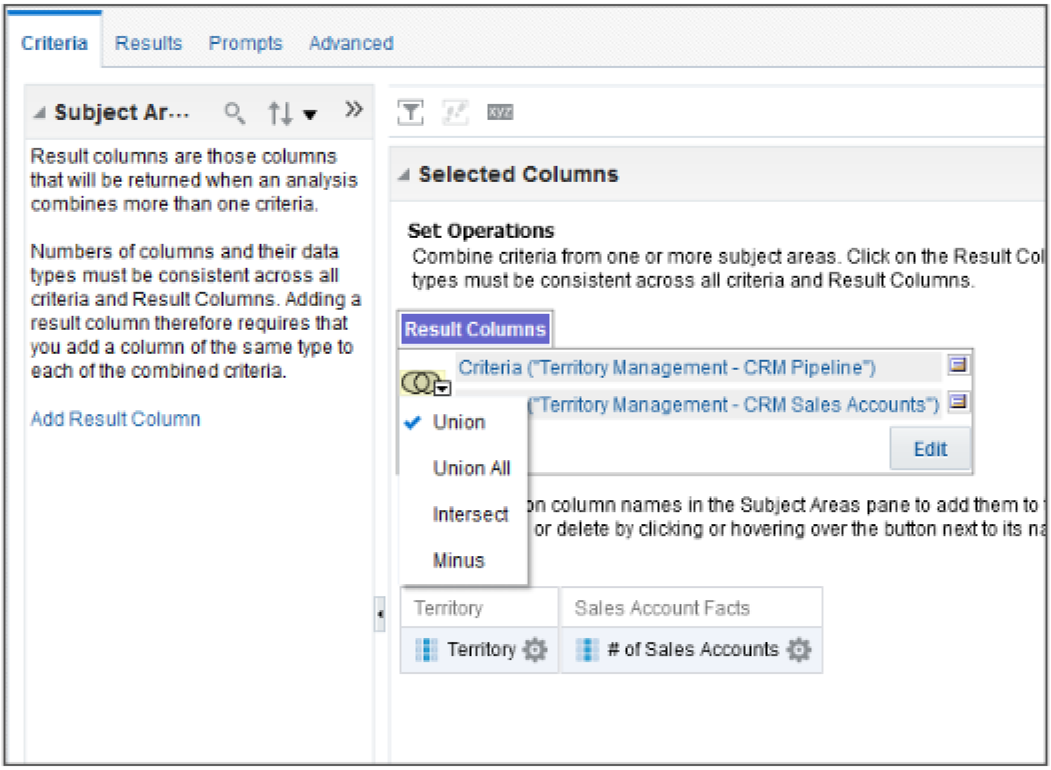
Here is the logical SQL for this example:

```
SELECT
saw_0,
saw_1
FROM (
(
SELECT
IFNULL("Territory"."Territory", 'Unspecified')||'~~ # of Opty Revn Lines' saw_0,
"Pipeline Detail Facts"."# of Opportunity Revenue Lines" saw_1
FROM "Territory Management - CRM Pipeline"
)
UNION
(
SELECT
IFNULL("Territory"."Territory", 'Unspecified')||'~~ # of Sales Accounts' saw_0,
"Sales Account Facts"."# of Sales Accounts" saw_1
FROM "Territory Management - CRM Sales Accounts"
)
) t1 ORDER BY saw_0
```

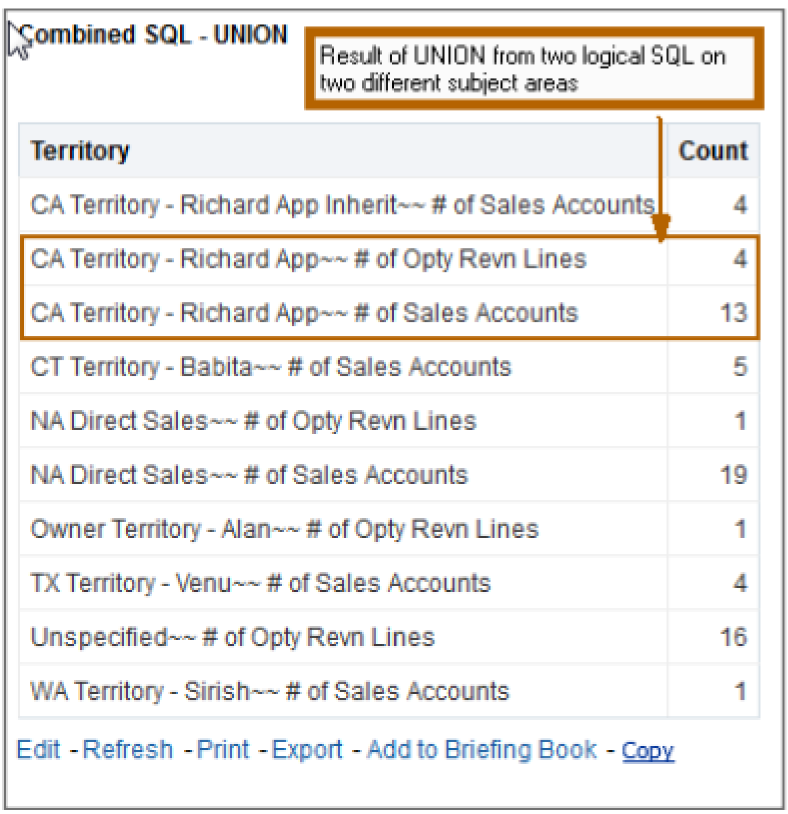
To use the set operations, click the button "Combine results based on union, intersection and difference operations" on the Selected Columns header



This shows the two combined subject areas using a union set operation.



Here is the resulting report.



Territory	Count
CA Territory - Richard App Inherit~~ # of Sales Accounts	4
CA Territory - Richard App~~ # of Opty Revn Lines	4
CA Territory - Richard App~~ # of Sales Accounts	13
CT Territory - Babita~~ # of Sales Accounts	5
NA Direct Sales~~ # of Opty Revn Lines	1
NA Direct Sales~~ # of Sales Accounts	19
Owner Territory - Alan~~ # of Opty Revn Lines	1
TX Territory - Venu~~ # of Sales Accounts	4
Unspecified~~ # of Opty Revn Lines	16
WA Territory - Sirish~~ # of Sales Accounts	1

Combining Logical SQL Using the Advanced Tab

If your requirement can't be met by either of the two methods already discussed, then there's another advanced technique you can try. This technique lets you join multiple logical SQL statements based on common IDs or keys, which can be written against the same or different subject areas as with normal SQL. Both . `Outer`and `Equi`joins are supported.

This example illustrates how the fact metrics on Territory assignment and Resource assignment for Opportunities can be combined to get a single report using advanced logical SQL

First, we are going to write a BI Answers query using the Sales - CRM Opportunity Territory subject area to show the # of Opportunity Territory Assignments, and Opportunity. Once the correct results are achieved, go to the Advanced tab and grab the logical SQL associated with this query.

This is the logical SQL we use for this example:

```
SELECT
 0 s_0,
 "Sales - CRM Opportunity Territory"."Opportunity"."Opportunity ID" s_1,
 "Sales - CRM Opportunity Territory"."Opportunity Territory Facts"."# of Opportunity Territory Assignments"
 s_2
FROM "Sales - CRM Opportunity Territory"
```

SQL Issued

The following box contains the SQL code that will be sent to the Oracle BI Server when this analysis is executed.

```
SET VARIABLE PREFERRED_CURRENCY='User Preferred Currency 1';SELECT
   0 s_0,
   "Sales - CRM Opportunity Territory"."Opportunity"."Opportunity ID" s_1,
   "Sales - CRM Opportunity Territory"."Opportunity Territory Facts"."# of
Opportunity Territory Assignments" s_2
FROM "Sales - CRM Opportunity Territory"
ORDER BY 1, 2 ASC NULLS LAST
FETCH FIRST 75001 ROWS ONLY
```

This is the result of the query using the Advanced tab.

Compound Layout

Title

Table

Opportunity ID	# of Opportunity Territory Assignments
300000063881526	5
300000098716473	1
300000120773686	1
300000122062065	1

Second, we're going to write a second BI Answers query using the Sales - CRM Opportunity Resource subject area to show # of Opportunity Resource Roles associated to an Opportunity. Once the correct results are achieved, we go to the Advanced tab and grab the logical SQL associated with this query.

This is the logical SQL we use for this example:

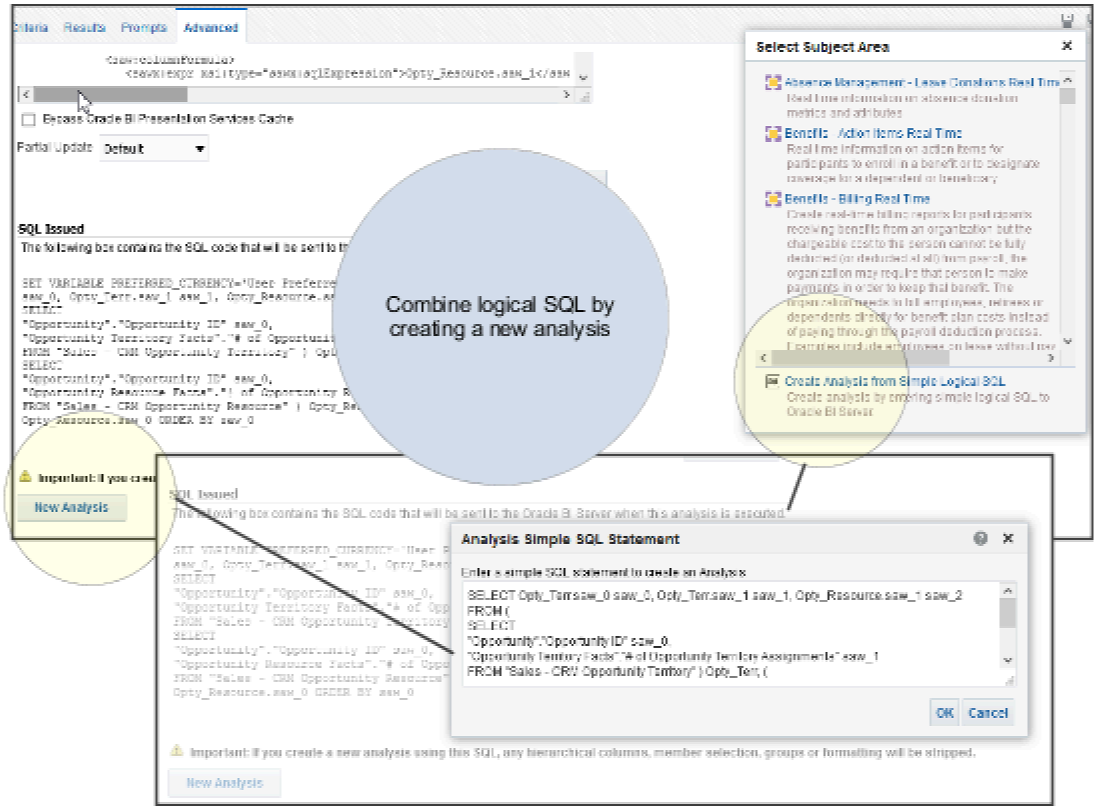
```
SELECT
 0 s_0,
 "Sales - CRM Opportunity Resource"."Opportunity"."Opportunity ID" s_1,
 "Sales - CRM Opportunity Resource"."Opportunity Resource Facts"."# of Opportunity Resource Roles" s_2
FROM "Sales - CRM Opportunity Resource"
```

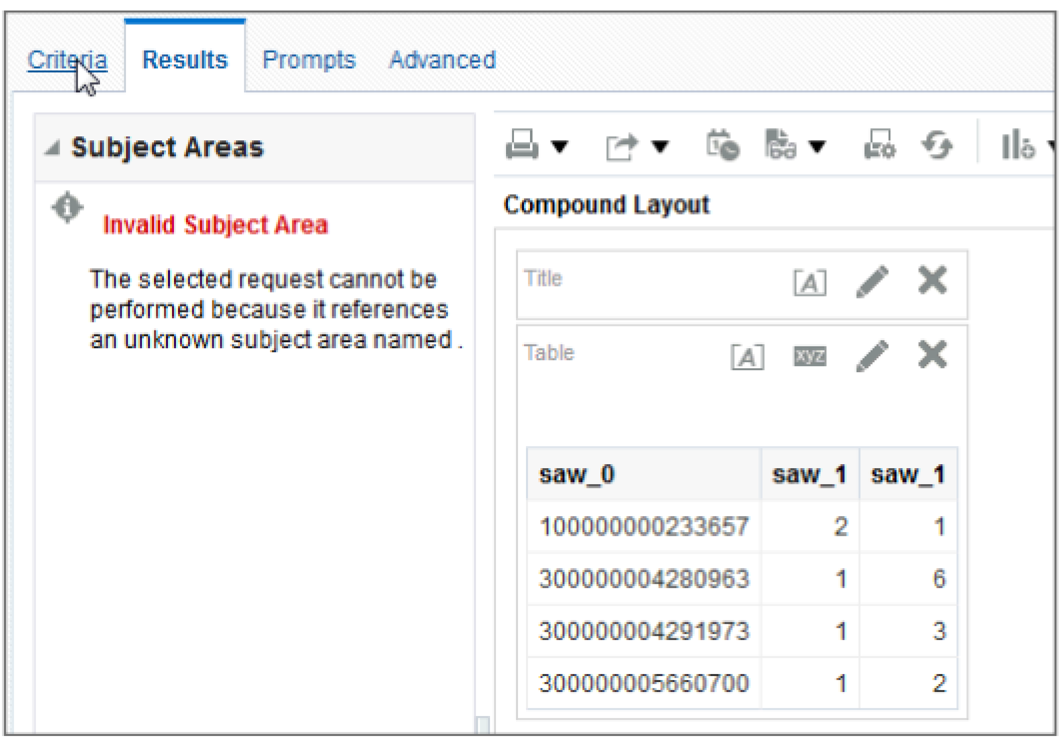
Using the Advanced tab in BI Answers, click on the New Analysis button, copy and paste the following logical SQL in the new analysis window. The new SQL is an OBIEE - Equijoin of the SQL statements we showed in the two previous examples. These queries are based on Opportunity ID.

```
SELECT
Opty_Terr.saw_0 OptyID,
Opty_Terr.saw_1 OptyTerrAsgnCnt,
Opty_Resource.saw_1 OptyRsrcRoleCnt
FROM
(
SELECT
"Opportunity"."Opportunity ID" saw_0,
"Opportunity Territory Facts"."# of Opportunity Territory Assignments" saw_1
FROM "Sales - CRM Opportunity Territory" ) Opty_Terr,
(
SELECT
"Opportunity"."Opportunity ID" saw_0,
"Opportunity Resource Facts"."# of Opportunity Resource Roles" saw_1
FROM "Sales - CRM Opportunity Resource" ) Opty_Resource
Where Opty_Terr.saw_0 = Opty_Resource.saw_0
ORDER BY OptyID
```

Note: Use any text editor to combine the logical SQL statements copied from the previous two queries. Make sure that you have extra space at the end of each line before you plug the SQL in the new analysis window.

This image shows how from your analytic editor Advanced tab, you can click New Analysis to create an analysis with SQL, or from the home page you can go to New > Analysis > and click Create Analysis from Simple Logical SQL.





This is the result of that query.

Note: If you create a new analysis using this SQL, any hierarchical columns, member selection, groups or formatting is stripped out.

Combining Columns Using Set Operations

Display data in different ways for your analytics by combining columns from different subject areas. Combining is done using set operations such as Union or Intersect.

Guidelines for Combining Columns

- The number and data types of the combined columns must be the same. The number of rows that are returned for each column can differ.
- Select columns from the same subject area or from a different subject area. Oracle recommends that to prevent conflicts in data type definitions, use the same columns if you are joining different subject areas.
- Specify one Set operation for one collection of criteria. For example, if you create criteria from the Foo subject area, you can apply only one Set operation to those columns. You cannot apply different Set operations to different columns in the collection of criteria.
- You cannot use hierarchical columns, selection steps, or groups when you combine criteria.

Combine Columns from One Subject Area

You can combine two columns from a single subject area to create comprehensive data sets. Say the Foo subject area contains the Offices folder, which contains the D1 Office and D2 Department columns. You can combine these two columns and create a column called Offices and Departments. You can include the Union All Set operation to specify that this new column shows all the values from both columns in a single column in a table.

Combine Columns Using Set Operations and Adding Columns from Related Subject Areas

There are important differences between Set operations and adding columns.

- When you combine columns using Set operations, the analysis results show a single newly combined column governed by a Set operation.
- When you add columns from related subject areas to an analysis, the results show each added column individually. For example, if you have the appropriate permissions you can create an analysis by selecting one column from a primary subject area and selecting another column from a related subject area.

Oracle recommends that you UNION on the same column as a best practice. The reason for this recommendation is that, as an example, if your UNION is done between different columns such as "Customer Row ID" and "Customer"."Level 8 Account ID", and if the underlying data type of "Customer"."Level 8 Account ID" can be changed from Numeric to VARCHAR, then the UNION would stop working. There is a risk that the underlying datatype for one of the columns might change leading to errors. Columns may have ID in their name, but they are not always necessarily numeric.

Combine Columns from One or More Subject Areas

Combining columns from multiple subject areas allows you to blend data from columns that express a combined and enhanced data insight. Here's how you do it:

1. In the Analysis editor, create an empty analysis and add a subject area.
2. In the Criteria tab, select the columns to include in the analysis.
3. In the Selected Columns pane, click the Combine results based on union, intersection, and difference operations button to display the Select Subject Area menu.
4. Select a subject area that contains the columns to combine with the columns that you have previously included. For example, click Foo-Sales.

   The Set Operations area is displayed in the Selected Columns pane. Note the boxes with dotted line borders that are displayed below the criteria. These boxes indicate the kind of column that you must combine with those that you have previously included. For example, the boxes might include "Add Column (D1 Office)" and "Add Column (1 - Revenue)". This text indicates that the columns that you include in each of those boxes are combined with the previously selected D1 Office and 1 - Revenue columns using a Set operation to form a new column. When you combine measure columns, no arithmetic operations are performed.
5. In the Subject Areas pane, select the columns to combine with the originally selected columns. For example, from the Offices folder, select D2 Department and from the Base Facts folder, select 1 - Revenue.

   > **Note:** The boxes that previously had dotted line borders now hold the columns that you have just selected. You have now specified the columns to combine.

6. Click the Union button under the Result Columns link. Select the operation type to use for combining the columns. For example, select the Union All type. The result columns are those that are displayed in views after applying the set operation of the derived columns.
7. Click the Result Columns link. Note that the Selected Columns pane is updated to show the newly combined columns that you have just created. You can work with these columns as you do other columns in this pane. For example, you can rename the first column (that is the single newly combined column) by following these steps:
   - Click the Options button for the D1 Office column.
   - Select Column Properties.
   - Select Column Format.
   - Ensure that Custom Headings is selected.
   - In the Column Heading box, enter Offices and Departments.
   - Click **OK**. Click the Results tab to view the columns in a table in the Compound Layout.

> **Note:** Data formatting that has been saved as the system wide default for a column is not reflected in a combined column. If you want the data formatting in the combined column, then you must reapply it to the combined column.

What are Facts?

Facts are a little tricky. This first thing to understand is that facts and dimensions work together as a pair for reporting. Think of the fact as the verb or the action in an analytic, and the dimensions as the nouns.

You can have a collection of things, but without doing something with them, they are just there to look at. Same with dimensions, sure you can go into the subject area editor, and expand all the folders and look at the columns. You can drag a column onto the editor and view row after row of data. But, if you want to analyze the data, you need a way to measure it. You need to count it, compare it, sum it up, average it over time or perform any other operation necessary to get the insights you want.

Keep in mind that all dimensions need a fact, at least one fact. Facts give meaning and purpose to your analysis. Don't build analytics without a fact, especially if you have more than one dimension because this leads to unpredictable results.

Hierarchies in Analytics

Some prebuilt, standard subject areas include hierarchies, such as a customer or territory hierarchy. When you design analytics with a hierarchy, users can drill up and down that hierarchy to view data grouped at different levels.

For example, with a territory hierarchy, users can drill up and down their data to look at information grouped by region, state, and city. Hierarchies are delivered with standard subject areas only; you can't add them to custom subject areas. What you can do, however, is join your custom subject area with a standard subject area that has the hierarchy you need. This lets you create analytics with a hierarchy using data pulled from your custom subject area.

Supported Hierarchies

The following hierarchies are supported in some standard subject areas, such as Sales - CRM Pipeline:

- Resource
- Territory
- Customer
- Partner

Example of Adding a Hierarchy to Analytics

If you want to create analytics that include a hierarchy, and also pull data from a custom subject area, then here's how you do it.

Let's say you have a custom object named Ticket that you want to report on. The Ticket object includes the Account field as a dynamic choice list. This means at runtime, your users can create tickets and assign accounts (customers) to them.

Now you have 1,000 tickets in your database and it's time to report on them. Your users would like to view total number of tickets up and down their customer hierarchy.

Here's how you can create a report to meet this need:

1. Create a custom subject area for Ticket and publish it.
2. Create a report using a standard subject area, such as Sales - CRM Customer or Contacts Real Time. These subject areas include the customer hierarchy.
3. Add the account hierarchy from the subject area to your report.
4. Next, add your Ticket custom subject area to the report. This "joins" the two subject areas.
5. Finally, add the metric, such as Number of Tickets, from the custom subject area to your report.

Related Topics

- Reporting Using Data from More than One Subject Area

Subject Area Context And Analytic Results

If your analytic doesn't look right, or columns of information aren't showing up, it could be an issue with context. The context defines what column details the analysis displays. Adding an employee column doesn't mean all employees show up in the analysis.

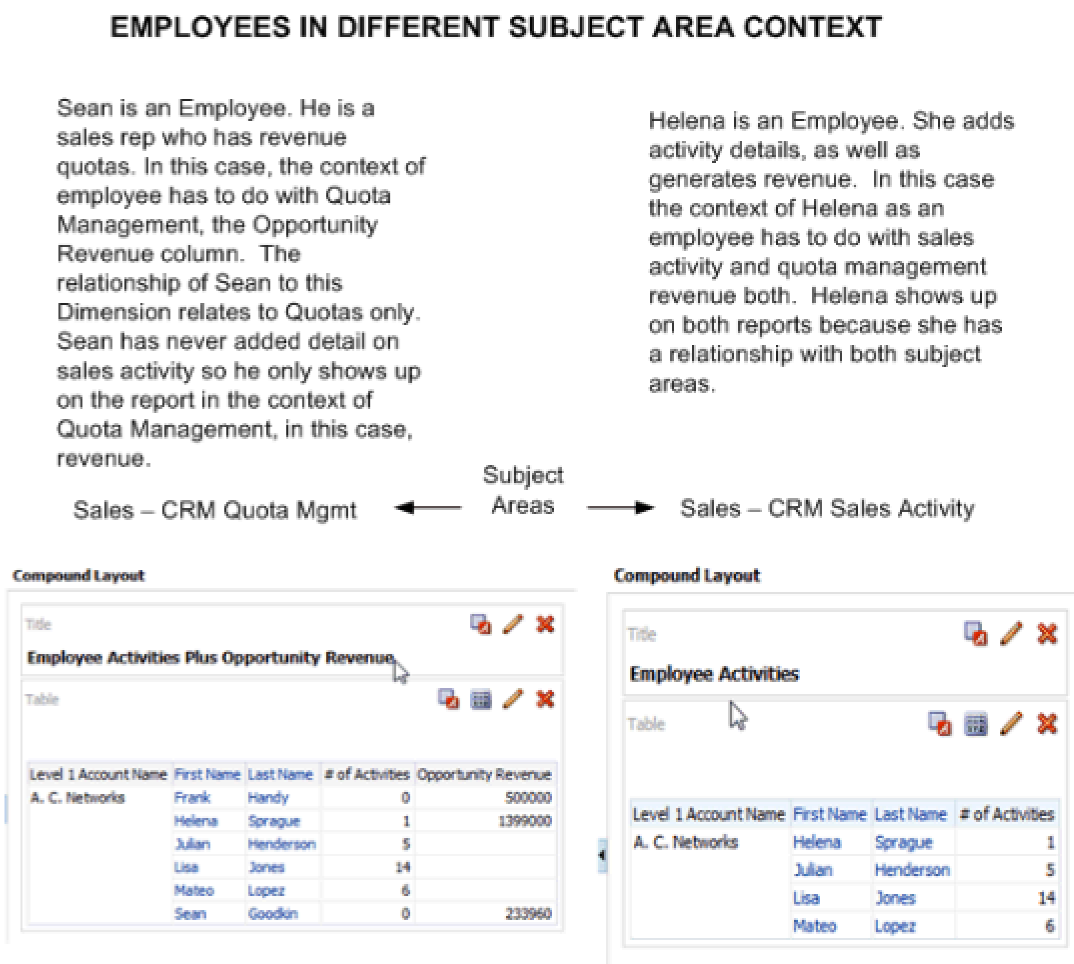
The subject area dimension folders contain the columns and the facts folders define the relationship of the columns. If you add the Employee column to your analysis, and then add the Fact, **Number of Activities** to the same analysis, then only the employees that have one or more activities show on this analysis in this context. There might be hundreds of employees that have some sort of relationship with A.C. Networks, but no associated activities, so they don't show up on your activity analysis.

The following is an example that might help explain this further.

In this exercise you will build an activity analysis, and add an additional subject area, then explore some different scenarios.

1. Build an activity analysis as directed in "Create an Activity Analysis".
2. With your activity analysis in edit mode, add the standard subject area Sales - CRM Quota Management.
3. Both subject areas appear under Subject Areas. Expand Sales - CRM Sales Activity. Expand Customer. Expand Sales Account Extension. Drag **Level 1 Account Name** onto the palette.
4. Still in Sales Activity, expand Employee. Drag **First Name** and **Last Name** onto the palette.
5. Expand Facts, then Activity Facts. Drag **# of Activities** onto the palette. This fact is key to this analysis because the relationship of Employee to this subject area is dependent on the employee having one or more activities for one or more accounts. If your employee has never entered activities for any given account, they don't t show up on this report, even if they have another type of relationship with an account. Since the context of this subject area has to do with sales activities, only employees with activities are included.
6. Now select the "Results" tab. You see four employees in the resulting analysis. Each of these employees has one or more activities.
7. Now select the "Criteria" tab. Under Subject Areas expand Sales - CRM Quota Management. Expand Facts. Expand Pipeline Facts and drag **Opportunity Revenue** to the palette.
8. Go to the "Results" tab. Notice that now there are more employees. This result is because you have added employees that also have relationships to Quota Management. In this case, employees are added that have generated revenue.
9. Go back to "Criteria". Remove **# of Activities**. The results show only the three employees that have revenue. Helena has both revenue and activities so she shows up in both scenarios.

Finally, note that if you remove both **# of Activities** and **Opportunity Revenue** and look at the results, you again have only the four employees that have a relationship with only the Sales Activity dimension.



About Creating Your Own Subject Areas

With CX Sales applications, you get prebuilt analytics that answer typical business questions you might have. But if your questions aren't answered, then you can create your own analytics.

Another case where you will want to create a custom subject area is when you want to report on the custom dynamic choice list fields that you add to standard objects. A dynamic choice list creates a new many-to-one relationship with another object. You will want your analytics to reflect that relationship, but you can't add objects (dimensions) to prebuilt subject areas. In this case, you must add dynamic choice lists to custom subject areas. You can then create a union report in BI that joins the desired prebuilt subject area with your new custom subject area.

You create custom subject areas using a step-by-step train process in Application Composer. For more information, see the Oracle Applications Cloud Configuring Applications Using Application Composer guide.

Related Topics

- About Custom Subject Areas

5 ESS Scheduled Processes for Analytics

Scheduled Processes for Analytics

Oracle Enterprise Scheduler Service (ESS) comes built into your application. ESS manages scheduled processes for the imports and updates for information used in your analytics.

Scheduled Processes for Analytics Data

Subject Area / Dimension	Process Name	Details
Common dimension Time / Calendar dimension	Refresh Denormalized Time Dimension Table for BI	Run the job when the CRM Calendar (profile ZCA_COMMON_CALENDAR) is changed or updated.
Common dimension Product dimension	Refresh Denormalized Product Dimension Table for BI	It is normally not necessary to run this job as the denormalized product dimension table is updated as the Sales Catalog changes are published. Run this job If you don't see the sales catalog changes reflected in BI.
Common dimension Classification Hierarchy	Classification Hierarchy Generation	Classification Hierarchy ESS Jobs are not submitted automatically but most of the times, users are not required submit these ESS jobs manually. Classification hierarchies will be flattened automatically when they are created or modified and the ESS job is available for cases when there are issues with the flattened data. FSM Task Name: Run Classification Hierarchy Generation ESS Job Name: Classification Hierarchy Generation ESS Job Description: Flatten Classification Hierarchy Rows and Columns.
Common dimension Customer Hierarchy	Party Hierarchy Generation	Customer Hierarchy ESS Jobs are not submitted automatically but most of the time user are not required submit these ESS jobs manually. Customer Hierarchy is flattened automatically when they are created or modified and the ESS job is available for cases when there are issues with the flattened data. FSM Task Name: Run Trading Community Party Hierarchy Generation ESS Job Name: Party Hierarchy Generation ESS Job Description: Flatten Party Hierarchy Rows and Columns.

Subject Area / Dimension	Process Name	Details
Common dimension (Sales Geography Zone) Sales Zone Hierarchy	Flatten HZ_GEO_HIERARCHY_CF Columns	Resource and geography jobs are submitted automatically, are not BI specific, and users are not required to submit any jobs manually.
Common dimension Resource Hierarchy	Reporting Hierarchy Generation	Generates the resource reporting hierarchy for a given sales or marketing organization hierarchy. Updates the reporting hierarchy when changes occur in the organization hierarchy. Resource jobs are submitted automatically, are not BI specific, and users are not required to submit any jobs manually.
Sales -Forecasting Forecast Header	Refresh Forecast	Prepares Forecast Headers with the latest Territory, Product hierarchies, and also makes a copy of Revenues for the Forecast Header.
Sales - Forecasting Historical Forecast Facts	Generate Forecast Metrics	Generates pre-computed metrics into the Metrics table. This data is used in the Historical Forecast Subject Area.
Sales -Forecasting Historical Forecast Facts	Compress Forecast Metrics	Updates transactional deltas in the Transactional Metrics table into the Metrics table. The combination of Metrics table and Transactional Metrics table provide real time metrics for Active Forecasts. This data is used in the Historical Forecast Subject Area to display real time metrics for Active Forecasts.
Sales - Historical Pipeline Historical Revenue Facts	Generate Sales Historical Snapshots	Captures a daily snapshot of opportunity and revenue data.
User System Usage Sales - CRM Resource System Usage Fact - CRM - Resource Session Activity	Refresh BI Reports Audit Data for User Adoption Reporting	Summarizes and aggregates data used for user adoption reporting. Profile option FND_TRACK_USER_ACTIVITY must be set to "ENABLED". This process has 2 parameters: • Full load (Y/N) • Purge after (months)
Sales - CRM Object Activity Fact - Object Activity	Refresh BI Reports Audit Data for User Adoption Reporting	Summarizes and aggregates data used for user adoption reporting.

Related Topics

- Statuses of Scheduled Processes

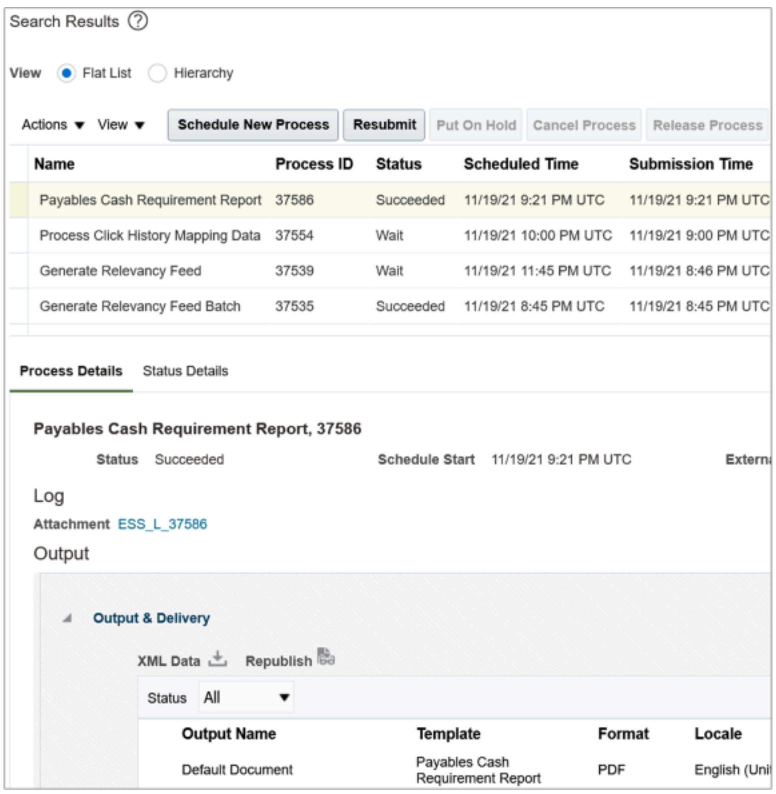
View Status and Other Details for Scheduled Processes

After you submit a scheduled process, you can track its progress. Processes can finish running in seconds, or a few minutes, or even longer.

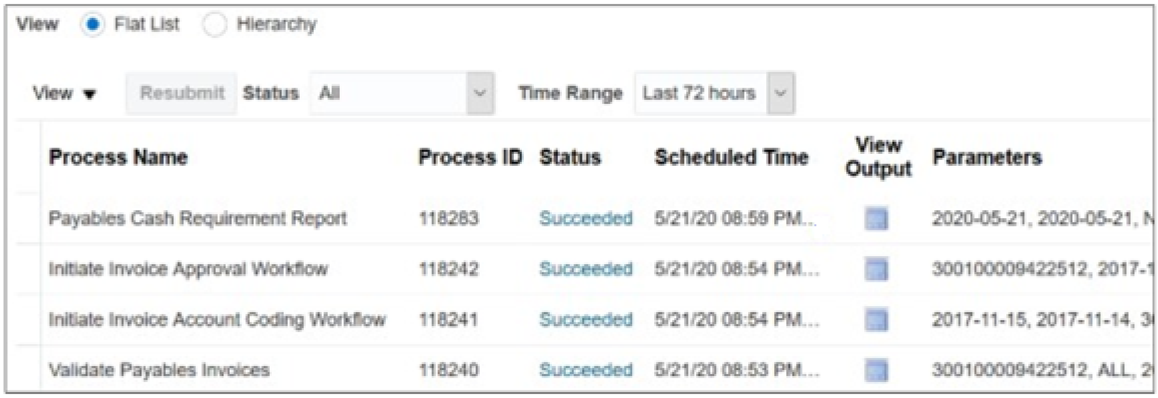
If something interrupts a process while it's running, for example a server restarting, then the process automatically picks up where it left off. If you need to see all processes, not just the ones you submitted, ask your security administrator to assign you a custom role that has the ESS Monitor Role (ESSMonitor) or ESS Operator Role (ESSOperator).

Here's where you can find processes that were submitted:

- Scheduled Processes work area



- Other work areas with a section for scheduled processes, if available.



Process Name	Process ID	Status	Scheduled Time	View Output	Parameters
Payables Cash Requirement Report	118283	Succeeded	5/21/20 08:59 PM...		2020-05-21, 2020-05-21, N
Initiate Invoice Approval Workflow	118242	Succeeded	5/21/20 08:54 PM...		300100009422512, 2017-1
Initiate Invoice Account Coding Workflow	118241	Succeeded	5/21/20 08:54 PM...		2017-11-15, 2017-11-14, 3
Validate Payables Invoices	118240	Succeeded	5/21/20 08:53 PM...		300100009422512, ALL, 2

Check the Status in the Scheduled Processes Work Area

Here's how you find your scheduled process and see how it's doing.

1. Click **Navigator** > **Tools** > **Scheduled Processes**.

   The Search Results table shows processes that were submitted in the last hour because the default saved search is **Last hour**. The table might be blank if nothing was submitted in the last hour.
2. If you don't see the process, click the **Refresh** icon or run a search. For the search, enter your own criteria or select another saved search. Here are a few examples of saved searches you can use:

   - Last 24 hours
   - Last 72 hours
   - Cancelable Processes

   Tip: In the search results, select **Hierarchy** for the **View** option to see, for example, the structure of nested processes or process sets within a process set. For processes running on a recurring schedule, the parent node is the original submission, the child nodes each run in the schedule.If submission notes were entered when submitting the process, you can use the **Submission Notes** column to help identify the process.

3. Refresh the search results at any time to see the latest status of the process in the **Status** column. You can also check the **Start Time** column to see if the process has started running yet.

   Note: Times such as start time and scheduled time are shown in the time zone you set in your preferences. If you change your preferences, you can see the change in the Scheduled Processes work area next time you sign in.

4. To get more details about the status, select your process in the Search Results table and open the Status Details tab. Here's some of the information you might find:
    - Status description, which explains what the current status means.
    - The position of the process with the Ready status, in the sequence of submitted processes. For example, if your process is queued up for submission at position 5, there are four processes that need to start running before your process starts.
    - Duration of a process, based on its current status.
        - How long process has been blocked: If a process is blocked, you can see how long it has been in the blocked status. For blocked processes, you can also expand the Incompatibility section to get information about which incompatible processes are preventing yours from running.
        - How long process has been running: If a process is running or completed, you can see how long it has been in the running status. If your process is in progress, and it's blocking other processes, you can also see IDs of those processes, which can't run until yours is done.
        - How long process took to complete: If a process is completed, you can see how long it took to complete with Error, Finished, Warning, or Succeeded status.
    - On the Status Details tab, you can also expand the Status of Items to Process section, if available.

      Here are a few things to know about the Status of Items to Process section:
        - This section isn't available for process sets. But, it's available for individual processes, including those within process sets, that are in these statuses:
            - Running
            - Completed
            - Succeeded
            - Error
            - Error Auto-Retry
            - Error Manual Recovery
            - Canceled
            - Canceling
            - Warning
            - Hold
            - Paused
        - If a specific process is predefined to show progress information through graphs, you can see that information in one or more graphs. For example, a process importing lines from a file might show a graph called Lines. You hover over parts of the graph to see how many lines are successfully imported, how many ended up in error, and how many are still pending. A process can have multiple graphs, depending on what it's working on.
5. With your process still selected in the Search Results table, optionally click the **View Log** button (if available), especially if information isn't available in the Status of Items to Process section. The type of information in the log varies, depending on the process. You can open the log from here only if the process is currently running. When the process is done, you might want to also take a look at the final log, if any, from the Process Details tab.

View Other Details in the Scheduled Processes Work Area

To get more information about a scheduled process, select it in the Search Results table and see the Process Details tab that appears after the table. These are some of the details you might find:

- Completion text, which is automatically generated when the process reaches a final state. What you see depends on the process. For example, it might say that the process finished 1792 records in less than a second.
- The log attachment, for example for details about why the process ended in error.
- Report output that the process generated, if any.
- Parameters for the scheduled process.
  - Open the Parameter Names with Values subsection to see the parameters from the Process Details dialog box and the values that were entered when the process was submitted.
  - Use the All Parameter Values subsection for troubleshooting purposes, if you need to see the parameters and values in their actual, technical format. This subsection might have more parameters. For example, some processes run with additional parameter values that are derived from the parameter values you entered when you submitted the process.

Monitor Scheduled Processes in Other Work Areas

Some work areas have a section where you can monitor the scheduled processes that were already submitted.

1. Go to the section if it's available, usually on the landing page of the work area.
2. Click the **Refresh** icon if you don't see any processes or need to see the latest status.
   - If you still don't see the process you're looking for, try changing the filters. If that doesn't help, use the Scheduled Processes work area instead.
   - If submission notes were entered when submitting the process, you can use the **Submission Notes** column to help identify the process.
3. Do either of these things to check on the progress of the process:
   - For more details about the status, click the status link. For example, if a process is in the Ready status, you can click the **Ready** link in the **Status** column to see where the process is in the submission queue.
   - Check the **Start Time** column to see if the process has started running yet. If it has, you can click the link in the **View Log** column to get information about how the process is running.

Related Topics

- View Output from Scheduled Processes
- Cancel or Make Changes to Scheduled Processes
- Statuses of Scheduled Processes
- What do I get if I view scheduled processes in a hierarchy?
- Resubmit Scheduled Processes and Process Sets

View Output from Scheduled Processes

Other than processing records, some scheduled processes also give you output. When you submit the process, you can select the output layout and format, and set other output options.

In the Scheduled Processes work area, you can view the output and even republish it in a different format without resubmitting the process. You might be able to see the output from other work areas too.

When You're In the Scheduled Processes Work Area

Here's what you do:

1. Click **Navigator** > **Tools** > **Scheduled Processes**.
2. Find your scheduled process and, if you need to, refresh the search results to see the latest status.
3. Select the scheduled process.
4. Go to the Output subsection on the Process Details tab.
5. Click the link in the **Output Name** column to view or download the output, which you can then print.
6. To view or export the output in a different format, follow these steps:

    a. Click the **Republish** button.
    b. Click the **Actions** icon.
    c. Select **Export**, and then select a format.

    If you want the Data format, you can also just click the **XML Data** icon instead.

> **Note:** On the Process Details tab, if you don't see an Output subsection, look for a Log and Output subsection. The output might be there instead as an attachment. This is likely if the Output tab isn't available when you submitted the process in Advanced mode.

When You're In Other Work Areas

Some other work areas have a section, usually on the landing page of the work area, where you can monitor the scheduled processes that were already submitted. In the table there, find your process and click the **Output** icon in the **View Output** column.

Related Topics

- Submit Scheduled Processes and Process Sets

Cancel or Make Changes to Scheduled Processes

Life is full of second chances! After a scheduled process is submitted, you can still cancel it or make other changes in the Scheduled Processes work area.

What you can do to the process depends on its status. Also, depending on what you've access to, you can even work on processes that someone else submitted. If you need to cancel processes that someone else submitted, ask your security administrator to assign you a custom role that has the ESS Administrator Role (ESSAdmin).

Make Changes to Processes

Select the scheduled process in the Search Results table. Here are some things you might be able to do.

Changes you can Make to Processes

Task	Prerequisite	Procedure
Edit Schedule Change the submission schedule, for example, to submit it biweekly instead of weekly.	This option is there only if you select the row with the process ID you got when you submitted the process to run on a schedule. The row should be the parent node when you view the search results in a hierarchy, and the status should be **Wait**.	From the **Actions** menu, select **Edit Schedule**.
Edit Output Change output options of a process, for example, from HTML format to PDF.	You can do this only if the process generates output, and hasn't started running yet.	From the **Actions** menu, select **Edit Output**.
Put On Hold Pause the process.		Click the **Put On Hold** button.
Release Process Resume a process that's on hold so that it continues to run.		Click the **Release Process** button.
Change Process Priority Change the priority of a process to affect when it runs. When there are many submitted processes, those with a lower number, for example 2, would usually run before those with a higher number, for example 7.	You can do this only if your implementor has enabled priorities for scheduled processes, and you've a custom role that has the ESS Administrator Role (ESSAdmin). You can change priorities only for processes that have the **Blocked**, **Hold**, **Ready**, or **Wait** status.	Click the **Change Process Priority** button.

Note: Even if the process hasn't started, you can't change the parameter settings. You can cancel the process and submit again with the parameter values you want.

Cancel a Process

Select the scheduled process in the Search Results table, and click **Cancel Process**.

Cancel a Process Running on a Schedule

If you submitted a process to run on a schedule, for example once a day, you can cancel the scheduled runs even if some of the runs already happened.

1. Find the original submission, the row with the process ID you got when you submitted the process. The row should be the parent node when you view the search results in a hierarchy, and the status should be **Wait**.
2. Click **Cancel Process**.

   When you cancel this original submission, you cancel any current and future runs based on the schedule you had set.

What to Do If Processes Take a Long Time to Cancel

Sometimes it takes a while for a process to finish canceling. So, you can use the **Actions** menu to end it. The option you get depends on the process.

Options and Descriptions

Option	Description
Hard Cancel	To end the process shortly after you canceled it, without waiting for the cancellation to finish by itself.
Force Cancel	To end a process that has been canceling for over 30 minutes but isn't done yet.

Processes on Remote Servers

Some processes run on a remote server. Even if the status for the process that you hard or force canceled has changed to **Canceled**, the process might still be running on the remote server. With the scheduled process still selected in the Search Results table, you check the status of the remote process on the **Process Details** tab that appears after the table.

Option You Used to End Your Process	Field that Shows the Status of the Remote Process	Status of Process on Remote Server
Force Cancel	**Remote Process Status**	• **Completed Successfully**: The remote process was successfully canceled within the 30 minute grace period. • **Running/Unknown**: Your scheduled process is in a Canceled state, but the remote process is still running. • **Terminated**: Your scheduled process is in a Canceled state, and the remote process is successfully canceled after the 30 minute grace period.
Hard Cancel	**External Job Status**	• **Completed Successfully**: The remote process has successfully canceled. • **Running/Unknown**: Your scheduled process is in a Canceled state, but the remote process is still running.

Cancel Processes in Bulk

You can cancel up to 100 processes at once, as long as the processes haven't reached a final state.

1. Click **Navigator** > **Tools** > **Scheduled Processes**.
2. In the Search section, select **Cancelable Processes** from the **Saved Search** list.
3. Make sure that what you get in the Search Results table meets these requirements:

- No more than 100 processes
- Only processes with a cancelable status:
  - Wait
  - Ready
  - Running
  - Completed
  - Blocked
  - Hold
  - Paused
  - Pending Validation
  - Schedule Ended
  - Error Auto-Retry

4. Use the Search section to change your search results, if you need to.
5. Select **Cancel Processes in Bulk** from the **Actions** menu.

Related Topics

- View Status and Other Details for Scheduled Processes
- Allow Updates to Scheduled Process Priority

Submit Scheduled Processes and Process Sets

Watch video

Use the Scheduled Processes work area to run all the scheduled processes that you've access to, including process sets. You can also submit many processes from other work areas.

Some processes that give you output are also reports that you can view from the Reports and Analytics work area or panel tab. You can find that panel tab in some work areas. It's quick to submit a scheduled process with the bare minimum steps. But there are many additional options you can set, for example, if you want to run the process on a schedule.

Select the Scheduled Process and Define Parameters

Here's what you do:

1. Click **Navigator** > **Tools** > **Scheduled Processes**.
2. On the Scheduled Processes Overview page, click **Schedule New Process**.
3. Leave the type as **Job**, select the process that you want to submit, and click **OK**.
4. In the **Process Details** dialog box, enter at least the required parameters, if any.
   - Some processes have no parameters at all.
   - Some parameters depend on other parameters. For example, date range parameters might appear only after you select **By Date** for another parameter.

5. Click the Advanced button if you want to define the schedule, notifications, or output. Continue to the next steps. Or, just skip to the steps for finishing the submission, to run the process once as soon as possible with the default output.

Define the Schedule

Set up a schedule to run the process on a recurring basis or at a specific time. Use the Process Details dialog box in Advanced mode.

1. Open the Schedule tab and select **Using a schedule** for the **Run** option.
2. Select a frequency, for example **Daily** or **Monthly**.
   - Select **User-Defined** if you want to enter the exact dates and times to run the process.
   - You can select **Use a Saved Schedule** to use an existing schedule, if there are any.
3. Depending on the frequency you selected, define when the process should run.

Some processes can't be run more often than a certain frequency, for example more than every 10 minutes. But there are some situations where that validation doesn't apply, for example, when different users run that same process less than 10 minutes apart. Or, if you use a saved schedule that has an individual run in addition to the regular frequency, for example a schedule that runs every 10 minutes and once at five minutes after the first run.

Define the Output

You can choose the layout, format, and destination for your output. Use the Process Details dialog box in Advanced mode.

1. Open the Output tab, if available.
2. Click **Add Output Document**.
3. Change the name if you want. The name identifies this output document when you go to view output later.
4. Select a layout if you've more than one to choose from.
5. Select a format, for example one of these options:
   - **PDF:** Is the best option if you want to print the output.
   - **Excel:** Supports embedded images, such as charts and logos, but can be opened only in Excel 2003 or higher.
   - **Data:** Gives you report data in an XML file, which is used mainly for editing the report layout.
6. Click **Add Destination** to send the output somewhere, for example to a printer or email address. You can add many destinations and send the output to all of them at the same time.

   > **Tip:** You can also print the output as part of the steps for finishing the submission, instead of adding a printer destination here.

7. To add more output documents, repeat steps 2 to 6.

Set Up Notifications

You can have notifications sent out depending on how the process ends. Use the Process Details dialog box in Advanced mode to set that up. These notifications are in English and they show times in UTC, no matter what language and time zone the recipient has in their preferences.

1. Open the Notification tab.
2. Click **Create Notification**.
3. From the **Address Type** list, select whether you want to identify the recipient by their email address or user ID.

4. In the **Recipient** field, enter either the email address or user ID of the person you want to send the notification to.
5. In the **Condition** list, select when to send the notification, for example when the process ends in error.
6. Click **OK**.
7. To send notifications to more people, repeat steps 2 to 6.

Finish the Submission

Follow these steps in the Process Details dialog box:

1. Click the **Process Options** button if you want to define settings that affect the data to be processed.
2. If the process gives you output and you want to print it, select the **Print output** check box and a printer.
3. Select the **Notify me when this process ends** check box if you want to get a notification. This notification is in English and shows times in UTC, no matter what language and time zone you have in your preferences.
4. Enter submission notes to capture any information you want to associate with this submission. You can use your notes to find this submission later.
5. Click **Submit**.
6. Click **OK** to confirm.

> **Tip:** Note down the process ID for your submission if you might need to easily find it later. For example, let's say you set the process to run once a week. If you later want to cancel all runs on this schedule, you need to cancel this original submission with the process ID you see.

Submit Process Sets

To submit a process set from the Scheduled Processes Overview page:

1. Proceed with the steps that you would follow to submit any scheduled process, but select **Job Set** for the **Type** option.
2. In the Process details dialog box, set parameters for individual processes in the set. A process set itself doesn't have parameters.
   a. Select a process on the Processes tab.
   b. Enter parameters for that process, if any.
   c. Repeat for other processes in the set.
3. Define the schedule, output, and notifications for the process set, as you would do for any scheduled process.
4. Set any other options and click **Submit**.

Whether you use the Notifications tab or the **Notify me when this process ends** check box, or both, notifications are sent when the entire process set ends, not when each process within the set ends.

Related Topics

- View Status and Other Details for Scheduled Processes
- Examples of Process Options
- Example of Process Details for a Process Set
- View Analytics, Reports, and Dashboards

Create Job Definitions to Run Reports as Scheduled Processes

Every job definition has a job type that reflects the executable for the job, such as Java or Oracle Analytics Publisher reports. You can only create job definitions that are based on Analytics Publisher reports.

When there's a job definition for an Analytics Publisher report, users can run the report as a scheduled process in the Scheduled Processes work area. Otherwise, they can open reports (which are set up to be run online) elsewhere, for example in the Reports and Analytics work area.

> **CAUTION:** Make sure your user name doesn't contain any spaces. If you create a custom job definition using a user name that contains spaces, other users might get errors when they submit this custom job definition.

Create Job Definitions

Here's how you create a job definition for an Analytics Publisher report:

1. In the Setup and Maintenance work area, go to the **Manage Enterprise Scheduler Job Definitions and Job Sets** task in the Application Extensions functional area. Or, depending on your offering, you might use a different functional area.

   > **Note:** If you don't see the task, make sure that the Enterprise Scheduler Job Definitions and Job Sets feature is enabled at the offering level.

2. On the Manage Enterprise Scheduler Job Definitions and Job Sets page, click the Manage Job Definitions tab.
3. Click the **Create** icon.
4. Fill in the Job Definition section.

Field or Check Box	What You Do
Display Name	Enter the name that users see and select to submit the scheduled process.
Name	Enter a name with only alphanumeric characters, for example, `AtkEssPrograms1`. It can't have spaces or any special characters.
Job Application Name	Select the application to associate the job definition with. What you select depends on the task you're using. ◦ Manage Enterprise Scheduler Job Definitions and Job Sets for Customer Relationship Management and Related Applications: Select **CrmEss**. ◦ Manage Enterprise Scheduler Job Definitions and Job Sets for Financial, Supply Chain Management, and Related Applications: Select **FscmEss**. ◦ Manage Enterprise Scheduler Job Definitions and Job Sets for Human Capital Management and Related Applications task: Select **EarHcmEss**.

Field or Check Box	What You Do
Enable submission from Enterprise Manager	Make sure you don't select this check box.
Job Type	Select **BIPJobType**. Don't select any other type.
Default Output Format	Select the output format users get by default when they submit the scheduled process.
Report ID	Enter the path to the report in the BI catalog, starting with the folder within Shared Folders, for example: `Custom/<Family Name>/<Product Name>/<Report File Name>.xdo`. Make sure to include the `.xdo` file extension for the report definition.
Enable submission from Scheduled Processes	Leave the check box selected.

5. In the Parameters subtab, you can define parameters that are available to users when they submit the scheduled process based on your job definition.
6. In the User Properties subtab, don't create or edit a user property unless you have the accurate information that's required to create or edit one. The `EXT_PortletContainerWebModule` user property is automatically created.
7. Click **Save and Close**.

When you create a job definition, a privilege with the same name as the job definition is automatically created with a Run prefix. For example, for a job definition named MyProcess1, with display name My Process, the privilege code is RUN_MYPROCESS1, with Run My Process as the name. Make sure to use the Security Console to assign this privilege to roles so that users who need to run the process can do so.

Related Topics

- Define Parameters for Job Definitions
- How do I update existing setup data?
- Configure Offerings
- Manage List of Values Sources
- Edit Job Definitions

Define Parameters for Job Definitions

A parameter controls which records are included or how they are affected when a job runs. Job definitions can have one or more parameters or none at all.

You define parameters while creating or editing job definitions using the Manage Enterprise Scheduler Job Definitions and Job Sets page. In the Setup and Maintenance work area, use the following:

- Functional Area: Application Extensions or a product-specific functional area

- Task: Manage Enterprise Scheduler Job Definitions and Job Sets

When users run the scheduled process for job definitions of type BIPJobType, the values they enter for the parameters determine the data to be included in the report. Also, the values are passed to the data model that the report is using.

The parameters that you define must be in the same order as parameters in the data model for the report. For example, the data model has parameters in this order:

- `P_START_DATE`
- `P_END_DATE`
- `P_CURRENCY`

You create parameters as follows:

- Start Date
- End Date
- Currency

Defining Parameters: Job Definitions

To define parameters while creating or editing job definitions:

1. On the Manage Job Definitions page, open the Parameters sub tab.
2. Click **Create**.
3. Enter the parameter prompt that users see when they submit the scheduled process.
4. Select a data type and configure how the parameter and the data entered are displayed, as described in this table.

Data Type	Fields
Boolean	Select this if you want the parameter to be a check box. Select **True** or **False** to determine if the check box is selected or not.
Date or time	Select **Date and time** or **Date only** option. Select a value from the **Default Date Format**. **Note:** Make sure the format you select here is the same as the format used for the job. If the job definition type is BIPJobType, select **yyyy-MM-dd**, and make sure the data model for the corresponding Oracle Analytics Publisher report is using the same date format.
Number	Select a **Number Format**. Select **Left** or **Right** for data alignment.
String	Select a **Page Element**. Select **Text box** if you want the user to provide a text.

Data Type	Fields
	Select **Choice list** if you want a list with limited options (maximum 10). If there are more than 500 values, users will get an error when they try to set the parameter as part of submitting the scheduled process. Select **List of values** if you want a list with unlimited options with a search facility.

5. Select the **Read Only** check box if you don't want to enable users to set this parameter. When a parameter is set as read only, the user is required to provide a default value to be passed to the job definition.
6. If you select list of values or choice list page element, select a **List of Values Source** and an **Attribute**. Use the list of values sources from the Manage List of Values Sources tab. Don't define lists of values in the data model that the report is using.
7. From the list of available attributes, select the attributes you want to appear in the list and move them to the selected attributes section. These attributes determine the values that the user can see.
8. Define a **Default Value** for the parameter.
9. In the **Tooltip Text** field, provide additional information for the user to follow.
10. Select the **Required** check box if users must set this parameter to submit the scheduled process.
11. Select the **Do not Display** check box if users should not see this parameter while submitting the process.
12. Click **Save and Create Another** or **Save and Close**.

Dependent Parameters

The attributes of some parameters depend on the attributes or values of certain other parameters. The attributes of a parameter would change if the value of its dependent parameter changes.

For example, you have three parameters, namely Country, State and, City. In this case, the value of the Country parameter would determine the values available in the State parameter. The values in the State parameter would determine the values available in the City parameter.

Related Topics

- Create Job Definitions to Run Reports as Scheduled Processes
- Define Dependent Parameters in Job Definitions

6 Application Adoption Reporting

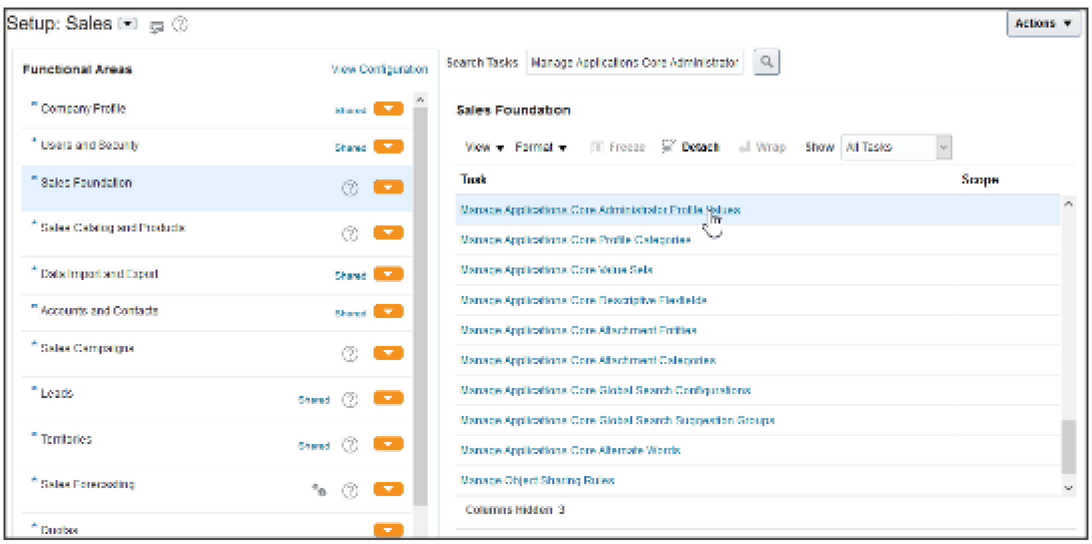
Set Up Adoption Tracking

To get started reporting on adoption you first need to do a few setup steps.

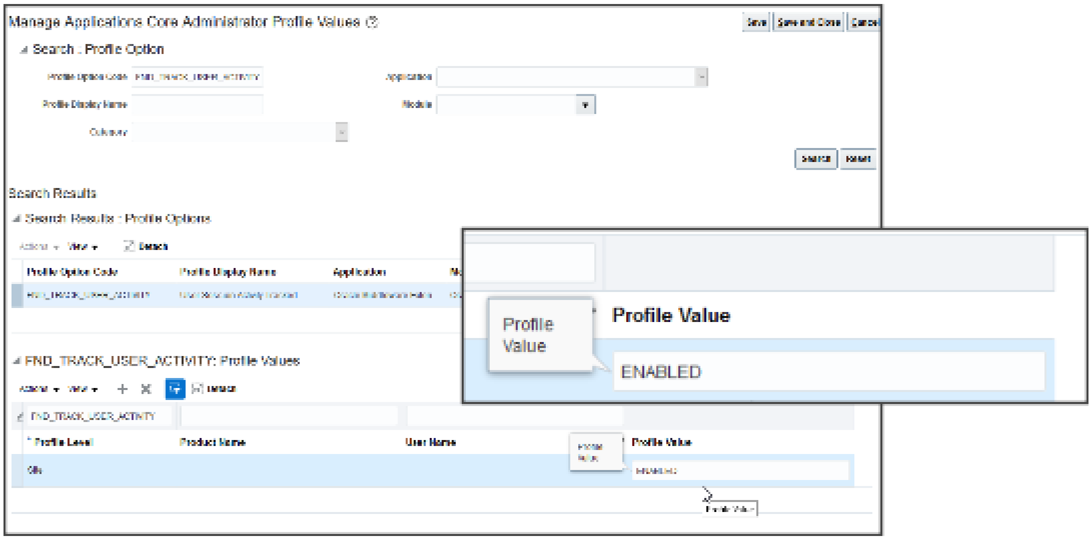
- Enable adoption tracking for the application.
- Add the user to the role of FBI_USER_SYSTEM_USAGE_TRANSACTION_ANALYSIS_DUTY .

Enable Adoption Tracking

1. Go to Setup and Maintenance.
2. Choose Setup: Sales.
3. Search for and select **Manage Applications Core Administrator Profile Values**.



4. Search for profile option code **FND_TRACK_USER_ACTIVITY** and ensure that it is enabled. If the value doesn't say enabled type in "ENABLED" and save.



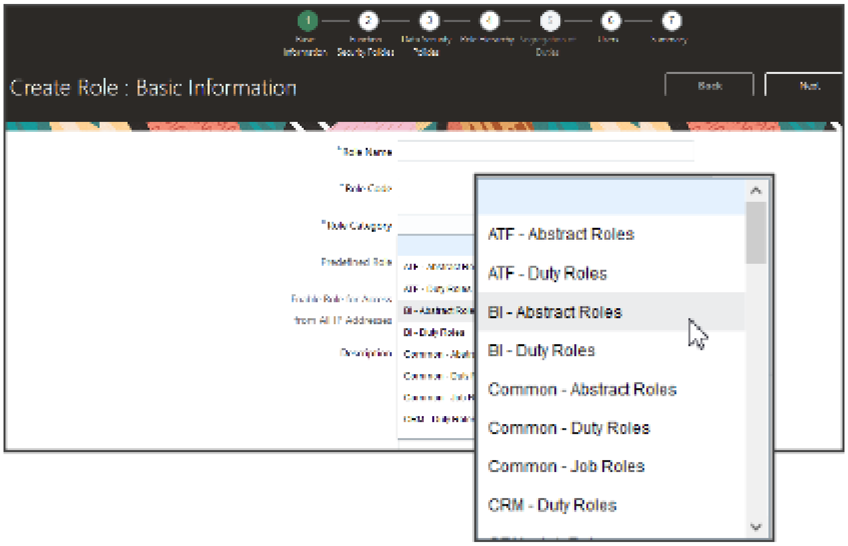
5. After setting the profile option run or schedule the ESS process "Refresh BI Reports Audit Data for User Adoption Reporting". This scheduled process summarizes and aggregates data used for user adoption reporting. To run this process you must have set the profile option FND_TRACK_USER_ACTIVITY to "ENABLED" in the previous steps..

Get the Duty Role

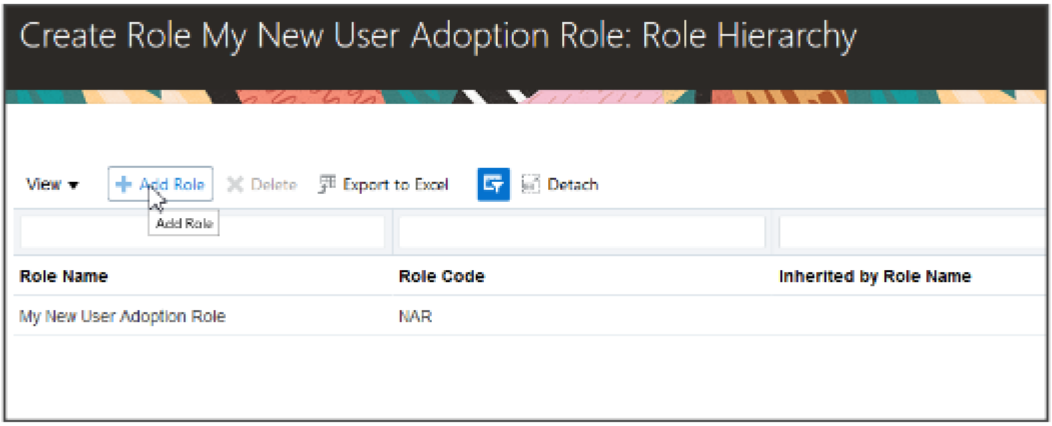
The User System Usage subject area holds all the activity information for users of the application. This subject area is secured and can be accessed by users who have the role FBI_USER_SYSTEM_USAGE_TRANSACTION_ANALYSIS_DUTY or by users who have the BI Administrator role.

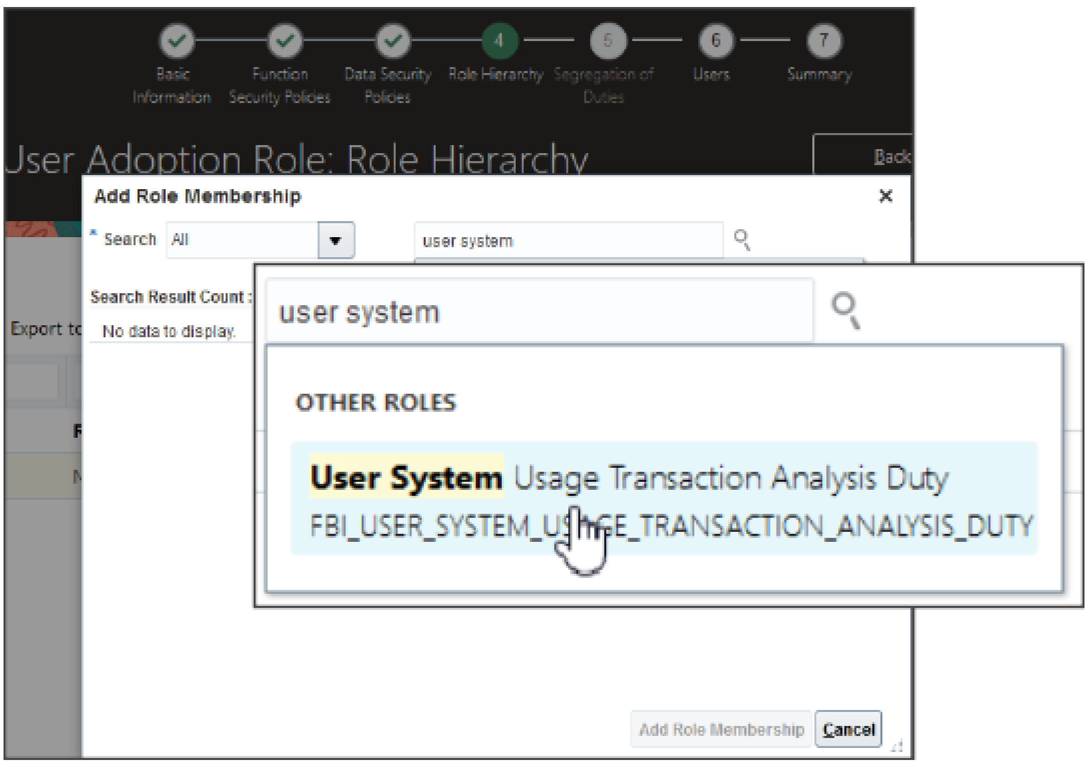
1. Sign in as a Security Manager. For example, IT_SECURITY_MANAGER.
2. Click **Tools** > **Security Console**.
3. Select **Roles**.
4. Click **Create Role**.

5. Fill in the required information. For Role Category choose **BI - Abstract Roles**

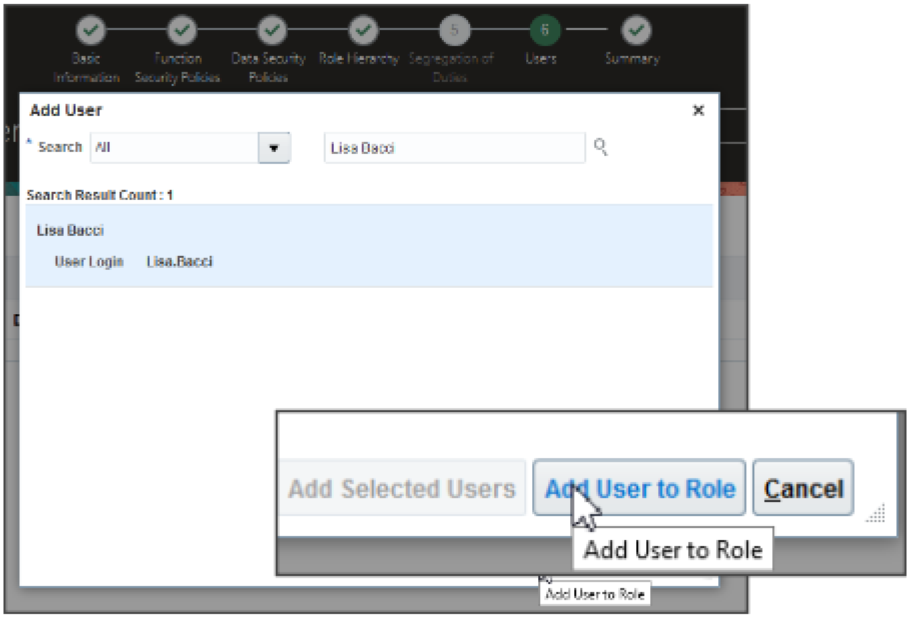


6. Click **Next** until you come to the Role Hierarchy page. Click **Add Role**. Search "user system". Choose User System User Transaction Analysis Duty - FBI_USER_SYSTEM_USAGE_TRANSACTION_ANALYSIS_DUTY. Click **Add Role Membership**.





7. Click **Next** to Users. Click **Add User**. Search for the user name and click **Add User to Role**.



8. Click **Next** to go to the Summary. Your new user should be listed there as assigned to your new role. Click **Save and Close**.

Configurations for User Adoption Reporting with OTBI

This table provides a list of the ESS jobs used to manage and refresh the data for User Adoption subject areas.

ESS Scheduled Process Name	Details
Refresh BI Reports Audit Data for User Adoption Reporting	This process populates data for the Resource System Usage and Object Activity subject areas. The process accepts 2 parameters: • **Full Load (Y/ N)**: Set to N to incrementally capture the audit data. This setting ensures better performance and prevents the deletion of all of the historical audit data you collect. A setting of Y deletes all of your historical audit data regardless of the number of months you enter in the **Purge after (Months)** parameter. • **Purge after (Months)**: Enter the number of months you want to retain the audit data. Entering 12, for example, causes the purging of audit data you collected that's older than 12 months. You always retain the latest 12 months worth of data. If you're starting to capture data today, the audit will start purging a month's worth of data after at the end of the 13 month. This job requires that the user have the privilege of ACM_RUN_CRM_ANALYTICS_REFRESH_JOB_PRIV The profile option FND_TRACK_USER_ACTIVITY needs to be set to "ENABLED" to run.

This shows the privileges, profile options, and roles that a user needs to manage and run the data that is used for the User Adoption subject areas. *Set Profile Option Values*

Privilege / Profile Option / Role	Details
Run CRM Analytics Audit Table Refresh Job	ACM_RUN_CRM_ANALYTICS_REFRESH_AUDIT_TABLE_JOB_PRIV This privilege permits you to run the "Refresh BI Reports Audit Data for User Adoption Reporting" ESS job.
User Session Activity Tracked	FND_TRACK_USER_ACTIVITY This profile option allows the site to run "Refresh BI Reports Audit Data for User Adoption Reporting" ESS job Enable tracking user activity at the session level.
BI User System SA Access	FBI_USER_SYSTEM_USAGE_TRANSACTION_ANALYSIS_DUTY This role lets you view and report with the User Adoption subject areas.

Related Topics

- Set Up Adoption Tracking
- Set Profile Option Values

Subject Areas for Adoption Reporting

Reporting on CX sales application usage gives you analytic data to evaluate user adoption.

There are prebuilt reports that you can use as a starting point for user adoption. Use these as a template and modify them to suite your business needs. Download the User Adoption catalog from the *User Adoption – Object Activity and Resource System Usage* page on Customer Connect.

Here are some of the business benefits of user adoption analytics:

- See the relationship between being signed into the application and interaction with objects.
- Leverage usage patterns and behaviors from successful users as best practice guidelines for other users.
- Gain insight on usage and trends for potential future investment opportunities.
- Identify improvements that can increase adoption and usage.

> **Note:** Adoption reporting applies to CX sales and B2B service and does not apply to the BI application in terms of reporting.

Adoption Subject Areas

There are five subject areas to use when you build application tracking analytics.

- **Sales - CRM Resource System Usage**: This subject area supports reporting on the interaction with the application by the user.

- **Sales - CRM Object Activity**: This subject area supports reporting on object activity metrics such as number of records created and number of records updated.
- **User System Usage**: This subject area supports reporting on whether a user was active or not for a particular day, and what channel they used, and when they were active.

Resource System Usage

Resource system usage reporting makes it possible for you to analyze many different aspects of user interaction with your application such as:

- Adoption and usage from different channels over a period of time.
- User log-ins, sessions, and active days by channel, such as web, mobile, mail.

Here are some of the details on usage tracking values:

- An important metric used in this subject areas is **# of Active Days**.
- An Active Day is a day in which a user logged into CX Sales. It is not a count of log-ins by a user on a day: if a user logs in once or more, it is considered an Active Day for that user. # of Active Days is helpful metric for understanding usage trends.
- The day value is based on the server time zone.
- Sessions can be reported for the web and mobile channels.
- Tracking differentiates between user activities made directly by the user, or through a proxy user.
- Two additional Metrics are used in these subject areas, they are # of Active Users/Resource and # of Users/ Resource.

Object Activity

The primary metrics used for object activity subject area is **Insert Action Count** and **Update Action Count**. These metrics provide information on the number of records added, and the number of records updated. In addition this subject area now supports reporting on object activity for the latest CX Sales mobile and Microsoft 365 applications.

Here is the information you can analyze using the object activity subject area:

- Track the type of object that was updated.
- Name of the employee who did the update.
- Manager of the employee that did the update.
- Number of records that were added.
- Number of records that were updated.
- Date the record update was made.
- Month the update report is produced.

Reporting Guidelines

Setting up the time parameters for user adoption reporting can be tricky. For best results follow these guidelines:

- To be sure the analytics you created in R12 work after you upgrade to 18A+, you should apply the **# of Active Days > 0** filter.

- Add a filter for a specific year. The Resource User System Usage subject area shows usage for all Time Periods and Users/Resources. This reporting method tracks when the user is actively using the application and the months where there were no activities/system usage. For this reason you should define specific time filters. Without time filters, the report shows results for the complete 100 years Time dimension.
- Avoid reporting by date. Instead use Month or Quarter.
- Filter by group of users, instead of individual users.
- Apply a filter on the # of Active Days fact > than 0 to ensure the analytic shows positive reporting values.

Related Topics

Adoption and Object Reporting Metrics

Application adoption, usage, and object metrics help CX sales stakeholders continuously measure the success of their CX Sales implementation. You get metrics on how often users login, as well as what tools they use in the application.

Login Sessions, and Active Days

Reporting on user (resource) login sessions, and active days is done using the **Sales - CRM Resource System Usage** subject area. Analytics build with the subject area provide information on how much your users are using your application and the channels used to access the application. With the reporting you can get insights on:

- Top active users across teams, job roles, and channels, over a period of time.
- Login count and session duration across different channels.
- Which users are inactive, or rarely using the application.

Note: The Sales - CRM Resource System Usage subject area provides similar reporting for User objects. The Sales - CRM Resource System Usage subject area provides reporting for User and Resource objects, in addition to enterprise time.

Object Activity

Object activity reporting is done using the **Sales - CRM Object Activity** subject area.

Analytics built with this subject area provide information on what objects are used the most or used the least. Object activity reporting lets you track when users create or update records or "objects". With this reporting you can get insights on:

- Usage of object types by user.
- Most and least used objects.
- Number of objects updated and created by object type, over a period of time. The subject area supports all parent objects, including Opportunity, Leads, Accounts, Activities, and Contacts.
- Object usage across channels. In release 20B, the subject area was updated to support reporting across Email and Mobile channels. Five additional measures were added to help and understand object activity patterns across channels: Insert Count via Mobile, Insert Count via Email, Insert Count via Web, Update Count via Mobile, and Update Count via Email.

Object Reporting Considerations

When you are using the subject area **Sales - CRM Object Activity** you should consider the following:

- Object creates (inserts) are supported across all three channels (Web, Email, and Mobile).
- Object updates are supported for the Email and Mobile channels.
- Object updates are not yet supported for the Web channel. For the Web channel, the application records the latest time an object is updated; it does not record the total number of times it was updated. For example, if an object is updated 5 times in one day, only the latest update is available for reporting.

Adoption Reporting Dashboards

User adoption analytics can be added to dashboards to create different views of user activity and usage. The analytics shown here are a simple implementation of the User Adoption subject areas.

There are prebuilt reports that you can use as a starting point for user adoption. Use these as a template and modify them to suite your business needs. Download the User Adoption catalog from the *User Adoption – Object Activity and Resource System Usage* page on Customer Connect.

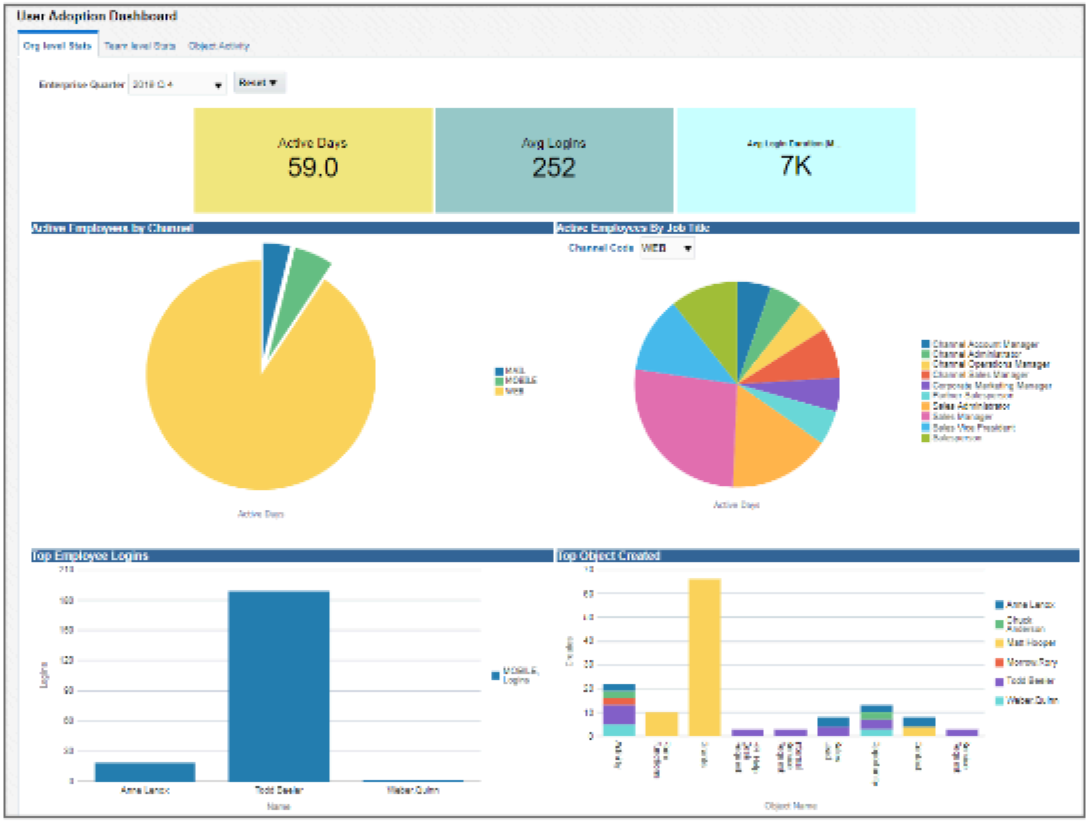
- User login - Uses subject area **Sales - CRM Resource System Usage**.
- Active and inactive user reporting - Uses subject area **Sales - CRM Resource System Usage**.
- Team level metrics - Uses subject area **Sales - CRM Object Activity**
- Object activity reporting - Uses subject area **Sales - CRM Object Activity**

User Login Dashboard

This dashboard shows analytics related to user activity. Detail is shown for:

- User login activity across different channels.
- User activity by job role.
- Most active users and the most used objects.

This is an example of a dashboard showing examples metrics derived from user login information.



Active and Inactive Users Dashboard

This dashboard shows how users are coming and going in the application as well as where they are coming from to get there. Detail is shown for:

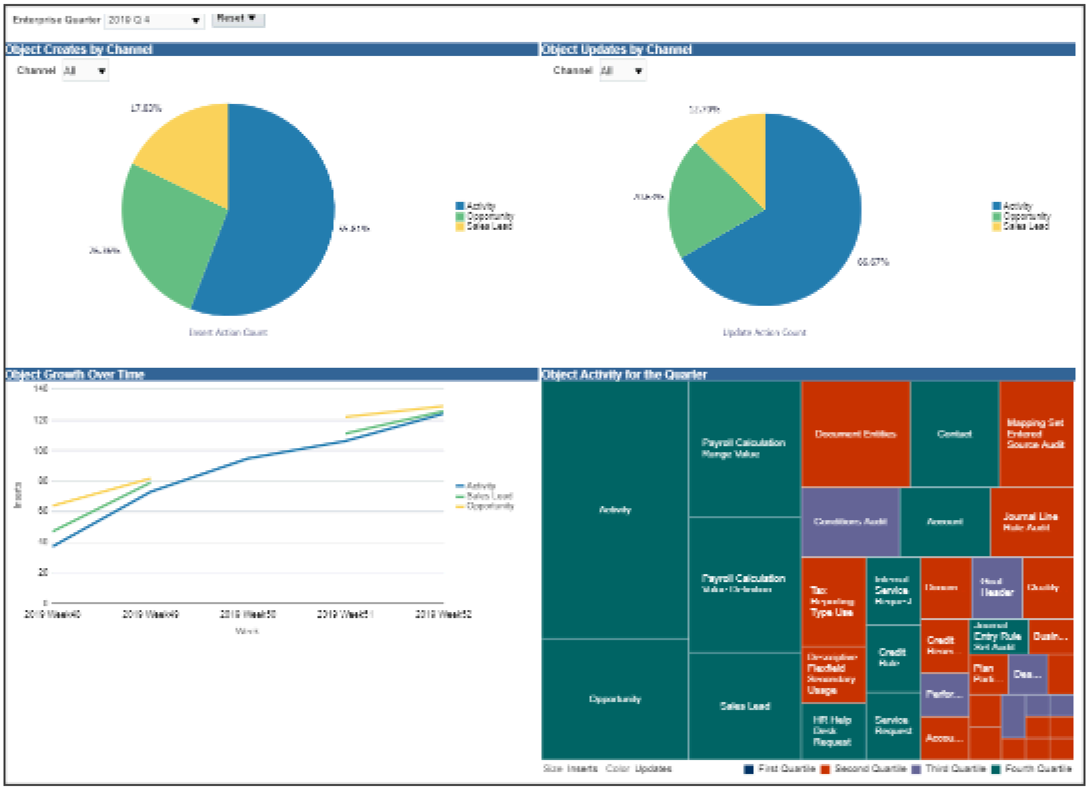
- User activity count over periods of Year, Quarter, Month , or Week.
- User activity across channels for periods of year, quarter, month , or week.

This is an example of a dashboard showing examples metrics derived from active and inactive login data.

Object Activity Dashboard

This dashboard shows what areas of the application your team is using. For example, when a record is created or updated and saved, such as an opportunity, the activity is reported. Detail is shown for:

- Activity by employees.
- Heavily used work areas.
- Work area usage based on channels and job roles.
- Negative reporting: Identify Employees / Teams that are least or not active.
- Negative reporting: Identify channel adoption rate across teams / employees.
- Team reporting: Identify areas / objects that the team uses more.
- Team reporting: Understand the Team's usage to help in identifying knowledge gaps.
- Team reporting: Get insights with emerging patterns in usage based on team's job role / channel of login, and objects used.



Deploy and Implement the Object Activity Dashboard

To get your object activity dashboard set up, you need to un-archive the "UserAdoption.catalog" files that hold all the individual reports, dashboard prompts, and the dashboard. Ensure that you un-archive the catalog under the **/shared/custom/** folder to retain the references from, the dashboard to the individual files. You may have to update or correct the references.

Implementation notes:

- The data fetched is for the selected Enterprise Quarter from the report prompt.
- The Subject areas is available from 19B onward.
- Schedule the ESS job **Refresh BI Reports Audit Data for User Adoption Reporting** to collect the audit data.

  The ESS job accepts 2 parameters:

  - **Full Load (Y/ N)**: Set to N to incrementally capture the audit data. This setting ensures better performance and prevents the deletion of all of the historical audit data you collect. A setting of Y deletes all of your historical audit data regardless of the number of months you enter in the **Purge after (Months)** parameter.
  - **Purge after (Months)**: Enter the number of months you want to retain the audit data. Entering 12, for example, causes the purging of audit data you collected that's older than 12 months. You always retain the latest 12 months worth of data. If you're starting to capture data today, the audit will start purging a month's worth of data after at the end of the 13 month.

Related Topics

FAQs for Application Adoption

This table provides answers to common questions regarding reporting on application adoption in your organization.

Question	Answer
If I select months = 600, will the data be retained for 50 years?	Yes, currently there is no limit. So whatever you select when scheduling the ESS job, the data is retained for that many months. If you pass 600 then 50 years data will be retained. This it ONLY valid after 19C. From 18A to 19B, you could only retrieve 12 months. If you are running the job for the first time, you won't be able to get the data from 50 years.
Why are there times when the "FND_ TRACK_USER_ACTIVITY" is Enabled at the site level, and the reports are still not showing the Facts measures?	You need to make sure the "FND_TRACK_USER_ACTIVITY" profile option is enabled as "ENABLED" meaning that it should be in all capital letters.
When is the user session counted as 1 and the record created in the ZCA_BI_USER_ Login_ACTIVITY table?	A record is created when a user signs in with their sign-in credentials. This session is valid for 30 minutes and if the user closes the browser and within 30 minutes creates a new session on the same browser, the application automatically redirects without asking for credentials, in which case this session is not counted as a second session, but only counted as one. The best way to check if the user is signed in or not is by checking the Active days. if the user had active days as 1 it means they logged in for that day.
Which table holds the record for when a user logs in?	If the user has provided their credentials and logged in to the FA URL the data is captured for the LOG IN_COUNT as 1 and LOG IN_DURATION as 30 mins if logged out after that. If the user has not logged in but there is any report scheduled agent run on behalf of the user / any approval flow / any REST P+ API flow runs on behalf of the user, LOG IN_COUNT is captured as 1 and LOG IN_DURATION is captured as 0. If the user has neither logged in nor any flow/tasks/agents run on his behalf, then the LOG IN count is not captured. If the user logs in directly to the BI URL not via FA (https://FAurl/analytics) then the LOG IN_COUNT is 0 and LOG IN_DURATION is 0. NOTE: Currently LOG IN is capture only for /fscmUI/faces/FuseWelcome or /crmUI/faces/ FuseWelcome of /hcmUI/faces/FuseWelcome NOTE: If a customer is logging into FA URL and a navigates to another application from that login, such as the HCM Application or thee CRM application, the application log-ins are not separately captured.
Is a record generated when a user receives an email, even they don't sign-in? (For example, when a purchase request approval request is received)	If the user signs in through Office 365, (clicking on the link in the mail and using the FA plugin) the sign-in is counted as 1 for the channel "Mail".

Question	Answer
What is # of inactive Days in User System Usage SA?	The User System Usage / Resource System Usage subject area supports negative reporting. This means that even if no user was active, instead of returning no rows (which is the usual behavior) all user rows are returned with # of active days 0. Since there is no filter on Time in the report, all the users and days are joined and returned. We advise that you have a filter on Time/User for reporting.
How do I create a report which shows the details of the users who have not signed into the application in Rel13 18B?	You can use User System Usage subject area for negative reporting. The # inactive days shows the days the user has not logged into the application.
What is the difference between the two subject areas "Sales - CRM Resource System Usage" and "User System Usage"?	User System Usage provides the key user adoption metrics at the application user level. Sales - CRM Resource Usage provides the mapping between the application user and the specific resource object.
Why don't my CX Mobile and Microsoft 365 mail applications usage not show in the adoption reports?	For mail (Microsoft 365) and mobile applications, if reports are run on a given day, data from that day will not show until a period of 24 hours has passed. Running the scheduled process 'Refresh BI Reports Audit Data for User Adoption Reporting' will not change this behavior.
What metrics are included in the User System Usage Active Day Facts?	• # of Active Users - Count of number of users who were active in the application • # of Active Days - Count of days for which users were active in the application. • # of Days - Total number of days for a given filter. • # of Inactive Days - Count of days for which user was not active in the application. • # of Logins - Number of times, a user logged in to the application. • # of Users - Total number of Active users in the application. • Total Session Duration - Total Time spent by the user in the application.

7 Prebuilt Analytics

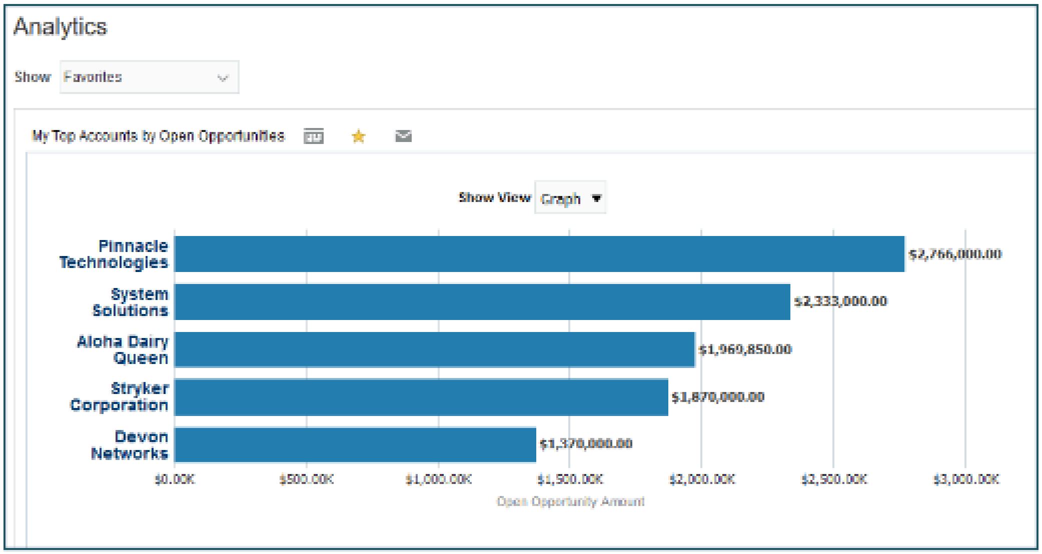
Analytics for User Roles

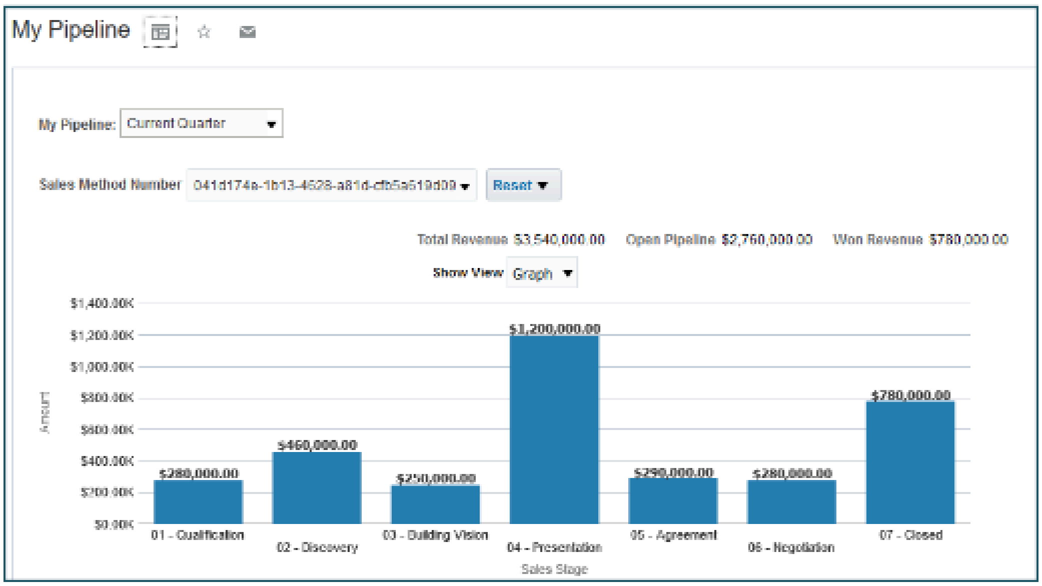
Prebuilt analytics let you get analytics out to your users right away. You can set up these analytics so that your sales or service user roles see their own data when they log in.

Here are some analytics for sales roles:

- Sales Representatives - performance, opportunities, pipeline, leads, and quota analytics
- Sales Managers - team analytics including activities, leads, performance, opportunities, quota, and performance
- Channel Account Managers - MDF Requests, deal registration, partner status, opportunities, pipeline, partner performance, and quota analytics
- Sales Executive - team leads and executive analytics including, actual vs. quota, forecast vs. quota, top open opportunities, sales stage by age, forecasting, performance, and service request
- Channel Sales Manager - MDF requests, open pipeline, stalled opportunities, partner business plan objectives, partner hierarchy analytics.
- Partner Sales Representative - stalled opportunities and top open opportunities analytics

Here are some analytics examples for specific user roles. These are for Sales Representatives to see their opportunities





and pipeline.

Here are some analytics for service roles:

- Customer Service Representative - personal performance, pending tasks, compliance, queues, action plans, work order analytics.
- Customer Service Manager - agent performance, compliance, interactions, queues, channels, action plans, work orders, email, social post analytics.
- Human Resource Help Desk Agent - personal performance, pending tasks, compliance, queue analytics.
- Human Resource Help Desk Manager - agent performance, compliance interaction, queues, email analytics.

Related Topics

- Listing of Prebuilt Analytics

Listing of Prebuilt Analytics

Your CX Sales applications come with a variety of different prebuilt analytics for your sales users. Use the prebuilt analytics right out of the box, or make a copy and modify them however you like.

Listing of prebuilt analytics

8 Create and Edit Analytics

Data Structure for Analytics

Oracle Business Intelligence repository contains the metadata that defines which columns (or piece of data) are available for you to include in analyses, and where data for each column originates. The repository is organized into subject areas, which contain folders with the columns.

> **Note:** You can also use the Oracle BI repository as a data source for reports.

Columns

This table describes the three types of columns.

Column Type	Description	Example	Icon for Column Type
Fact	Provides a measure of something, meaning that the values are numbers.	Total	Yellow ruler
Attribute	Represents a piece of information about a business object, with values that are dates, IDs, or text.	Start Date	Gray paper
Hierarchy	Holds data values that are organized in a hierarchical manner.	Time, with sublevels: • Year • Quarter • Month	**Column:** Hierarchy of blue squares **Sublevel:** Blue or white square

Subject Areas

When you create an analysis, you first select a subject area, which contains columns related to a specific business object or area. You then open folders within the subject area to find the columns to include in your analysis.

Folders

Each subject area has one fact folder and a number of dimension folders. Folders can have subfolders.

- **Fact folders:**
  - Contain fact columns.
  - Are usually at the bottom of the list of folders and are usually named after the subject area.

- **Dimension folders:**
  - Contain attribute and hierarchical columns.
  - Are joined to the fact folder within a subject area.

    For example, if your analysis has the Currency attribute from a dimension folder, you see currencies in the results. If you also add the Total fact, then your analysis includes only records with both a currency and a total amount. The more columns you add, the smaller the query set for your analysis.
  - Can be common folders or common dimensions that appear in more than one subject area.

    Note: If your analysis has columns from multiple subject areas, then you:
    - Include columns only from dimension folders that are common to all of those subject areas. At least one such column is mandatory.
    - Must include one column from the fact folder in each of those subject areas.

Create and Modify Analyses and Dashboards

You can edit and create your own OTBI analytics on your transactional data. The predefined analyses and dashboards help answer many of your business questions. But you can also create your own OTBI analyses and dashboards to meet your requirements.

Note: You can't use Direct Database Query in your analysis. Direct Database Query isn't supported in SaaS OTBI. To create a direct database SQL report, you can create a Analytics Publisher SQL data model and then create a report.

This table lists a few examples.

Task	Example
Create an analysis	Your team needs a simple list of all your accounts, sorted by account ID. You include the account name, ID, and address in a new analysis, and sort the ID column.
Create a view	A predefined analysis has a bar graph. You save a new version of the analysis with a table view added to the graph.
Create a view selector	You later decide you want to toggle between viewing a table and a graph. You add a view selector that includes the table and graph views.
Edit a dashboard prompt	A predefined dashboard has a Start Date prompt. You make a copy of the dashboard and replace Start Date with a date range prompt.
Create a dashboard	You create a dashboard that includes an analysis and a report, which you can view together. You also add a dashboard prompt to filter both the analysis and the report.

Tip: When you create or edit analyses, you can use a wizard in the Reports and Analytics work area and panel tab.

Flexfield Attributes

Administrators can modify the business intelligence (BI) repository to determine the columns available for you to use in analyses.

- They enable flexfields (which support attributes) for BI, and import them into the repository.
- After administrators import the flexfields, you can select the flexfield attributes to include in your analyses.

Related Topics

- Create and Edit Analyses Using a Wizard
- Create and Edit Dashboards
- How Data Is Structured for Analytics
- Overview of Flexfield Use in Analyses

Edit Prebuilt Analytics

Out of the box you have plenty of analytics to start off with. But you will probably want to modify many of them and make them your own.

1. Make a copy of the analytic you want to edit.
2. Name the copy.
3. Find the new analytic and click **Edit**.
4. Select a dimension and the contents appear in the pane.
5. From the tabs select **Criteria**.
6. Drag and drop columns from the Subject Area pane to the editing palette.

Right-click the gear icon and get options for editing that column such as filtering and deleting that column from the analysis.

Review SQL Statements Used in Analyses

You can review logical and physical SQL statements using either of the following procedures.

Logical and Physical SQL

Logical SQL is non-source specific SQL that's issued to the Oracle BI Server for an analysis. Logical queries use column names from the subject areas in the Presentation Layer in the repository (RPD) metadata. Based on the logical request, the BI Server issues optimized source-specific SQL to the actual data sources in the Physical Layer of the metadata. If you have administrative privileges, you can review both logical and physical SQL for analyses.

Edit Mode

1. Open the analysis in Edit mode and click the Advanced tab.
2. In the SQL Issued section, review the logical SQL statement.

Administration Page

1. On the Administration page, in the Session Management section, click the **Manage Sessions** link.

   > **Note:** You must be a Business Intelligence Administrator to access the Administration and Manage Sessions page.

2. On the Manage Sessions page, in the Action column, click the **View Log** link to review the SQL statement.

CX Sales Repository and Session Variables for Business Intelligence

You can use these repository and session variables in your analyses.

Variable Name	Type	Usage	Offering
CURRENT_DAY	Session Variable	Returns the value of Current Date.	All
CURRENT_MONTH	Repository Variable	Returns the value of Current Month in the YYYY/MM format.	All
CURRENT_WEEK	Repository Variable	Returns the value of the current week in YYYY Weeknnn format.	All
CURRENT_QUARTER	Repository Variable	Returns the value of Current Quarter in YYYY Q n format.	All
CURRENT_YEAR	Repository Variable	Returns the value of Current Year in the YYYY format.	All
NEXT_MONTH	Repository Variable	Returns the value of Next Month in the YYYY / MM format.	All
NEXT_WEEK	Repository Variable	Returns the value of Next Week in the YYYY Week nn format.	All
NEXT_QUARTER	Repository Variable	Returns the value of Next Calendar Quarter in the YYYY Q nn format.	All

Variable Name	Type	Usage	Offering
NEXT_YEAR	Repository Variable	Returns the value of Next Year in the YYYY format.	All
PREVIOUS_MONTH	Repository Variable	Returns the value of Previous Month in the YYYY/MM format.	All
PREVIOUS_WEEK	Repository Variable	Returns the value of Previous Week in the YYYY Week nn format.	All
PREVIOUS_QUARTER	Repository Variable	Returns the value of Previous Quarter in the YYYY Q nn format.	All

These variables are available for CX Sales only.

Variable Name	Type	Usage	Offering
USER_MAX_TERR_HIER_LEVEL	Session Variable	Returns the maximum fixed hierarchy level from Territory Hierarchy for the logged-in user. This variable can be used to dynamically retrieve the maximum territory level that the logged-in user owns.	Customer Experience
USER_ORG_HIER_LEVEL	Session Variable	Holds the hierarchy level within the organization selected by the user in a report.	Customer Experience
USER_PARTY_ID	Session Variable	Stores the PARTY_ID from UserPVO.	Customer Experience
CURRENT_ENTERPRISE_PERIOD	Repository Variable	Returns the value of the Current Fiscal Period.	Customer Experience
CURRENT_ENTERPRISE_PERIOD_END_DATE	Session Variable	Returns the End date of Current Enterprise Period.	Customer Experience
CURRENT_ENTERPRISE_QUARTER	Repository Variable	Returns the value of Current Enterprise Quarter in the YYYY Q n format.	Customer Experience
CURRENT_ENTERPRISE_QUARTER_END_DATE	Session Variable	Returns the End date of Current Enterprise Quarter.	Customer Experience
CURRENT_ENTERPRISE_YEAR	Repository Variable	Returns the value of Current Enterprise Week in the YYYY Week format.	Customer Experience

Variable Name	Type	Usage	Offering
NEXT_ENTERPRISE_PERIOD	Repository Variable	Returns the value of Next Enterprise Period.	Customer Experience
NEXT_ENTERPRISE_QUARTER	Repository Variable	Returns the value of Next Enterprise Quarter in the YYYY Q n.	Customer Experience
NEXT_ENTERPRISE_YEAR	Repository Variable	Returns the value of Next Enterprise Year in the FYYYYY format.	Customer Experience
PREVIOUS_ENTERPRISE_PERIOD	Repository Variable	Returns the value of Previous Enterprise Period.	Customer Experience
PREVIOUS_ENTERPRISE_QUARTER	Repository Variable	Returns the value of Previous Enterprise Quarter in the YYYY Q n format.	Customer Experience
PREVIOUS_ENTERPRISE_YEAR	Repository Variable	Returns the value of Previous Enterprise Year in the FYYYYY format.	Customer Experience
SVC_SR_ASSIGN_INIT_DT	Session Variable	Returns a date when the POD was upgraded to latest version.	Customer Experience

Create and Edit Analyses Using a Wizard

Use the wizards to quickly create and edit your analyses. You can use a wizard to create and edit most of your analytics, for example to select columns, add filters or views.

You can also use advanced business intelligence features to create or edit dashboards or manage analyses and other objects in the catalog.

1. Start the wizard from the Reports and Analytics work area or the Reports and Analytics panel tab (if available).
   - To create a new analysis click **Create** and select **Analysis**. Select a subject area for your analysis and click the **Continue** button.
   - To edit an existing analysis, in the Reports and Analytics work area, select it in a folder or the favorites list, click its ellipsis icon and select **Edit**. In the Reports and Analytics panel tab, click the analysis, then click **Edit**.
2. In the Select Columns page, optionally, click **Add/Remove Subject Areas** and, in the Add/Remove Subject Areas dialog box, select more subject areas or remove any that you no longer need, and click **OK**. You can't remove the original subject area selected for the analysis. To remove any other subject area, first remove its columns from the analysis.

3. From here on, make selections in a series of analysis-definition pages, selecting Next or Back to navigate among them.
   - In the Select Columns page, expand your subject area and folders within it to choose the columns to include in your analysis. Also set options for those columns.
   - In the Select Views page, determine whether your analysis is to include a table, a graph, or both. For either, select among several types. If you include both, select the order in which they appear.
   - In Edit Table and Edit Graph pages, select options that apply to your table and graph layouts. Each of these pages is active only if you selected the item it applies to in the Select Views page.
   - In the Sort and Filter page, optionally apply filters to columns to refine the selection of records in your analysis, and apply sorts to them to order your results.
   - In the Highlight page, optionally add color highlights based on numeric thresholds you set.
   - In the Save page, enter a name for the analysis, select a catalog folder to save it in, and click **Submit**.

In general, these pages are designed so that procedures for using them are readily apparent. Even so, here are some things you will want to know.

Select Columns Page

For each column in your analysis, you select an Interaction option.

- Two of the options, Default and Drill, do the same thing: If you click on a column header, the analysis adds a column displaying values at the next hierarchical level. (For example, if you click on Control Name, the analysis adds a Control ID column.) If you click on a column value, the analysis adds the subordinate column, but also filters to display only records containing the value you clicked.
- Navigate to Transaction: If you click on a value from a column for which this option is set, the analysis presents a link to the record of an object the value applies to.

  For such links to work, however, further configuration is required: You need to define paths to the records that are to be opened. If you want to use this option, you're probably better off creating the analysis in the BI Catalog. However, you can create it in the wizard, then edit it in the BI Catalog. See the topic titled Link Analyses to Application Pages.
- None: This option in effect turns the Default option off and turns nothing on. Nothing happens if you click on a value in a column for which this option is set.

For each column, you can also select a Hidden option. This prevents the analysis from displaying the column, but leaves its values available for use behind the scenes, for example in filters.

Select Views Page

You can add a graph to your analysis only if it includes at least one column from a fact folder. (You can include a table in your analysis no matter what columns you select for it.) A fact column contains numeric values, such as counts of incidents returned by advanced controls. Other columns contain attributes of objects, such as names of advanced controls. Without numeric values, there's nothing to base a graph on.

You can create a title for the analysis in this page, but doing so is optional. You also create a name for the analysis in the Save page, and that one is required. If you create both, the analysis displays both; they don't have to be the same.

You can use a Preview option to ensure the analysis returns data you expect. Turn it on or off in this page or in subsequent wizard pages. Once it's on, the preview remains on in other wizard pages you navigate to, unless you turn it off.

Edit Table Page

Here are the layout options you can select for tables:

- Columns: This is the default. Each column you assign this value to appears as a column in the table.
- Prompt For: In a prompt field, you select among values from the column you're configuring. For example, you would select a date if the column were Calendar Month Start Date. The table would then display only rows containing the value you selected.
- Section By: The table is divided into sections. Each value of the column you're configuring becomes a header, and the section beneath each header includes rows containing that value.
- Excluded: The column you select is no longer available to the view you're configuring. The column is hidden, and its values are unavailable for behind-the-scenes tasks such as filtering. However, the column remains available to other views in your analysis.

Edit Graph Page

You can't apply layout options to fact columns. For other columns, graph layout options include Prompt For, Section By, and Excluded, which have the same effect as they do in tables. You can also apply these options in graphs:

- Vary Color By: Each value in the column you're configuring is represented by a distinct color in the graph.
- Group By: Values in the columns you assign this option to are combined in the graph. For example, if you select this option for the State and Calendar Month Start Date columns in a bar graph, each bar represents a particular status on a particular date.

Highlight Page

You can use this feature only if your analysis includes at least one fact column, and you can apply it only to fact columns.

Related Topics

- Manage Analytics with Advanced Features
- Where to Save Analytics and Reports
- View Analytics, Reports, and Dashboards
- How Data Is Structured for Analytics

Manage Analytics with Advanced Features

Wizards are an easy way to create or edit analyses. But you might have to use advanced features for complicated analyses or specific requirements. For example, you can create view selectors so that users can toggle between views within an analysis, or define

You can also perform other actions on analyses, for example delete them or copy and paste them within the business intelligence catalog.

How to Create and Edit Analytics

1. In the Reports and Analytics work area or the Reports and Analytics panel tab (if available), click the **Browse Catalog** button.
2. Click the **New** button, select **Analysis** in **Analysis and Interactive Reporting**, and select a subject area.
   Or, select your analysis in the catalog and click **Edit**.
3. This table lists the ways you can use the tabs.

Tab	Task
Criteria	Select and define the columns to include. Add filters.
Results	Add views and set options for results.
Prompts	Define prompts to filter all views in the analysis.
Advanced	View or update the XML code and logical SQL statement that the analysis generates. Set options related to query performance.

4. Save your analysis.

More Actions on Analytics

1. In the Reports and Analytics work area or the Reports and Analytics panel tab (if available), select your analysis and click **Action** and select **More**..
2. Click **More** for your analysis and select the action you want, for example **Delete** or **Copy**.

Related Topics

- Create and Edit Analyses Using a Wizard
- Where to Save Analytics and Reports
- How Data Is Structured for Analytics

Create an Activity Analysis for Your Sales Team

Watch video

An activity analysis can help you make sure your resources are being used to your greatest advantage.

New to creating analytics? *Watch this video*

Analytics to Answer Business Questions

To build custom analytics you start by defining your objectives. What problem do you want to solve? What opportunities might you be missing? What insights have potential to drive your sales forward? Here are a few examples:

- Is there any workload balancing issues in my team?
- Which team members are available to focus on a new product?
- What are my urgent overdue tasks, and what's my workload for this week?
- How is my team performing?
- Which accounts are my sales representative focusing on and does this align with business priorities?
- Which accounts can I focus on more to meet our business objectives?

Create Your Own Activity Analysis

You Sales Manager wants to see how much their team is interacting with potential opportunities. How many times has a potential customer been contacted? And how have they been contacted? Let's try creating an activity analysis to help our Sales Manager figure things out.

1. In BI, Click **New** analysis.
2. Select **CRM - CRM Activity Real Time.**
   - From the dimension Customer, add **Account Name**.
   - From the dimension Employee, add **Last Name**.
   - From the Facts folder, add **# of Activities**.
3. You can filter Customer to see a specific account, select the properties on Account Name.
4. You select the filter to show only A.C. Networks, for example, and click **OK**.
5. Click **Results**. The Results tab shows your analysis at this point. Move back and forth from Criteria to Results at any time to see your analysis.
6. Name and save your analysis.

Now you can check out everything that has been going on with with A.C. Networks. Is it time to reach out to them again and tell them about some new stuff you're offering?

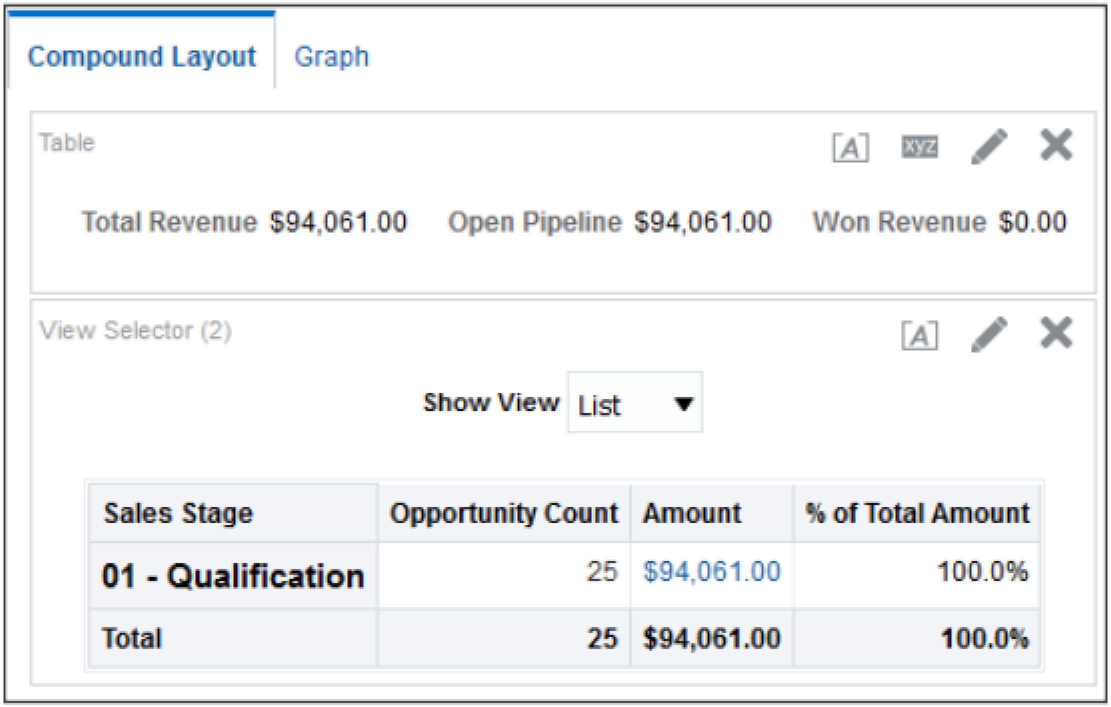
Create an Opportunity Analysis

You can keep an eye on your revenue pipeline using Opportunity analytics. Opportunities can be looked at over different time periods, or the current time period. You can examine each stage of an opportunity and the associated revenue for that stage.

How to Create an Opportunity Analysis

The simple analysis you build in this example shows Total Revenue, Open Pipeline, and Won Revenue for sales representatives for the current quarter. Keep in mind you can add any columns you want from the CRM Pipeline subject area. You can even add columns from other subject areas. But for this exercise, let's keep it simple.

This is an opportunity analysis. Let's create one now.



To Create an Opportunity analysis:

1. Navigate to BI.
2. Select the **New** drop-down list.
3. Select **Analysis**.
4. Go to the editing palette and on the Subject Area panel expand the **Sales - CRM Pipeline** subject area.

   This subject area Sales - CRM Pipeline includes the following columns and facts to use for this example.

Columns and Facts	Definition
Sales Stage	Contains data on the stage the opportunity on in the pipeline.
Amount	Contains the amount of the opportunity revenue at a stage in the pipeline.
Open Pipeline	Contains the amount of the revenue not closed in the pipeline.
Won Revenue	Contains the amount of revenue closed in this quarter.

Columns and Facts	Definition
Total Revenue	Contains the amount of all opportunity revenue in the pipeline for this quarter.
Enterprise Quarter	Contains real time opportunity custom data
Pipeline Facts: Number of Opportunities	Contains real time revenue data

5. In the Subject Areas Panel, in the Sales - CRM Opportunities subject area, expand **Historical Sales Stage**. Add the columns: Sales Stage, Sales Stage Name, and Sales Stage Row ID.
6. Expand Pipeline Detail Facts: Add **Amount**, **Open Pipeline,** , **Won Revenue**, **% of Total Amount**.
7. Expand Pipeline Facts:**# of Opportunities**.
8. Expand Employee. Add **Employee Row ID**.
9. Expand Time. Add **Enterprise Quarter**.
10. Expand Employee. Add **Employee Login**. On the editing palette, on Employee Login, hover over the gear image and from the drop-down list menu and select Filter. Under Add More Options select Session Variable. In the Session Variable add: `USER_PARTY_ID`. Select **OK**. From the drop-down list again, select **Delete**. You only added the column to add the variable. Adding this variable tells the application to show data for the signed in user specific to her opportunities only.
11. That's it. Now let's see what it looks like. Select the **Results** tab and there it is. Don't forget to name and save your analytics.

Create and Filter an Historical Trending Analysis

Looking at a broad view of your pipeline helps you get a sense of what things might look like in the future.

How to Create an Historical Trending Analysis

Historical Trending analytics use the subject area Sales - CRM Opportunity Sales Stage Snapshot. This subject area is specifically designed for reporting on opportunities and revenues against their daily, weekly or monthly (depending on the enterprise calendar period setup), quarterly and yearly trends or to compare opportunity and revenue data against specific points in time.

To Create an Historical Trending Analysis:

1. Navigate to BI.
2. Choose **New**.
3. Select **Analysis**.
4. Select the **Sales - CRM Historical Pipeline** subject area. You may need to scroll down.
5. In the regional area, expand **Opportunity**.
6. Double-click Opportunity Name to add it to the Selected Columns section. You may need to scroll down to locate Opportunity Name.
7. Add Owner **First Name**.

8. Add Owner **Last Name**.
9. Expand Customer and add **Customer Name**.
10. Collapse Customer and expand Industry.
11. Add **Industry Name** and collapse Industry.
12. Expand Product and add **Product Name**.
13. Collapse **Product** and expand Revenue.
14. Add Revenue ID and collapse Revenue.
15. Expand Pipeline Snapshot Date.

    Notice that you can choose a pipeline date, period (week or month), quarter, or year.
16. Add Pipeline Snapshot Date and collapse Pipeline Snapshot Date.
17. Expand Historical Pipeline Detail Facts.

    Notice that you can add facts on revenue lines, open or closed opportunities, or both.
18. Add Opportunity Line Revenue.
19. Verify your columns.

    After you create a historical trending report, you should create filters for your report. The next section shows you how.

Filtering Historical Analytics

You can filter your analytics to show open or closed opportunities, and more.

1. Click Create a filter for the current Subject Area, in the local area, under Filters.
2. In the drop-down list, click **More Columns.**
3. In the dialog box, expand Opportunity.
4. Select **Opportunity Status Category**.
5. Click **OK**.
6. Verify that Operator = is equal to / is in.
7. Select Value = **OPEN**.
8. Click **OK** to close the New Filter dialog box.

    After creating your filters for your historical trending report, name and save your analysis.

Create and Edit Dashboards

You can create and edit dashboards and define their content and layout to organize your analytics and other objects to create meaningful and navigable palettes of information. In addition to objects in the business intelligence (BI) catalog, such as analyses, reports, and prompts, you

Create a Dashboard

1. Open the Reports and Analytics work area, or the Reports and Analytics panel tab (if available).
2. Click **Browse Catalog**.
3. Click **New** and select **Dashboard**.
4. Enter the dashboard's name and description, and select a folder to save in.
5. With the **Add content now** option selected, click **OK**.
6. Optionally, add more pages, or tabs, within the dashboard.

7. Bring items from the Dashboard Objects or Catalog pane to add content to a page.
8. Click **Save**.

> **Note:** The first dashboard page is saved with the **page 1** name by default. To rename this page:
> 1. Click the **Catalog** link.
> 2. In the Folders pane, select your dashboard.
> 3. For **page 1**, click **More** and select **Rename**.
> 4. Enter the new name and click **OK**.

Edit a Dashboard

1. In the Reports and Analytics work area or the Reports and Analytics panel tab (if available) select your dashboard in the pane and click **More**.
2. Select your dashboard in the pane and click **More**.
3. Click **Edit**.
4. Perform steps 6 and 7 from the preceding Creating Dashboards task, and make other changes as needed, for example:
   - Remove content from the dashboard.
   - Move content around.
   - Change the layout of a page.

Related Topics

- Where to Save Analytics and Reports

Localize Catalog Captions

As an administrator, you can localize the names of reporting objects, or captions, that users create in the catalog. For example, you might localize the names of dashboards and analyses into Spanish and French.

To localize object names in the catalog, export the captions from the catalog, localize them, and upload back to the catalog.

1. Export the default captions to an XML file.
2. Localize the downloaded XML file.
3. Upload the localized XML file.

After translated caption XML is uploaded, the new strings take effect once the cache refreshes. Translated strings are protected during an upgrade.

Export Captions from the Catalog

1. Click **Administration**.

2. Click **Export Captions**.
3. Click **Browse** and select the folder you want to localize in the catalog, then click **OK**.
4. Save the XML file.

Localize Your Captions

Translate the XML file into one or more languages.

Upload Localized Captions to the Catalog

After you have localized captions, upload the translated XML files, one for each language.

1. Click **Administration**.
2. Click **Import Captions**.
3. Click **Browse** and select the localized XML file, then click **OK**.
4. Use the Select Language option to select the language to which you have localized, then click **OK**.
5. Save the XML file.

To download, review, or delete imported captions files, use the **Manage Captions** option.

FAQs for Analytics and Dashboards

What are subject areas, dimensions, attributes, facts, and metrics?

Information for your analytics is grouped into related functional areas called subject areas that contain fact and dimension folders with metrics and columns you can add to your analyses.

Dimension folders include the grouping of dimensional attributes for the subject area. Columns (such as date of birth or name) that are grouped for a dimension are known as attributes. Fact folders contain formulas for getting calculated numeric values, such as counts, sums, and percentages.

What's the relationship between dimensions and fact in a subject area?

A subject area is based around a single fact. The dimensions are all related to each other through the fact only. The fact is automatically included in any query that's created, even if none of the measures in the fact appear in the

What's a common dimension?

A common dimension is shared across multiple subject areas. For example, Time, Department, and Location are common dimensions. When constructing a cross-subject area analysis, only common dimensions can be used.

How can I determine which dimensions are shared across two subject areas?

If the dimensions exist in both subject areas, they're common dimensions, and are often among the first folders in a subject area. You can join any subject areas you have access to, but analyses are subject to the normalized data structure. Unless

What's a dashboard?

A dashboard is a container page to display analyses, reports, and other objects. Administrators can create shared dashboards for groups of users with common responsibilities or job functions. Personalized views can be created based on a user's permissions.

9 Analytics on Interfaces

Analytic Interfaces For Your Sales Teams

Watch video

These are all the areas on the CX sales interface where your users can view analytics. Some of these pages come prebuilt and can be personalized by your users, and some you need to set up.

You will need to work in a sandbox if you are setting up analytic interface pages for your sales users, such as adding infolet analytics, adding analytics to side and sub-tabs, adding infolet pages or dashboards. The application requires you to be in a sandbox for most administrative tasks, with the exception of managing analytics on the BI side. But adding the analytics you manage in BI to the user interfaces listed in this topic requires working in a sandbox environment.

Note: When you're working with analytics, you need to ensure that you've completed the setup requirements. The Related Topics at the bottom of this topic takes you a list of what you need to do.

Type	Description	Visibility
Sales Pages	Includes five blank pages that administrators configure and add prebuilt or custom analytics for any area.	Not visible until administrators enable the Sales Pages in Set System Options. To view these pages, all users need to have the following privileges: • View Sales Homepage pagination dot one • View Sales Homepage pagination dot two • View Sales Homepage pagination dot three • View Sales Homepage pagination dot four • View Sales Homepage pagination dot five
Sales Infolet Page	Comes prebuilt with role-based analytics and infolets. One page for each role.	Not visible until administrators enable the Sales Infolets in Set System Options.
Object Pages	Analytics can be added to the following object page work areas: For Sales: • Leads • Opportunities • Forecasts	Analytics can be added to the object landing page or object edit page, such as the Opportunities page, or the Edit Opportunities page.

ORACLE

Type	Description	Visibility
	• Accounts • Households • Contacts • Activities For Service: • Service Requests • Work Orders • Queues	
Analytics Page	This page is where users can add analyses themselves by searching for the analysis and making it a favorite.	Administrators make custom analytics available for users on the Analytics page by adding session variables on the analysis. These variables can show data specific to the user signed in and viewing her Analytics page.

Action Linking in Analytics

Actions and Links

You can add actions, such as buttons and menu items, to detail pages, list pages, and so on. You can also create special fields, rendered as links, that are displayed with other fields throughout the application.

You can base an action on a script (a Groovy method that's defined on the object) or on a URL defined by a script. After you create an action, it can be exposed as a button or an option on the Actions menu. A button can perform an action or navigate the user to another page in the runtime application, or to another Web site. For example, you might want to include a button on a summary table, which users can click at runtime to create a new type of record from a selected row, such as escalating an existing "trouble ticket" to a more severe "case" that can be managed separately.

After creating a link, you can select it as a field for display at runtime. For example, you might want to provide a static link from an overview page to a corporate Web site.

Add Actions or Links

You add actions or links in two steps:

1. Define an action or link for an object.
2. Add that action or link to a page layout.

   You can also manage the Actions menu by hiding or showing menu items, rearranging the action groupings or display sequence, and managing the toolbar by hiding or showing icons and buttons.

> **Note:** Custom actions with **Save and Close** and **Save and Edit** are only available for the below objects:
> - Service Request
> - Business Plan
> - Sales Objective
> - Opportunity

Define Actions or Links

To define an action or link for an object:

1. On the main Overview page in Application composer, select a standard or custom object in the object tree.
2. Select the **Actions and Links** node.
3. In the Create Action or Link page, enter a descriptive name in the Display Label field.
4. In the Type field, select either **Action** or **Link**.
5. In the Source field, select either **Script** or **URL**.
6. In the Script region click the **New** icon to build your script.
   - If the source is a URL, you can enter a static URL enclosed in double quotation marks. Or, you can define the URL by using the expression builder, which provides access to this object's fields to assist you in constructing the URL. If this object has a parent or relationship with a source object, then optionally change the context to access another object's fields for URL definition.

     Any new functions that you create will be added to the **Method Name** choice list. If functions were already created for the object, then you can select one of them from the Method Name choice list. Object functions that are created elsewhere through other flows, such as server scripts, can also be used here.

     To switch the context to the object's parent or related source object, for access to the object's fields for the URL definition, check the **Select alternative context** check box.

     > **Note:** Since the script deriving the URL can execute multiple times during the page life cycle, ensure that your script is safe to run multiple times. For example, don't write custom business logic to update object records.
   - If the source is a script, you can either select a predefined object function from the **Method Name** choice list, or create a new object function using the expression builder. Any new functions that you create will be added to the **Method Name** choice list.

     If functions were already created for the object, then you can select one of them from the **Method Name** choice list. Object functions that are created elsewhere through other flows, such as server scripts, can also be used here.

     > **Note:** Avoid writing a process-intensive script that references external web services. Repeated executions of such scripts can cause errors and potentially degrade performance.

   When creating custom actions based on a script for top-level custom objects, you can specify how you would like the action to conclude at runtime, after the script completes:

- Save the record and return to the previous page (save and close)
- Save and continue editing the record (save and continue)
- Perform the action but don't save the record (run the script only)

> **Note:** You can also specify this same information for standard objects, although some standard objects don't support the "save and close" and "save and continue" options. If you use one of these options with an unsupported standard object, then you won't be able to select and add this action to a page layout.

Display Actions or Links on Pages

After you save actions or links, you can expose them on page layouts.

When displaying a link, you select it just as you select to display standard or custom fields. This is because, at runtime, the UI displays the URL link as if it's a field in a table.

You can add actions to two places in the UI: on the toolbar as a button and in the Actions menu for a table.

> **Tip:** To support functions that don't need to be displayed prominently on the page, add actions as options on the Actions menu. To support key functions that are frequently executed by your users, add actions as buttons. When displaying actions as buttons, be sure to test your page at runtime (in all supported languages) to confirm that the presentation of buttons is as expected. Button display could be unexpected due to the available space on the page at runtime, the number of buttons on the page, and button width (which depends on label length). If you add more buttons than the toolbar has space, then at runtime the buttons are stacked and made available using a drop-down button.

You can display actions as either buttons or Actions menu items in a variety of locations:

- Summary table on the overview page
- Default summary on the details page
- Summary table on a details page's subtab
- Revenue table on the details page for the opportunity object

> **Note:** If you add a custom button to a table and, at runtime, that table has no rows, then the button is automatically disabled.

You can display links for an object in a variety of locations in that object's work area. You can add a link wherever you can add a field. Possible locations include, but aren't limited to:

- As a column in the summary table on the overview page
- Default summary on the details page
- As a column in the summary table on a details page's subtab
- In the detail form under the summary table on a details page's subtab
- As a column in the summary table on a tree node page for a child object
- As a column in the revenue table on the details page for the opportunity object

Delete Unpublished Actions and Links

You can use Application Composer to delete any unpublished actions and links. Any exposure of the actions (as UI buttons or action menus) and links (as fields) in the same object's extensible pages or as a detailed subtab under another object's page are also automatically deleted.

To delete unpublished actions or links for an object:

1. On the main Overview page in Application Composer, expand the standard or custom object whose actions or links you want to delete.
2. Select the **Actions and Links** node.

   Application Composer lists all the actions and links defined for the selected object.
3. Select the action or link that you want to delete and click the delete icon.
4. Click **OK** on the confirmation dialog.
5. To verify that the deleted actions and links no longer appear in the object's pages, click the Pages node and review the page layouts.

Points to Consider

When defining actions, here are some important points to consider:

- If you define a custom action and expose it on a list, ensure that you do the following:
   a. Include a check for the active record row, and ensure that the UI supports users selecting any record as the active row before invoking the custom action.
   b. Test the performance of the script behind the action. Actions on the list page are synchronous calls which means that long-running scripts will block the page from displaying.
- Don't create custom buttons to populate the mandatory or required fields on the UI. End users must enter the values in the mandatory fields manually.
- Avoid creating an action that, when invoked from a record, calls an external web service to update the same record currently open. Instead, consider calling the external web service asynchronously using an object workflow.

Related Topics

- Create and Add Custom Links to Application Pages

ADF Contextual Event Action

Administrators can set the ADF Contextual Event action on the object name or other attribute columns of an object to enable drilling down.

These are the available objects:

- Opportunity
- Contact
- Account
- Activity

- Partner
- Deal
- MDF Budget
- MDF Request
- MDF Claim
- Business Plan
- Business Plan Objective
- Leads
- Queues
- Work Orders
- Service Requests
- Assets

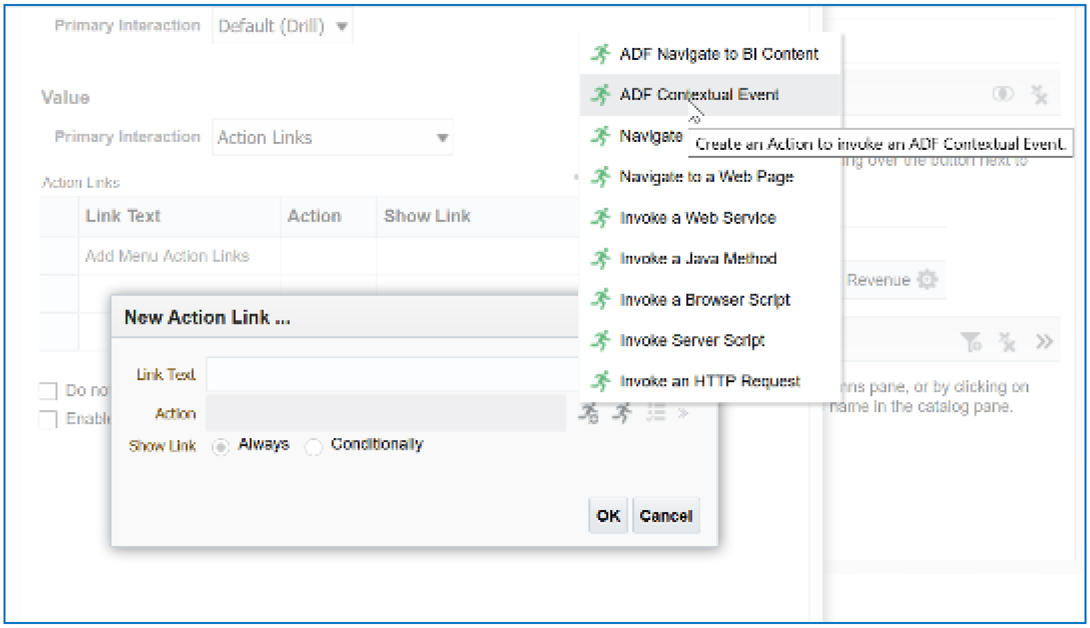
Set the ADF Contextual Event

You can add this event to any analytic you build as long as it has an identifier for the record. In this case the identifier is Customer ID. For this example you build an analytic that shows Account and Opportunity details.

1. Create a new analysis from the subject area Sales-CRM Pipeline.
2. From the Subject Area pane, drag the following columns onto the Selected Columns editing palette:
    - From the Customer dimension, select "Name".
    - From the Customer dimension, select "Customer Row ID".
    - From the Opportunity dimension select "Name".
    - From the Opportunity dimension select "Opportunity ID".
    - From the Facts folder, under Pipeline Facts, select "Opportunity Revenue".
3. Click the settings gear icon for Customer Name.
4. Choose **Column Properties**.
5. Choose the Interaction tab.
6. Under Value, Primary Interaction, choose **Action Links**.
7. Click the + icon to add a new action.
8. Click the running man action icon with the + on it. A list of actions comes up.

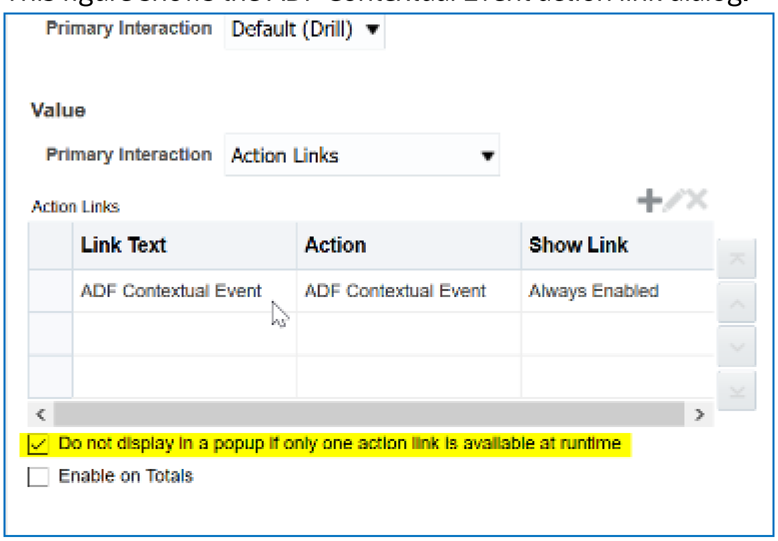
9. Choose ADF Contextual Event. Click **OK**.

   This figure shows the ADF Contextual Event option.



10. In the Column Properties dialog, check **Do not display in a dialog if only one action link is available at runtime**.

    This figure shows the ADF Contextual Event action link dialog.



11. Click **OK**.
12. Repeat steps 3 through 9 for the Opportunity Name column.

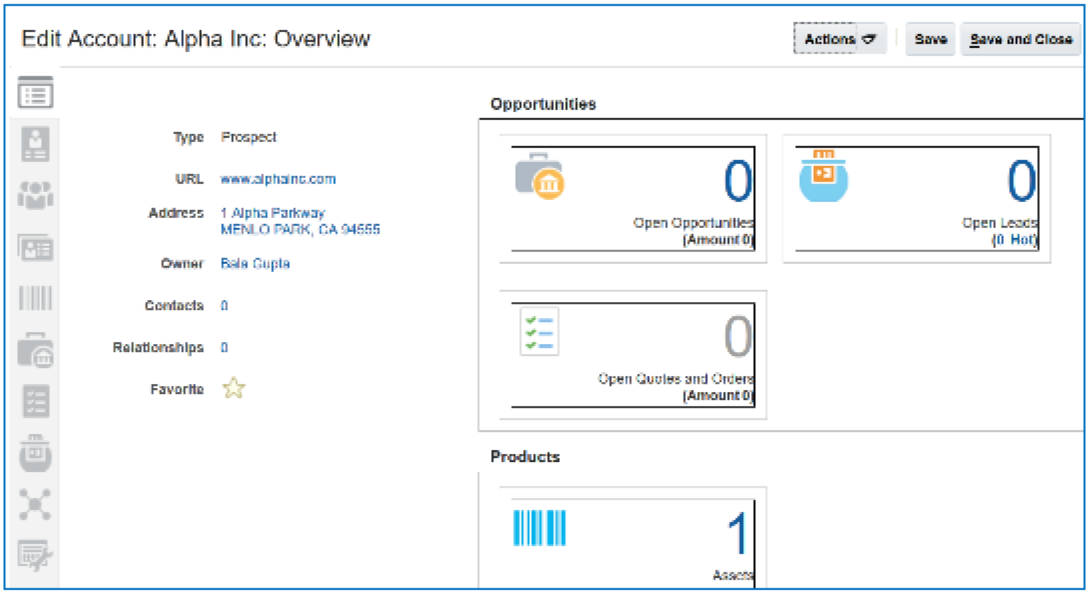
Viewing the ADF Contextual Event Action

The analytic to which you added the ADF Contextual Event can be added on the interface. Using the ADF Contextual Event action, users now have the option to view the additional details of a particular object, or make changes to details on an object pages.

To set your analytic an edit object page, do the following:

1. Enable the analytic tab on the Accounts page and add the newly created analytic.
2. Click the Customer Name from the BI report and it opens up the detail page for a particular customer as a dialog box. You can close the dialog box and open up any customer name or opportunity name to get a detail page dialog box.

This shows the drill-down detail for the Edit Account object when the ADF Contextual Event action is added.



Set Up Deep Linking Using Business Intelligence Features

Deep page linking lets your users drill down on a record without leaving the page. You can add deep page linking for records in most custom objects in CX Sales in Business Intelligence.

For more information on deep linking see: *Direct Page Links for CX Sales*. Also refer to the MOS article on deep linking *MOS article 2145842.1">MOS article 2145842.1*

There are three parts to deep page linking:

1. Defining an action link.
2. Constructing the deep link URL.
3. Updating the deep link URL and parameters to navigate to a selected record.

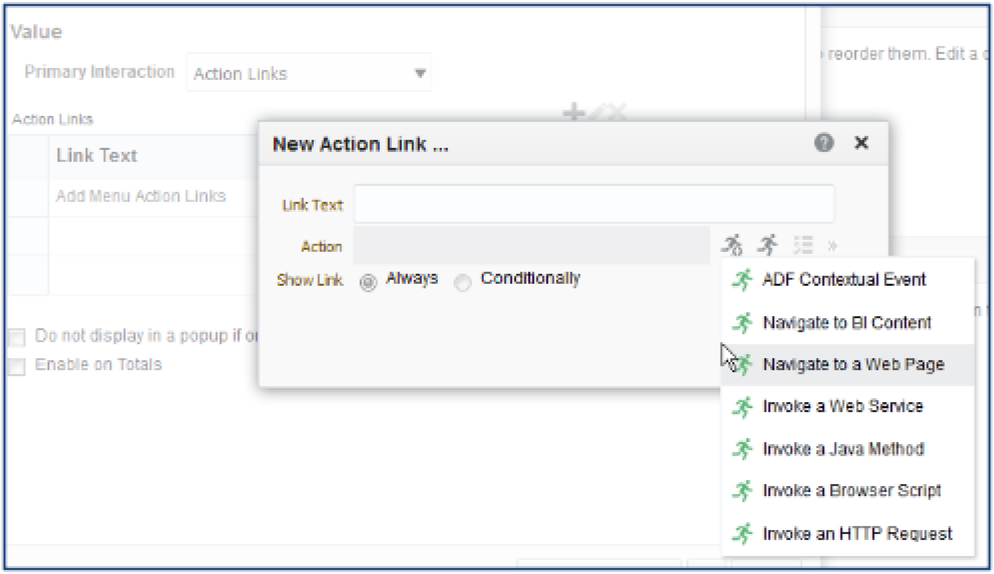
Define an Action Link

You can add a deep page URL to any column of an analysis created for a custom object by adding an action link from column properties. Note that the analysis must have a column that holds the identification of the record, such as Record ID in the case of a custom object.

1. Create or open an analytic that contains a column for the name of the document. Select the gear icon on the column and then from the drop-down list choose **Column Properties**.
   As an example of this, say there is a custom object called Product Documents. For deep page linking, we want to add the deep URL/deep link to the column that holds the identification of the record. In the following figure, since there is a Product Document column, it would be the Document name that holds the ID of that record.

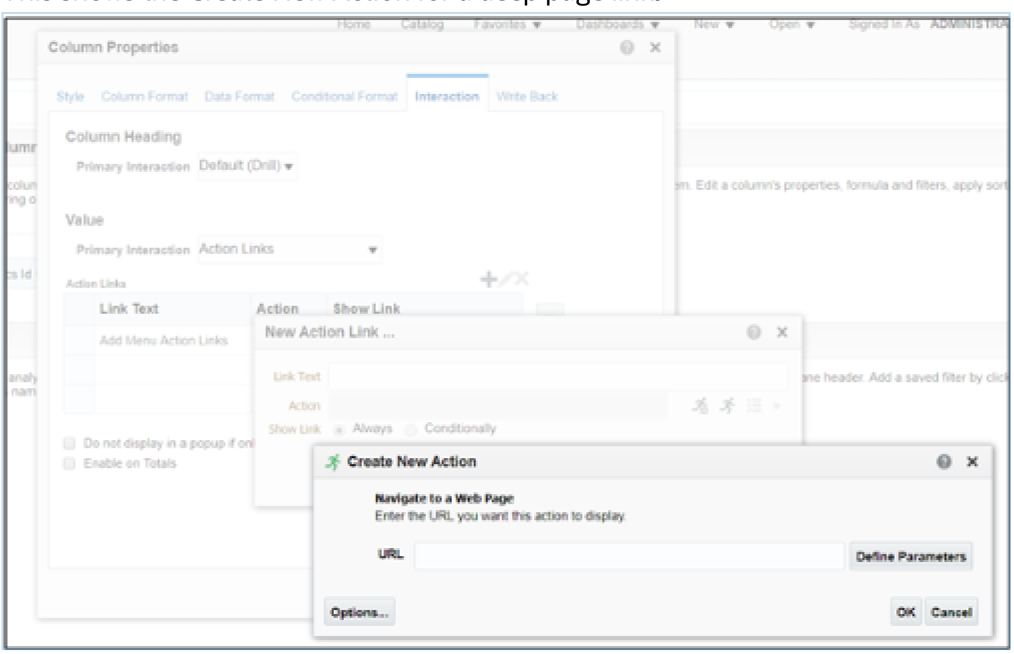
2. In Column Properties, select the **Interaction** tab.
3. Under Value, for Primary Interaction choose **Action Links** from the drop-down list.
4. Click the + icon to add an action link.

   This shows the New Action, Navigate to a Web Page option.



5. Click **Create New Action** and then from the drop-down list select **Navigate to a Web Page**.

   This shows the Create New Action for a deep page link.



Construct the deep Link URL

You add your specific URL to the action field. These steps show you how to determine the correct URL for your environment. These URLs are examples only.

1. Add the deep link URL to the Create New Action field. There are deep page links patterns available for objects which can be found by going to Related Topics at the bottom of this section and clicking deep Page Links: Explained. In this example, you take the deep URL pattern for the Custom Object, which in this case is called Product Docs. To create a deep link to a default summary page tab for a custom object use the deep link URL pattern in the following example:

   ```
   https://<hostname>:<port>/<application>/faces/FuseOverview?
   fndGlobalItemNodeId=CRM_CUSTOM_CARD_<XXXX>&fndTaskItemNodeId=CRM_CUSTOM_TAB_<XXXX>&fnd=%3BsubTabName
   %253DSUMMARY%253BObjectId%253D<YYYY>%253B%3B%3B%3Bfalse%3B256%3B%3B%3B
   ```

   Replace XXXX with the custom object's API name, for example, ProductDocs_c. Obtain the API name from the object overview page (click the object's node in the Custom Objects tree in Application Composer).

   Replace the YYYY with the custom object's primary key in the database. In this case, the custom object primary key .comes from the Record_Id column, as shown in the following example:

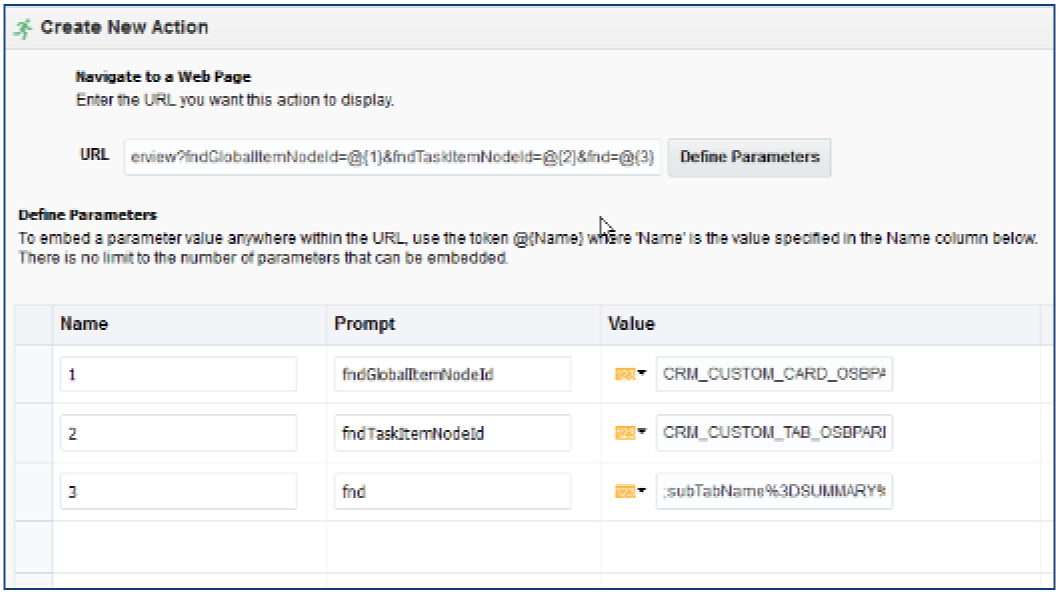
   ```
   https://<hostname>:<port>/<application>/faces/FuseOverview?
   fndGlobalItemNodeId=CRM_CUSTOM_CARD_ProductDocs_c&fndTaskItemNodeId=CRM_CUSTOM_TAB_ ProductDocs_c&fnd=
   %3BsubTabName%253DSUMMARY%253BObjectId%253D300100057476089%253B%3B%3B%3Bfalse%3B256%3B%3B%3B
   ```

   Note that you can test the URL by replacing the host name with your actual host name and using a valid record value in place of <YYYY>. Put the URL in a browser to see if the record details page appears and the URL is valid.
2. Once you have determined that the URL is valid, the next step is to embed this URL in the analytic and ensure that the object ID, represented in these instructions as <YYYY> is dynamically retrieved from the analytic whenever the Product Docs name is clicked. When you have added the URL click **Define Parameters**. The next part of these instructions is to construct the deep link URL.

Update the deep Link URL and Parameters

The define parameters fields are populated with some prompts and values already. The purpose of these steps is to ensure that the object ID is defined as a parameter.

This shows some Prompt and Value fields on the Create New Action page.

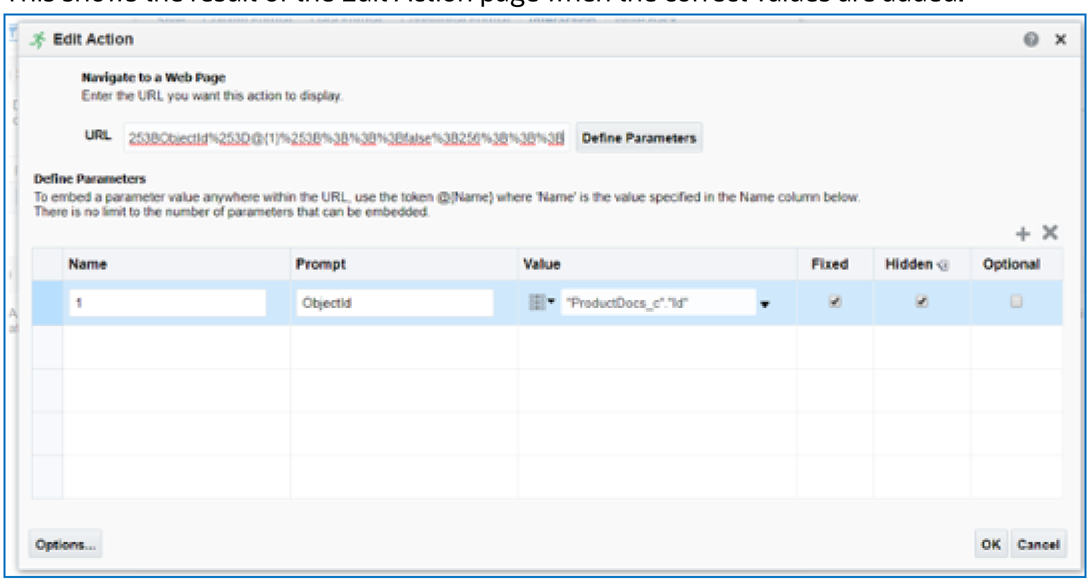


To update the deep link URL and parameters:

1. Because you're changing the value of the ID only, delete the default parameters and leave only one parameter mapped to the ID.
2. Update the first parameter by renaming the Prompt value to `ObjectId` and set the value to a column value by selecting the record ID from the drop-down list. For example `ProductDocs_c.Id`.
3. Paste the URL again in the URL field and replace the ID of <YYYY> value with @{1} as shown in the following example:

```
https://<hostname>:<port>/<application>/faces/FuseOverview?
fndGlobalItemNodeId=CRM_CUSTOM_CARD_ProductDocs_c&fndTaskItemNodeId=CRM_CUSTOM_TAB_ ProductDocs_c&fnd=
%3BsubTabName%253DSUMMARY%253BObjectId%253D@{1}%253B%3B%3B%3Bfalse%3B256%
```

   This shows the result of the Edit Action page when the correct values are added.



4. Check **Hidden**.

ORACLE

5. Click **Ok**.
6. Click **OK** to edit the Action Link window. The Column Properties window appears.
7. Click the **Data Format** tab.
8. Check the **Override Default Data Format** and select **Number** for Treat Number As.
9. Click **OK** and save.
10. Select the Results tab. Now the document name column shows the link. When users click the link, they're taken to that record detail in simplified page.

    This shows an analysis with deep links from the document name column. This analysis with links to drill-down detail can be viewed on the Analytics page or any analytics tab.

Table

Product Docs Id	Record ID	Doc Name	Rating	URL
0001	300000126471973	Whitman Competitive Update	2	https://www.oracle.com/applications/index.h
0002	300000126471976	Noyce Competitive Update	4	http://www.oracle.com/us/solutions/cloud/sm
0003	300000126471977	IT Industry Annual Tablet Review		http://www.oracle.com/us/solutions/cloud/co
0004	300000126471978	Green Server 1000 Video	5	https://www.oracle.com/servers/sparc/t7-1/ir
0005	300000126471982	Green Server 1000 Brochure	3	http://www.oracle.com/us/products/servers-
0006	300000126471992	Green Server 3000 Video	5	https://www.oracle.com/servers/sparc/t7-2/ir
0007	300000126471993	Green Server 3000 Brochure	3	http://www.oracle.com/us/products/servers-
0008	300000126471994	High Tech Industry Server Facts	4	http://www.oracle.com/us/industries/high-tec
0009	300000126471999	Engineering &Construction Demo	5	https://demo.oracle.com/quicktours/?LP=9&
0010	300000126472000	Industrial Manufacturing Portal	5	https://demo.oracle.com/quicktours/?LP=10
0011	300000126472003	Chemical Industry Presentation	3	https://demo.oracle.com/quicktours/?LP=8&
0012	300000130425150	Automotive Industry Brochure	4	http://www.oracle.com/us/industries/automo
0013	300000130425151	Education Inustry Brochure	2	http://www.oracle.com/us/industries/educati
0014	300000130425152	Life Science Webiste for Sales Materials	3	https://www.oracle.com/industries/life-scienc

These same steps can be performed for any of the standard objects for sales and service using the deep link format and embedding links in the BI analyses.

Sandboxes

Overview of Sandboxes

You use sandboxes to make application changes and test them without impacting other users in the environment. Wherever possible, make changes to the application in a sandbox rather than making direct changes in the mainline environment.

Sandboxes isolate untested configuration changes from the mainline environment. So you can test your changes in the sandbox and then publish it to make your changes available in the mainline metadata or other sandboxes after they're refreshed. After you publish, end users can see your changes after they sign out and sign back in.

Why You Need Sandboxes

Today's business landscape is quite dynamic. Companies are expected to respond quickly to address both customer and market needs. So multiple teams need to make application changes at the same time while sharing the same data model and configuration starting point. But you may get conflicts between teams working that way. To avoid such conflicts, sandboxes come in handy.

Here are a few things you can do using sandboxes:

- Select the configuration tools to enable for your sandboxes while creating them. Since you enable all configuration tools in the same way using the Sandboxes UI, you get a consistent sandbox experience across tools.
- Restrict access to various sandbox activities for users. For example, you can specify these access rights for your sandboxes:
  - Full access
  - Edit and preview access
  - View only access
- View just your application changes without having other context layers hide your content.
- Test your changes in a preview mode that shows you exactly how your application changes would appear in a published sandbox.
- Refresh and merge sandboxes with latest changes in mainline metadata from other published sandboxes. After merging all changes, you can publish your sandbox.
- If you register your target environment in your source environment, you can do these additional migration tasks using the Migration UI:
  - Migrate your changes from the test environment to the target environment without manually downloading and uploading the configuration set file.
  - Move only new changes from the source environment to the target environment.

Sandbox Usage

You typically use sandboxes for either of these purposes:

- Test-Only: You can make application changes using test-only sandboxes, which you don't want to publish to the mainline code.
- Publish: Once satisfied with the application changes made in the test-only sandbox, you can replicate these changes in a sandbox that you want to publish. And then publish your changes to the mainline code. This sandbox type is also known as the integration sandbox, because teams working in parallel use this sandbox as the final staging point before publication to the mainline code.

> **Note:** Before each patch or upgrade, publish or delete your sandboxes. If you haven't yet completed your work, restart with a new sandbox.

Related Topics

- Create and Activate Sandboxes
- Migrate Your Configurations

Create and Activate Sandboxes

To make changes to the application, you must first store the changes in an active sandbox. You can either create a sandbox or select an existing one, and make it active.

Watch video

You must activate the configuration tools you want to use in your sandbox. If you plan to use Page Composer in your sandbox and edit pages at a layer other than Site, you need to create a sandbox just for that layer, and activate only Page Composer in it.

Create and Activate Sandboxes

Follow these steps to create and activate sandboxes for most configuration tools. For flexfields, use the **Manage Descriptive Flexfields** task or the **Manage Extensible Flexfields** task instead.

1. Click **Navigator** > **Configuration** > **Sandboxes**.
2. On the Sandboxes page, click **Create Sandbox**.
3. Enter a name and description for your sandbox.
4. In the **Publishable** field, select **Yes** or **No**. If you set this option as **No**, you can just use your sandbox for testing purposes, but can never publish it.
5. In the All Tools section, select the tools you want to activate for this sandbox. The context layers for all selected tools are set as **Site** by default. So the changes you make using these tools affect all users.
6. If you select Page Composer, you can click the **Edit Sandbox Context** icon and change the context layer from **Site** to another layer, for example **Internal**. You can find the **Edit Sandbox Context** icon in the Support Context column. Make sure you select a context that's supported by the page you want to edit. Otherwise, you won't be able to edit the page.

   > **Note:** If you want to use other tools along with Page Composer in your sandbox, don't change the context layer for Page Composer, even though you can. That's because all tools except Page Composer support only a single context layer, Site. So if you change the context layer for Page Composer from Site to any other layer, all other tools that you might have selected earlier will be deselected.

7. Click **Create** to just create the sandbox, or **Create and Enter** to enter or activate the sandbox after creating it.

Here are a few things to know about activating tools in your sandbox.

- If you try to use a configuration tool in a sandbox without activating the tool in it, you get a message prompting you to activate the tool. You can add more tools to your sandbox later also.
- To create and manage saved searches and make UI adjustments (for example, change a table's column width) just for yourself, you must leave your sandbox before making these changes. But if you want to make these changes for others too, then make the changes with Page Composer open, in which case you also must be in a sandbox.

Activate Existing Sandboxes

Follow these steps to activate a sandbox.

1. Click **Navigator** > **Configuration** > **Sandboxes**.

2. From the list of sandboxes, if available, find the one you want to activate, and click the **Enter Sandbox** icon for that sandbox. Your sandbox is activated, and you can see its name on the sandbox bar before the global header. You can use the options available on the sandbox bar to quickly do some activities, such as view sandbox details, publish the sandbox, or leave the sandbox.

Publish Sandboxes

After you're done making changes to the application, publish the sandbox to make your changes available to all users. You must have the Administer Sandbox (FND_ADMINISTER_SANDBOX_PRIV) privilege to publish sandboxes.

> **Note:** Remember, you can't make further changes in the sandbox once you publish it.

Before you start, do these tasks:

- Test or validate your changes in the sandbox in preview mode before actually publishing it. If you made changes using Page Composer, don't forget to close it before testing. To preview your changes, on the sandbox bar before the global header, click **Sandbox Mode**, and select **Preview as if Published (Context: All)**.

  > **Note:** You can see the sandbox bar only when you're in an active sandbox.

- Resolve all conflicts flagged in the merge log of your sandbox.

To publish a sandbox:

1. Click **Navigator** > **Configuration** > **Sandboxes**.
2. On the Sandboxes page, click the name of the sandbox you want to publish.
3. Click **Publish**.

   > **Note:** You might not be able to publish your sandbox because of various reasons. For example, you haven't yet made any changes in your sandbox, or the **Control Publish Sandbox Action in Production Environment** profile option (FND_ALLOW_PUBLISH_SANDBOX) is set to **No**.

4. Click **Continue** to Publish. The sandbox is published to the mainline metadata.
5. Click **Done**.

Related Topics

- Create and Activate Sandboxes

Infolets

Overview of Infolets

An infolet is a small interactive widget that gives you key information and shows you what's going on in the areas you work on. You might also find something in an infolet that you need to follow up on.

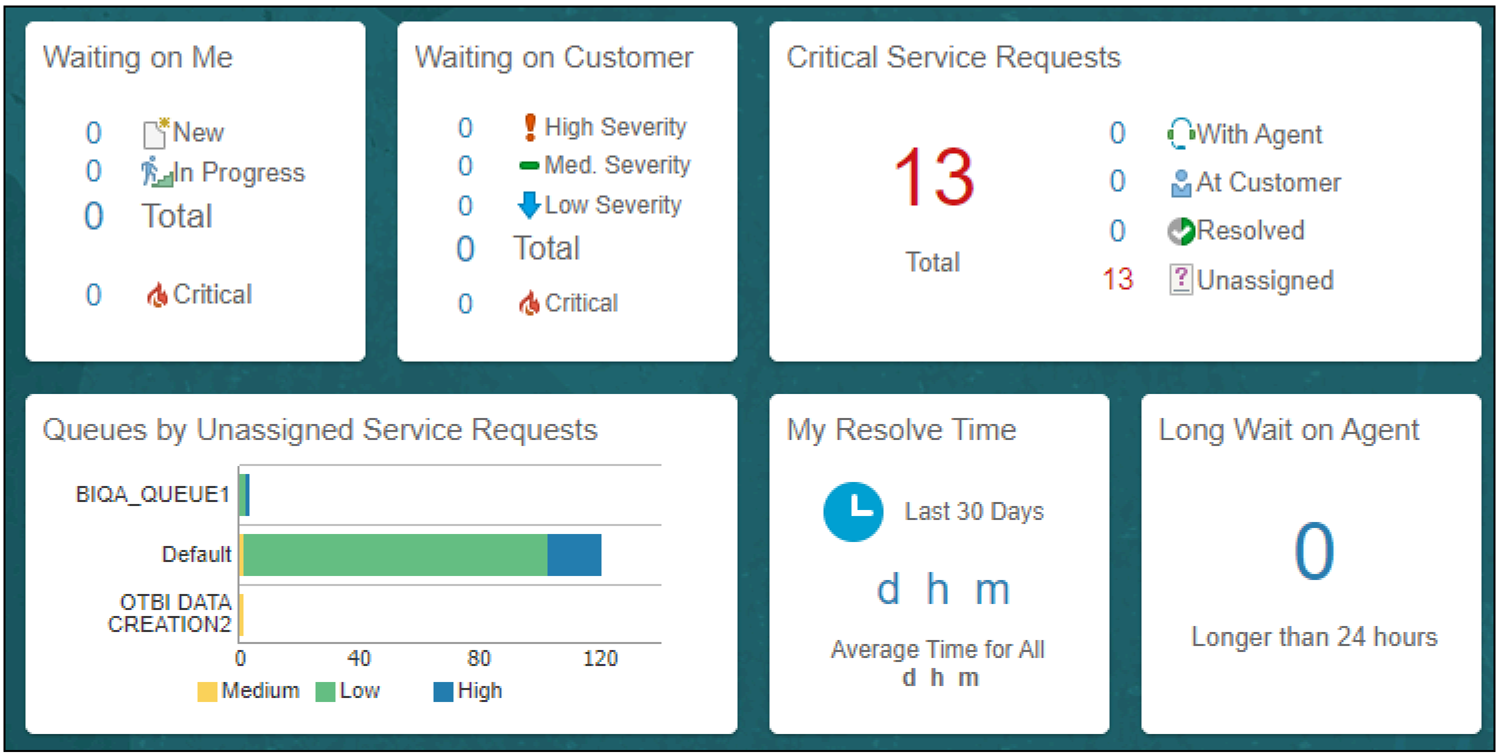
You can use infolets arranged in tabs in the Analytics section of your home page.

Here are a few things to know about infolets.

- Infolets have a front view, and might have a back and expanded view. Use the **Back View**, **Front View**, and **Expanded View** icons at the bottom corners of an infolet to open these views.
- Your current infolet view persists as the default view the next time you sign in. For example, if you viewed a back view of the infolet in your last session, you will see the same infolet view by default in your next session.
- Some infolets might also contain links to detailed reports. You can click anywhere in the infolet area to drill down to the detailed report.
- You can also personalize the infolets. For example, you can move or hide them on the infolets page.
- If you don't see infolet pages on your home page, then your administrators must have disabled them to show on the home page.

Note: Some SCM or Procurement Cloud infolets might function differently from other infolets.

Here's how an infolet page looks.



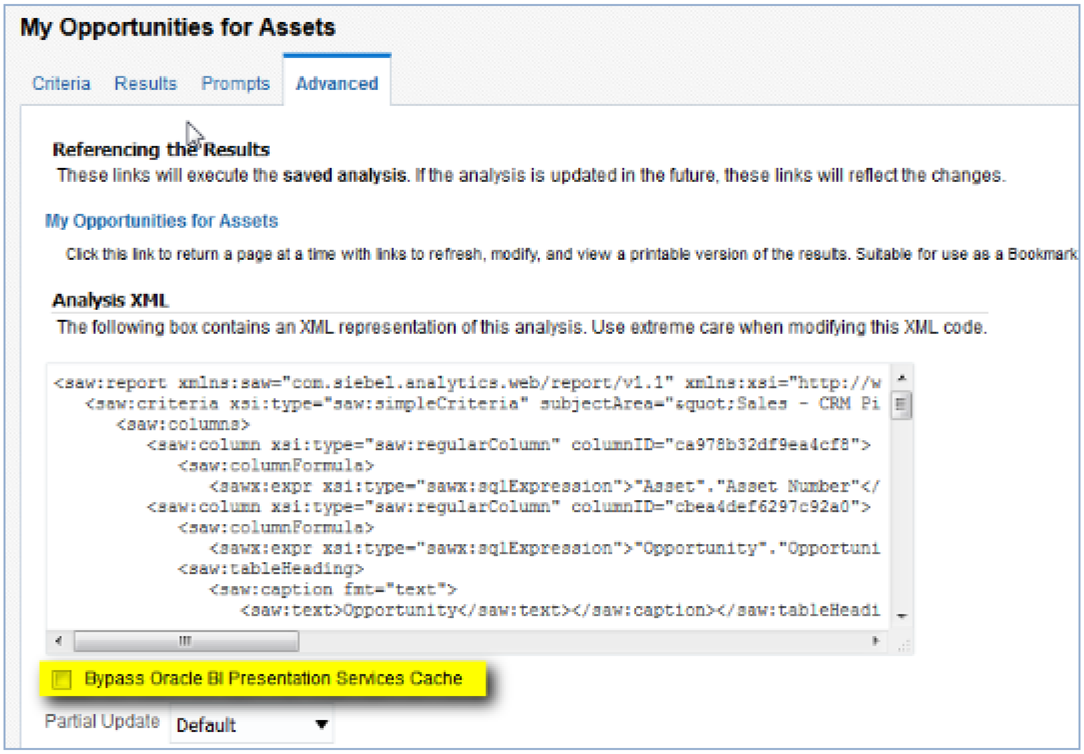
Infolet Caching

As you make changes to your infolets, remember that infolets are cached by default. Currently the default setting is to be cached one hour before the existing infolet content is invalidated and refreshed with new content.

Infolet Cache Override

You can manually override this action by opening your analytic in BI, then going to the **Advanced** tab, and checking the **Bypass Oracle BI Presentation Services Cache.** Once this check box in enabled your infolet analysis is visible immediately.

This image shows the control to bypass the presentation services cache, and make infolet changes immediately available.



Personalize Infolets

You can personalize the infolets on your infolets page, such as you can edit their titles and views, move them, or hide or show specific infolets on the infolets page.

Edit Infolet Titles and Views

1. Click the **Actions** icon on the top right corner of the infolet, and select **Edit Title and Views**.
2. Edit the infolet title, and enable or disable the infolet views.
3. Click **Save and Close**.

Reorder Infolets

You can change the position of an infolet within an infolet page.

1. Click the **Infolet Repository** icon, and select **Reorder Infolets**.
2. In the Reorder Infolets dialog box, select the infolets, and use the arrows to reorder them.

   Tip: To select multiple infolets, press the Ctrl key, and then select them.

3. Click **Apply**.

Hide or Show Infolets

To hide an infolet from an infolet page, click the **Infolet Repository** icon, and deselect the infolet from the list of infolets.

> **Tip:** Alternatively, click the **Actions** icon on the top right corner of the infolet, and select **Hide**.

To show a hidden infolet on an infolet page, click the **Infolet Repository** icon, and select the infolet from the list of infolets.

Related Topics

- Configure Infolet Display

Configure Infolets

Overview of Configuring Infolets

You can configure infolets that aggregate key information for a specific area, for example, personal profile.

Your users use infolets arranged in tabs in the Analytics section of the home page.

If your users don't find infolet pages on the home page, you can enable them by using the Home Configuration tab in the Structure work area. Let's look at some tasks you can do to configure infolets.

- Create infolets.
- Add content to infolets. For example, you can add a task flow or a performance tile report, and if an infolet contains a performance tile report, then you can add a link to a detailed report in the same infolet.

  > **Note:** In the context of infolets, a report is an analysis, not an Analytics Publisher report.

- Edit infolets. For example, edit infolet content and add, change, or remove link to detailed report.
- Delete infolets.

But before you start creating and editing infolets, here are a few things to keep in mind:

- You can add analyses from the catalog to an infolet, but not Analytics Publisher reports, or other objects like filters or prompts.
- To create or edit infolets, you must first either create and activate a sandbox, or activate an existing one. But make sure the sandbox has the Page Composer tool selected. If you want to make changes in a context layer that isn't the default layer, Site, you must create a separate sandbox just to use Page Composer in it. You can then change the context layer from Site to the other layer. For example, to create or edit infolets for a user with a specific job role, you must select the **Job Role** context layer.
- You can validate your changes in the sandbox in preview mode before you publish it.

Related Topics

- Configure Infolet Display
- Best Practices for Using Page Composer in Sandboxes

ORACLE

Create Infolets

Watch video

Use infolet pages to create infolets. You can create an infolet, add content to it, and link detailed reports. For some product-specific infolet pages, you can't create infolets.

1. Activate a sandbox that has the Page Composer tool in it.
2. Open an infolet page.
3. Click your user image or name in the global header, and on the **Settings and Actions** menu, select **Edit Pages**.
4. Click the **Infolet Repository** icon, and select **Create Infolet**.

   > **Note:** If you can't find the **Create Infolet** menu item, it either means you can't create infolets for this page, or the theme may be using a global text and icon color that's too light, impacting the visibility of the UI element.

5. Enter a title for the infolet and set its views.
   - Specify the dimensions for the front view.
   - Enable or disable the back view.
   - Enable or disable the expanded view, and specify its dimensions. The dimensions of the front and the back views must be the same, but the expanded view must be bigger because it displays more details.
6. Click **Save and Close**. You can now add content to infolets.

Add Content to Infolets

You can add content to the infolet's front, back, or expanded view. You can't add a business intelligence dashboard to an infolet because a dashboard report is generally bigger than an infolet.

1. Select the infolet's view that you want to add content to.

   > **Note:** To open infolet's back view, click the **Back View** icon on the bottom right corner of the infolet. And to open expanded view, click the **Expanded View** icon on the bottom right corner of the infolet's back view.

2. Click **Add Content** on the infolet. You can find this button on any of the infolet's views, but only if you don't have any existing content in that view.
3. Search and select a performance tile or a task flow, and click **Add**. You can browse the business intelligence (BI) catalog to find the analytics and reports that you want to add.
4. Close the Add Content dialog box. You can now add detailed reports to the infolet.

Link Detailed Reports to Infolets

To provide detailed information about a subject matter on an infolet, you can add a link to a detailed report. After you add the link, your users can click anywhere in the infolet area to drill down to that detailed report. The detailed report doesn't replace the existing infolet content.

First, add a performance tile report to the infolet content, and then follow these steps:

1. Click the **Actions** icon on the top right corner of the infolet, and select **Link Detailed Report**.
2. On the Detailed Report page, click **Add Content**.
3. Search and select a report, and click **Add** to add it to the infolet.
4. Close the Add Content dialog box.
5. Click **Done**. You can now publish the sandbox.

Publish the Sandbox

1. Preview the infolet's front view, drill down to the detailed report, and then preview the back and the expanded views.
2. After you made changes, click **Close** to leave Page Composer.
3. Test your changes and publish the sandbox to make the new infolet available to your users.

Related Topics

- Why don't I see infolets in the Analytics section of the home page?
- Overview of Sandboxes
- Create and Activate Sandboxes
- Best Practices for Using Page Composer in Sandboxes
- Why can't I see application changes made in previously published sandboxes in my current sandbox?

Edit and Delete Infolets

On the infolet page, use the options available on each infolet to edit infolet content and delete infolets.

1. Activate a sandbox that has the Page Composer tool in it.
2. Open an infolet page.
3. Click your user image or name in the global header, and on the **Settings and Actions** menu, select **Edit Pages**.

   > **Note:** After you're done making changes, click **Close** to leave Page Composer, test your changes, and publish the sandbox.

Edit Infolet Content

1. Click the **Actions** icon on the top right corner of the infolet, and select **Edit Content**.

   > **Note:** To edit the infolet content of the back or expanded view, open the view and use the **Actions** icon on that view.

2. Click **Add Content** to replace the existing content of the infolet.
3. Search and select a performance tile or a task flow, and click **Add**. You can browse the business intelligence (BI) catalog to find the analytics and reports that you want to add.
4. Close the Add Content dialog box.

Edit Title and Views

To edit title and views of an infolet, click the **Actions** icon on the top right corner of the infolet, and select **Edit Title and Views**.

Edit or Remove Detailed Report

You can edit or remove the detailed report.

1. Click the **Actions** icon on the top right corner of the infolet, and select **Edit Detailed Report**.
2. On the Detailed Report page, you can edit or remove the detailed report.
   - To edit, click **Edit Report** and make changes to the detailed report.

- To remove, click **Remove Report**.

3. Click **Done**.

Edit Infolet Visibility

You can show or hide an infolet on the infolet page. To edit the visibility settings of an infolet, do these steps:

1. Click the **Actions** icon on the top right corner of the infolet, and select **Edit Visibility**.
2. Select one of these options:
   - **Yes**: The infolet appears on the infolet page.
   - **No**: The infolet doesn't appear on the infolet page.
   - **EL Expression**: The evaluation of the EL expression decides whether the infolet appears on the infolet page.

Delete Infolets

To delete an infolet, click the **Actions** icon on the top right corner of the infolet, and select **Delete**.

> **CAUTION:** You can't easily retrieve an infolet once you delete it. But if you have accidentally deleted any infolet, don't worry. Contact My Oracle Support at https://support.oracle.com.

Related Topics

- Overview of Sandboxes
- Create and Activate Sandboxes

FAQs for Infolets

Why don't I see infolets in the Analytics section of the home page?

That's probably because the infolet page is hidden.

Change the visibility setting of the infolet page using the Home Configuration page of the Structure work area. To open this page, click **Navigator** > **Configuration** > **Structure**, and then click the Home Configuration tab.

Related Topics

- Configure Infolet Display

How can I rename an icon for an infolet page in the page control on the home page?

You can rename an icon for an infolet page using the Home Configuration page of the Structure work area. To open this page, select **Configuration** > **Structure** from the Navigator menu, and then click the **Home Configuration** tab.

Related Topics

- Configure Infolet Display

What's the difference between a performance tile report and a detailed report added to the infolets content?

Performance tile report shows data in the small infolet format. When you add a performance tile report to an infolet, users can see only the summary information about the subject matter. But this report doesn't provide detailed information.

To provide detailed information about the subject matter on the same infolet, add a link to a detailed report. Users can click this link to gather more information.

Analytics on Object Pages

Analytics on Object Pages

Administrators can add analytics to object landing and edit pages. The object landing pages are the pages sales teams interact with every day like the Opportunities, Accounts, or Contacts pages.

For the object landing pages there are two steps:

1. Enable the Analytics tab.
2. Add an analytic to the enabled tab.

For the edit object pages, there are three steps:

1. Set the "Is "Prompted" filter on the analytic in BI.
2. Enable the Analytics tab.
3. Add the analytic to the enabled tab.

Note: The Service Request and Work Order landing pages don't have the option for adding analytics.

Enable Analytics Tabs for Object Landing Pages

The analytics on your object pages don't show by default. Administrators must enable the feature before they can add analytics to object pages.

Enable Landing Page Analytics Tabs

This uses the Opportunities object landing page as an example. The steps are the same for all of the object landing pages.

1. In Navigator click Structure.
2. Choose Sales, then Opportunities.
3. On the analytics row, change the value for visible column to "Yes."
4. Click **Save and Close**.

Add an Analysis to the Object Landing Page

After the analytics tab is enabled, administrators add the analytic to the landing page tab. This procedure uses the Opportunity landing page as an example. The procedure is the same for all object edit and landing pages.

Add an Analysis to the Opportunity Landing Page Tab

1. In a specific opportunity, select the Analytics tab. You enabled this tab in the previous section.
2. At the top of the Home Page click the arrow next to your name and select Edit Pages.
3. Select **Job Role** and choose the role to which your change should apply. Any analytics you add in this context apply only to the role you define here.
4. In Opportunities on the analytics tab click **Add Content** and navigate to the analysis you want to show on the Opportunity page.
5. Click **Add** next to the analysis and close the dialog. The analysis is now added to the Analytics tab.

Enable Sub Tabs and Add Analytics to Object Edit Pages

There are three steps to adding analytics to object edit pages.

1. Set the "Is Prompted" filter in the analytic in Business Intelligence. This step is used when the requirement is to view contextual data specific to the record selected.
2. Enable the sub tab on the object page.
3. Add the analysis to the sub tab on the object page.

All of these steps are done using the Opportunities landing and edit pages. You can use these same steps for any of the object pages listed as analytics work areas in the sub table at the start of this section.

For service, the Service, Work Order, and Queue pages use the same procedures.

Set the "Is Prompted" Filter

For analytics to show on your user Opportunity pages you enable the "Is Prompted" filter on the name or object ID for the analysis. Adding this filter adds an analytic with data that relates only to the opportunity your user is currently viewing.

1. Open an existing analysis, or create a new analysis in BI.
2. In the report Criteria sub tab, select the Filter icon for the appropriate column. Under Operator, select **is prompted**. Leave the other options blank.
3. Click **OK**.

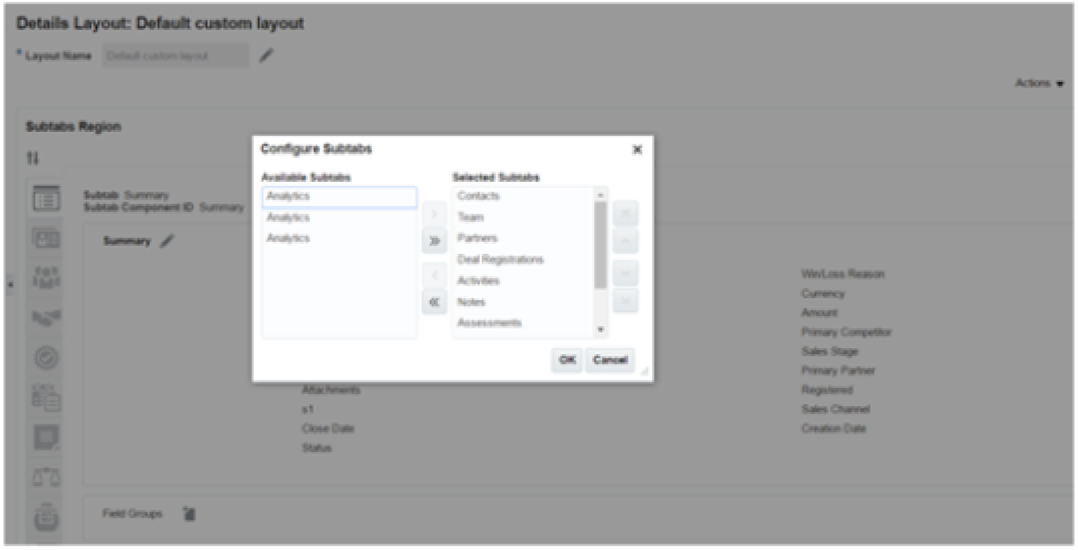
Enable Object Edit Page Analytics Sub Tabs

This procedure uses the Opportunity object landing page as an example. The procedure is the same for all object edit pages.

1. In Navigator click Application Composer.
2. Select **Sales** from the Application drop-down list.
3. Expand **Standard Objects** and go to **Opportunity**.
4. Under Opportunity click **Pages**.

5. Under **Detail Page Layouts** copy the standard layout or select an existing created layout where the Analytics sub tab is added.
6. Click the Reorder sub tab.

   This shows the Configure sub tab option for the edit object page.



7. Click **OK**.
8. Click **Done**. The Analytics sub tab now shows on the Edit Opportunity page.

Add Analytics to Edit Object Sub Tabs

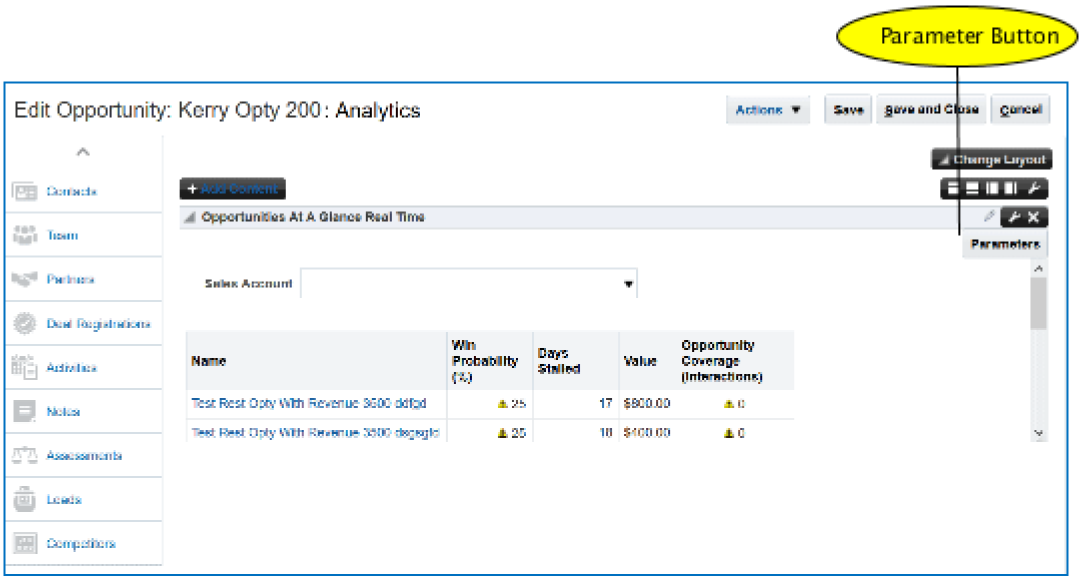
The final step is to add an analysis to the Edit Object sub tab you've just enabled. When an analysis is added to the object page, it shows data specific to the signed in user's transaction record. The specific data shows because of the "is prompted" filter being set in the analytic which passes parameters from the transaction record to the analytic. A parameter is visible in the analytic when a filter prompt is added.

1. At the top of the Home Page click the arrow next to your name and select Edit Pages. The Edit Pages dialog appears.
2. Select **Job Role** and choose the role to which your change should apply. Any analytics you add in this context apply only to the role you define here.
3. In Opportunities on the analytics sub tab click **Add Content** and navigate to the analysis you want to show on the Opportunity page.
4. Click **Add** next to the analysis and close the dialog. The analysis is now added to the Analytics sub tab.

5. Next step you want to either save the default parameters, or add parameters specific the object your are working with.

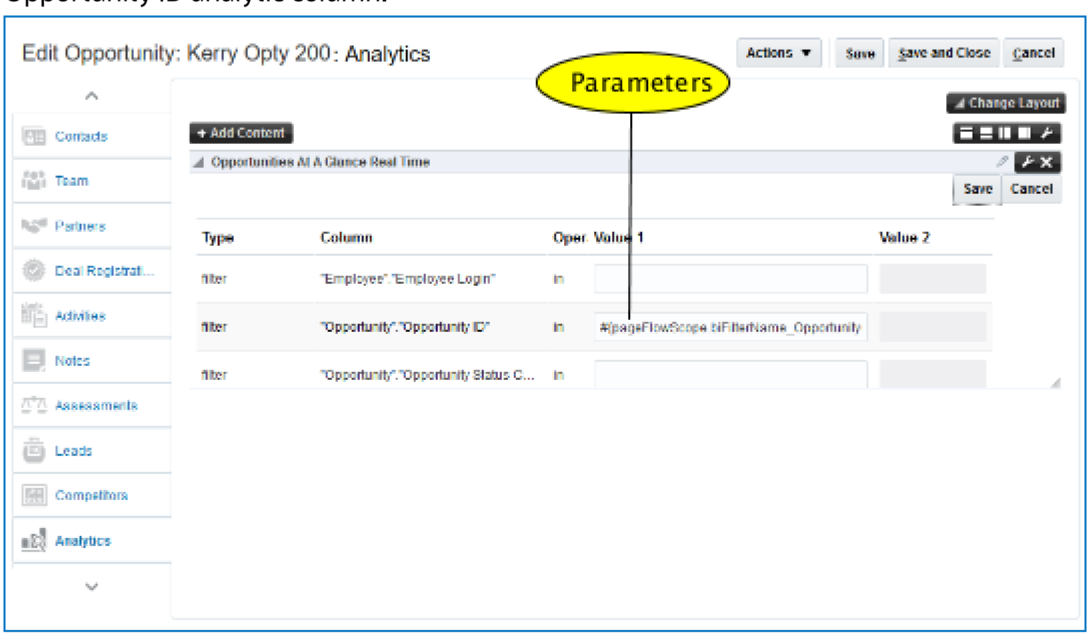
   Click **Parameters**.

   This shows the Parameters button on the Edit Opportunity analytic.



6. The parameter used is `pageFlowScope` variable and is set by default for Opportunity, Leads, Partners, Service Request and custom object pages. For example, in the case of Opportunity the parameter is `#pageFLowScope.biFilterName_OpportunityOpportunityId`. In the case of Service Request it's `"#{pageFlowScope.biFilterName_ServiceRequestServiceRequestId}"` . If for any reason the parameter field is blank, insert the variable manually and save it.

   This shows the parameter value of #pageFLowScope.biFilterName_OpportunityOpportunityId on an Edit Opportunity ID analytic column ..#pageFLowScope.biFilterName_OpportunityOpportunityId on an Edit Opportunity ID analytic column.



7. For the objects that aren't prepopulated with the `pageFlowScope` parameters, you can use one of these `sessionScope` variables depending on which object page you're on, and the columns available in the analytic.
   - Customer ID: `#{sessionScope.zcmAnalyticsCustomerId}`
   - Contact ID: `#{sessionScope.hzAnalyticsContactPartyId}`
   - Contact Name: `#{sessionScope.hzAnalyticsContactName}`
   - Lead ID: `#{sessionScope.mklAnalyticsLeadId}`
   - Opportunity ID: `#{sessionScope.mooAnalyticsOpportunityId}`
   - Partner ID:`#{sessionScope.zpmAnalyticsPartnerId}`

Expose the Refresh, Export, and Print Links on Tabs

When you're working with analytics on tabs on your interface objects, you have the option of exposing the Print, Export, or Refresh links for the analytics you add to the tabs.

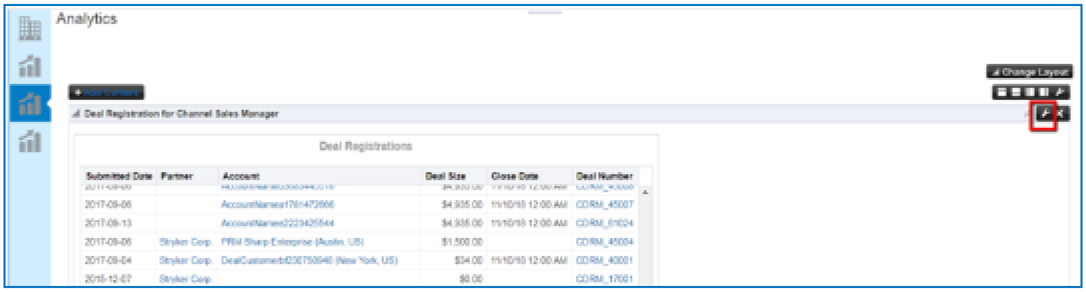
This shows the Refresh, Print, and Export links on an analytic from a tab on the Analytics page.

How to Expose the Refresh, Export and Print Links

To expose the links for refresh, export, and print on analytics from object tabs, you modify the component properties in Page Composer.

1. Highlight the analytics tab and click the Edit Component Properties wrench icon.

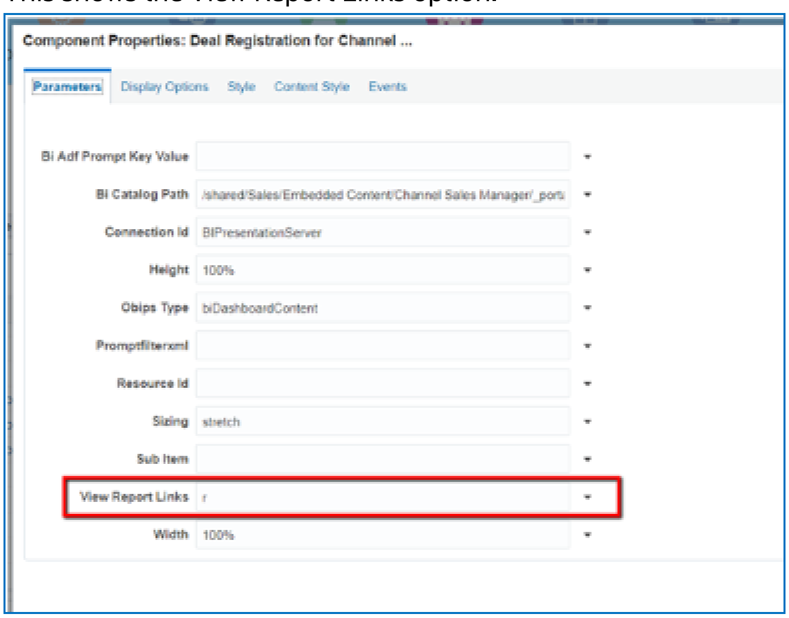
   This shows the Page Composer option to modify component properties for a analytics tab.

2. In Component Properties dialog, go to **View Report Links**.
3. In the View Report Links field,, the following values can be entered:

   - Add "r" to expose the Refresh link.
   - Add "f" to expose the Print link.
   - Add "d" to expose the Export link.
   - Add more than one of these options separated by a comma: r,f,d.

     This shows the View Report Links option.

Paths and Links to Analytics

Your analytics are stored in BI. You are expressing that analytic that's stored in BI in a different location. So when you add an analytic to an infolet, you need to define that path to the analytic.

Find Analytic Pathways

1. From the Navigator, click **Reports and Analytics**.
2. Click the directory icon on the Reports and Analytics page.
3. Go to Sales, Embedded Content, and navigate to the analytic.
4. Highlight the analytic you want, right-click and click **More.**
5. Under your analytic name, click **More**, then **Properties.**
6. From the **General** area, go to **Location** and copy the path.

   The path is your report location for your sales infolets.
7. Click **OK**.

   Repeat the steps 1 through 6 to find your tile analytics.

Session Variables for Reporting

You can configure analyses to show user-specific analytic data on the work areas for your users. This is done by adding session variables to the analytic.

Using the Session Variable

The Session Variable stores information about, or changes settings for a user session. Variables stored in a Session object hold information about one single user, and are available to all pages in one application. Common information stored in session variables are name, ID, and user preferences.

More on OTBI variables

If a report has multiple report-level filters, they would all show up under the session scope list, although the option of providing the value of the session scope variable is limited to these objects:

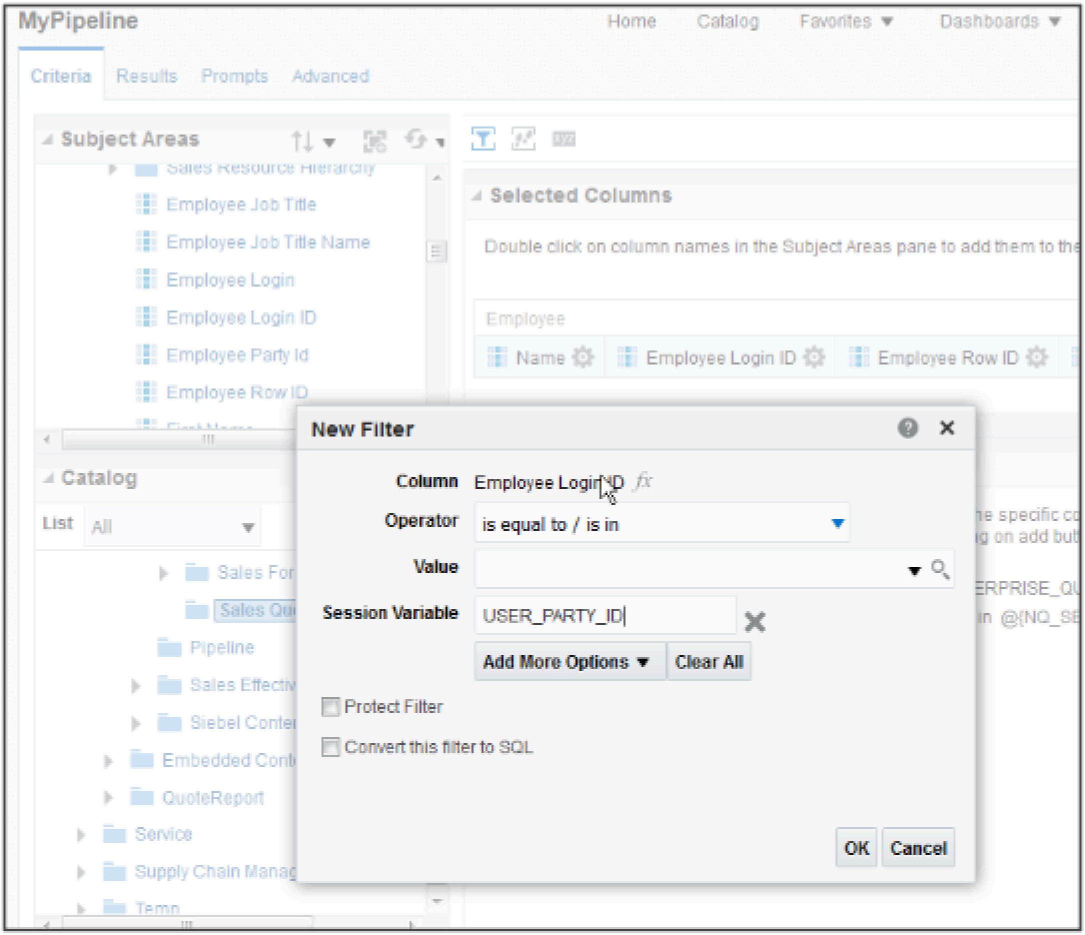
- Customer ID :#{sessionScope.zcmAnalyticsCustomerId}
- Contact ID: #{sessionScope.hzAnalyticsContactPartyId}
- Contact Name: #{sessionScope.hzAnalyticsContactName}
- Opportunity ID: #{sessionScope.mooAnalyticsOpportunityId}
- Partner ID: #{sessionScope.zpmAnalyticsPartnerId}

When a report is added to the Edit objects page, for example, you expect it to show the data specific to that transaction record. This is achieved by having a session filter prompt so that the parameters can be passed from the transaction record to the report. But session scope variables are limited to specific objects. You might also use the the IsPrompted filter on the column you want to filter for session results.

Show User Session Data with USER_PARTY_ID

Use the session variable as another way to show data in an analytic specific to the logged in user.

This shows the New Filter option for adding a session variable that shows an analysis for a signed in user.



10 Schedule and Share Analytics

Create Briefing Books

Use briefing books to hold a collection of analytic snapshots. These snapshots give you a picture of what's going on at the time the analytic is added, downloaded, or rerun. You can download briefing books as PDFs or MHTML to view, print, or

Add Content to New Briefing Books

1. Open the Reports and Analytics work area.
2. Click **Browse Catalog**.
3. Select your analytic, then click **More** and select **Add to Briefing Book**.

   Or, find your dashboard and click **Open**.

   a. Go to the dashboard page you want to add.
   b. Click the **Page Options** button and select **Add to Briefing Book**.
4. Select **Updatable** if you want the analytic results refreshed whenever the briefing book is downloaded or rerun, or **Snapshot** to store it without updating.
5. Click **Browse**.
6. Name your briefing book and save it in **My Folders**.

Add Content to Existing Briefing Books

1. Open the Reports and Analytics work area.
2. Click **Browse Catalog**.
3. Select your analysis, then click **More** and select **Add to Briefing Book**.

   Or, find your dashboard and click **Open**.

   a. Go to the dashboard page you want to add.
   b. Click the **Page Options** button and select **Add to Briefing Book**.
4. Select **Updatable** if you want the analytic results refreshed whenever the briefing book is downloaded or rerun, or **Snapshot** to store it without updating.

Download and Edit Briefing Books

1. Open the Reports and Analytics work area.
2. Click **Browse Catalog** to locate your briefing book, and click **PDF** to download it.

Schedule Analytics, Dashboard Pages, and Briefing Books

You can schedule Analytics, dashboard pages, and briefing books to run when you need them. You can also schedule other automated tasks, for example to deliver results to specific recipients, send notifications, or to generate a list of changes implemented today using the

Create an Agent

1. Open the Reports and Analytics work area or the Reports and Analytics panel tab if available in other work areas.
2. Click **Browse Catalog**.
3. Click the **New** icon and, from the Actionable Intelligence section, select **Agent**.
4. Make sure you enter information on the Delivery Content tab to specify the analysis, dashboard page, or briefing book to run. Browse for the analysis, dashboard page, or briefing book, which must be specified to generate an attachment.
5. Click the **Save this Agent** icon and save it in **My Folders**.

Related Topics

- Schedule Reports

Schedule Snapshots of Your Sales Historical Pipeline

Keep an eye on your bottom line using the Generates Sales Historical Snapshots scheduling process. You get daily snapshots of your sales pipeline as well as snapshots of opportunity and revenue trends over time.

Snapshots are designed to work only when your enterprise calendar is configured to be either Monthly or Weekly. So you need to be sure to set up your calendar to be weekly or monthly before you start using snapshots.

The Generates Sales Historical Snapshots feature uses the **Sales - CRM Historical Pipeline** subject area to cull information on your key pipeline data.

> **Note:** The snapshot data will be retained for the new value for parameter for the days starting from the day the profile option was changed as long as the count of snapshot records (opportunity and revenue combined) does not cross 10 million records.

Configure Historical Snapshots

The Generates Sales Historical Snapshots scheduled process captures opportunity and revenue snapshots for open opportunities and opportunities closed within the time period you specify. You can set up a snapshot to run once, or set it up to run daily, weekly, monthly, yearly, or on your own time frame. You can also choose the number of days after which opportunities have been closed to continue to take a snapshot of the opportunity and its corresponding revenue information.

To configure your Sales Historical Snapshots scheduled process:

1. Navigate to **Setup and Maintenance, All Tasks**.
2. Under **Name**, search for **Manage Opportunity Profile Options**.
   The search results returns the Manage Opportunity Profile Option in the bottom of the window.
3. Click **Go to Task** on the row that holds the Manage Opportunity Profile Options search result. The Manage Opportunity Profile Options page appears.
4. Under **Profile Option Code**, enter `MOO_MANAGE_SALES_HISTORICAL_SNAPSHOT_CONFIGURATION`. Search for that profile.
5. Under **Profile Values** on the right ensure that the value are `C=120,D=120,W=58,M=14,Q=5`.
   The Profile Values are defined the following ways:
   - C is number of create snapshots for closed opportunities closed within the last C days. This value must be greater than zero.
   - D is number of days to retain daily snapshots. This value must be greater than zero.
   - W is umber of weeks to retain weekly snapshots if the enterprise calendar is a week based calendar.
   - M is number of months to retain monthly snapshots if the enterprise calendar is a month based calendar.
   - Q is number of quarters to retain a quarterly snapshot.

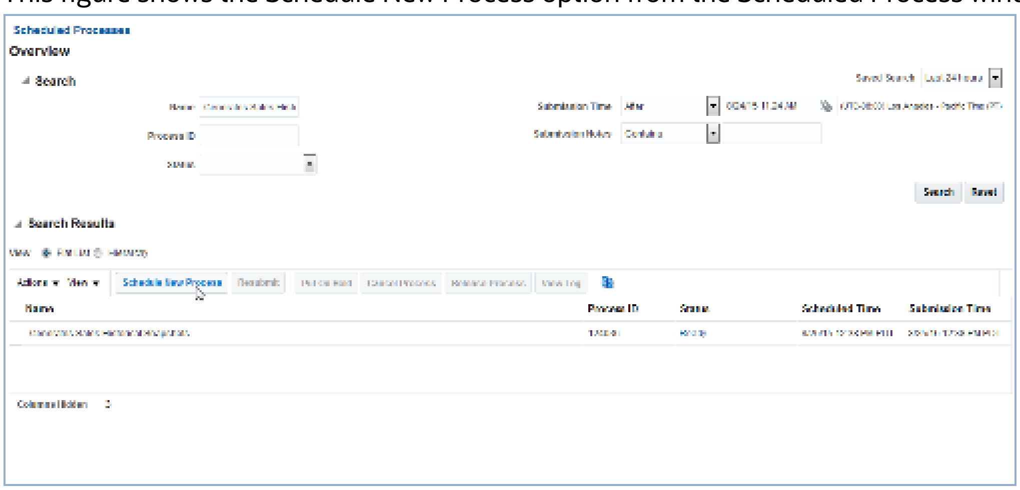
> **Note:** An upper limit of 10M snapshot records (opportunity and revenue records combined) is supported and once the record limit is reached, the snapshot process automatically purges records by oldest snapshot date until the record count is brought under the limit.

Schedule Historical Snapshots

You can schedule your Sales Historical Snapshots processes either from the SUI, or from the desktop UI.

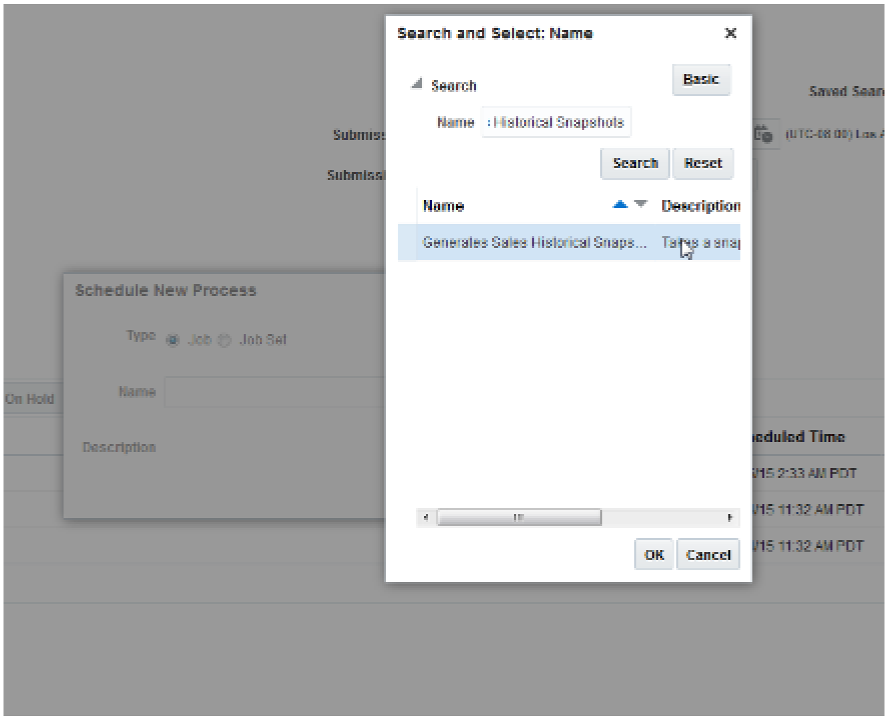
To schedule your sales historical snapshots processes:

1. From the menu options choose **More** then **Scheduled Processes**.
2. Click the **Schedule New Process** tab.
   This figure shows the Schedule New Process option from the Scheduled Process window.



3. If you haven't already run this process, in which case it will show under the search results on the Scheduled Processes starting page, then you will search in the **Scheduled New Process** dialog. Click to view all of the choices. At the bottom there is a Search option. Click **Search** and enter **Generates Sales Historical Snapshots**. In Search Results highlight Generates Sales Historical Snapshots and click **OK**. The Schedule New Process dialog appears. Click **OK** again.

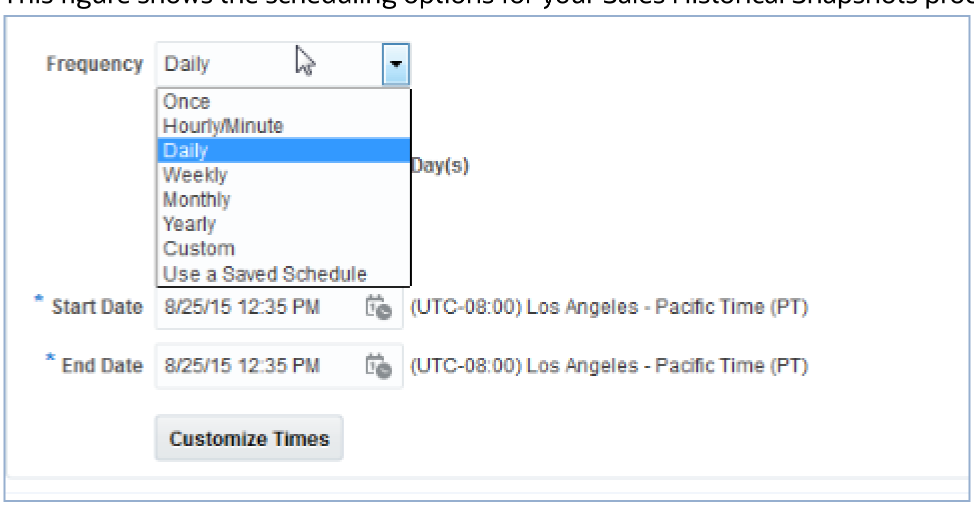
   This figure shows the Search and Select dialog for choosing your Generate Sales Historical Snapshots process.

4. In the Process Detail dialog click the **Advanced** tab.

   Here you set set when your process runs,, whether it is daily, weekly, or monthly. You will also set the start and end date.

   This figure shows the scheduling options for your Sales Historical Snapshots processes.

5. Click the **Notification** tab and define whom you want to be notified if the process run is successful, if it generates an error, or if there are warnings.

6. When you're finished with your scheduling process details for times, frequency, and notifications, click **Submit**.
   Your Generate Sales Historical Snapshot is now completed.

11 Analytics Folders

Where to Save Analytics and Reports

You save analyses, dashboards, and reports in the catalog, along with other objects like prompts and filters.

Besides the hierarchy of folders organized by product family, another important folder is Custom, found in Shared Folders. This is where you save the analytics and reports you create or edit for others to use.

Shared Folders and the Custom Subfolder

Anyone with the correct access can get to objects stored in Shared Folders. If you have the appropriate roles, you can save in Shared Folders so that your objects are available for other users. You should save objects in the Custom subfolder, and use the product family subfolders to organize and publish analytics and objects for the correct audiences.

Here are a few things to know while working with analytics in the catalog. Keep all modified analyses and reports in the Custom folder. Directly edit predefined analytics only when it's necessary to make sure that any references to the analysis or dashboard still work properly.

- Preserve modified predefined objects during updates, which can make changes to predefined analytics, reports, and other objects outside the Custom folder. You might lose changes saved outside the Custom folder during updates.
- You can easily find modified objects if they're not spread around the catalog.
- You can edit objects in the Custom folder without compromising security on the original objects.
- For predefined reports only, you can use a special **Customize** option to copy the report and also the folder structure and permissions. The copy is linked to the original, so editing the copy is like directly editing the original.

When you copy an object into the Custom folder, the copied object inherits the permission settings of the Custom folder. An administrator can reset the permissions on the object and the folder that it's in.

> **Note:** When you create folders in the catalog, don't use special characters (~, !, #, $, %, ^, &, *, +, `; |, :, ", \\, <, >, ?, ,, /) in their names.

My Folders

My Folders is your personal storage; you're the only one who can access anything that you save there. What you save there is available in the Reports and Analytics work area, but not in My Folders in the Reports and Analytics panel tab on any other work area. But an exception is when you create an analysis using the wizard in the Reports and Analytics work area. If you save a wizard analysis in My Folders, it's available in any panel tab that appears in any work area.

> **Note:** Don't store analyses or reports in the predefined Temp folder in My Folders. That folder is used by Analytics Publisher and purged automatically every 24 hours.

Create Folders

Create folders in Custom or My Folders.

To create folders:

1. In the catalog, navigate to the desired location of the new folder in the Folders pane.
2. In the catalog toolbar, click **New**, and select **Folder**.
3. In the New Folder dialog box, enter the folder name, and click **OK**.

Automatically Created Folders

If conflicts are detected during upgrade, folders named backup_nnn are automatically created in the catalog. After reviewing and resolving any conflicts, Oracle recommends that you manually delete the backup folders from the catalog. You can contact your help desk to request an automated removal if you have many folders to delete.

Related Topics

- What happens to modified analytics and reports when a release update is applied?

Manage Catalog Permission

You may want to remove access to predefined catalog folders so that those associated with offerings you don't use aren't displayed. You can hide the entire predefined catalog or selectively display root catalog folders for offerings.

To control which offerings are available, create a custom role based on the Custom BI Web cat Reporting Duty role and its associated roles for each. Using custom roles, you can manage folder access in a number of ways, depending on requirements and previous modifications you have made.

- Add duty roles for parent folders to the custom role so that all users see a subset of the predefined catalog. Add roles only for the offerings you want to retain access for.
- Don't add any catalog reporting duty roles for any offerings to the custom role to hide the entire predefined catalog and display only **/Shared/Custom** folders. For example, you can remove BI catalog access for external users such as partners who have no access to reporting.
- Delete all catalog reporting duty roles from the custom role. Also, add catalog reporting duty roles to a new or existing job role so that job roles with BI access get default access to the predefined catalog. For example, by default, Financial job roles have access to Financial reporting content but Human Capital Management job roles don't have access to the predefined HCM BI catalog. You can grant the Human Capital Management Folder Reporting Duty role to new job roles to allow access to predefined HCM reports.

Hide Predefined Catalog Folders

All authenticated users have the Custom BI Web cat Reporting Duty role, which inherits all of the folder reporting roles that determine access and visibility of root level catalog folders. Administrators with IT Security Manager privileges can hide predefined folders by creating custom roles based on this role and their associated roles from the duty role.

1. Open the Security Console.
2. Search for Custom BI Web cat Reporting Duty and review its duty roles to determine which to retain in your custom role.

3. Create a custom role.
4. Click **Actions** > **Add Role**.
5. Click **Next** twice to navigate to the Role Hierarchy step.
6. To hide all folders, leave the hierarchy empty. Add any roles for offerings you want to retain access for.
7. Run the **Import User and Role Application Security Data** process to synchronize security changes.
8. Click **Browse Catalog** in the Reports and Analytics work area and click **Administration**. In the Maintenance and Troubleshooting section, select **Reload Files and Metadata** to refresh the BI cache.

BI Reporting Roles

This table shows the mapping between shared root catalog folders, folder reporting roles, and job roles.

Catalog Folder	Duty Role	Duty Role Name	Associated Job Roles
/Shared/Common Content	BI_COMMON_CONTENT_REPORTING_DUTY	Common Content Folder Reporting Duty	None
/Shared/Customer Data Management	BI_CDM_REPORTING_DUTY	Customer Data Management Folder Reporting Duty	None
/Shared/Enterprise Contracts	BI_OKC_REPORTING_DUTY	Enterprise Contracts Folder Reporting Duty	ORA_OKC_CUSTOMER_CONTRACT_ADMINISTRATOR_JOB, ORA_OKC_CUSTOMER_CONTRACT_MANAGER_JOB, ORA_OKC_CUSTOMER_CONTRACT_TEAM_MEMBER_ABSTRACT, ORA_OKC_ENTERPRISE_CONTRACT_ADMINISTRATOR_JOB, ORA_OKC_ENTERPRISE_CONTRACT_MANAGER_JOB, ORA_OKC_ENTERPRISE_CONTRACT_TEAM_MEMBER_ABSTRACT, ORA_OKC_SUPPLIER_CONTRACT_ADMINISTRATOR_JOB, ORA_OKC_SUPPLIER_CONTRACT_MANAGER_JOB, ORA_OKC_SUPPLIER_CONTRACT_TEAM_MEMBER_ABSTRACT
/Shared/Extension	BI_EXT_REPORTING_DUTY	Extension Folder Reporting Duty	None
/Shared/Financials	BI_FIN_REPORTING_DUTY	Financials Folder Reporting Duty	ORA_AP_ACCOUNTS_PAYABLE_INVOICE_SUPERVISOR_JOB ORA_AP_ACCOUNTS_PAYABLE_MANAGER_JOB, ORA_AP_ACCOUNTS_PAYABLE_PAYMENT_SUPERVISOR_JOB, ORA_AP_ACCOUNTS_PAYABLE_SPECIALIST_JOB, ORA_AP_ACCOUNTS_PAYABLE_SUPERVISOR_JOB, ORA_AR_ACCOUNTS_RECEIVABLE_MANAGER_JOB, ORA_AR_ACCOUNTS_RECEIVABLE_MANAGER_SOD_JOB, ORA_AR_ACCOUNTS_RECEIVABLE_SPECIALIST_JOB, ORA_AR_

Catalog Folder	Duty Role	Duty Role Name	Associated Job Roles
			ACCOUNTS_RECEIVABLE_SPECIALIST_SOD_JOB, ORA_AR_BILLING_MANAGER_JOB, ORA_AR_BILLING_SPECIALIST_JOB, ORA_CE_CASH_MANAGER_JOB, ORA_EXM_EXPENSE_MANAGER_JOB, ORA_FA_ASSET_ACCOUNTANT_JOB, ORA_FA_ASSET_ACCOUNTING_MANAGER_JOB, ORA_FUN_INTERCOMPANY_ACCOUNTANT_JOB, ORA_GL_FINANCIAL_ANALYST_JOB, ORA_VRM_REVENUE_ANALYST_JOB, ORA_VRM_REVENUE_MANAGER_JOB, ORA_XCC_BUDGET_MANAGER_JOB
/Shared/Higher Education	BI_HED_REPORTING_DUTY	Higher Education Folder Reporting Duty	ORA_HEQ_ADMISSIONS_COORDINATOR_JOB, ORA_HEQ_ADMISSIONS_MANAGER_JOB, ORA_HER_ACADEMIC_COORDINATOR_JOB, ORA_HER_REGISTRAR_JOB, ORA_HES_BURSAR_JOB, ORA_HEY_STUDENT_SERVICES_MANAGER_JOB, ORA_HEY_STUDENT_SUPPORT_ADVISOR_JOB
/Shared/Human Capital Management	BI_HCM_REPORTING_DUTY	Human Capital Management Folder Reporting Duty	By default, predefined HCM job roles have no access to the predefined content.
/Shared/Incentive Compensation	BI_IC_REPORTING_DUTY	Incentive Compensation Folder Reporting Duty	ORA_CN_INCENTIVE_COMPENSATION_ANALYST_JOB, ORA_CN_INCENTIVE_COMPENSATION_MANAGER_JOB, ORA_CN_INCENTIVE_COMPENSATION_PARTICIPANT_ABSTRACT, ORA_CN_INCENTIVE_COMPENSATION_PARTICIPANT_MANAGER_ABSTRACT, ORA_CN_INCENTIVE_COMPENSATION_PLAN_ADMINISTRATOR_JOB
/Shared/Loyalty	BI_LOY_REPORTING_DUTY	Loyalty Folder Reporting Duty	ORA_LOY_LOYALTY_MARKETING_MANAGER_JOB, ORA_LOY_LOYALTY_PROGRAM_ADMINISTRATOR_JOB
/Shared/Manufacturing	BI_MFG_REPORTING_DUTY	Manufacturing Folder Reporting Duty	ORA_CSE_ASSET_ADMINISTRATOR_JOB
/Shared/Marketing	BI_MKT_REPORTING_DUTY	Marketing Folder Reporting Duty	ORA_MKL_SALES_LEAD_QUALIFIER_JOB, ORA_MKT_CORPORATE_MARKETING_MANAGER_JOB, ORA_MKT_MARKETING_ANALYST_JOB, ORA_

Catalog Folder	Duty Role	Duty Role Name	Associated Job Roles
			MKT_MARKETING_MANAGER_JOB, ORA_MKT_MARKETING_OPERATIONS_MANAGER_JOB, ORA_MKT_MARKETING_VP_JOB
/Shared/Partner	BI_ZPM_REPORTING_DUTY	Partner Folder Reporting Duty	ORA_ZPM_CHANNEL_ACCOUNT_MANAGER_JOB, ORA_ZPM_CHANNEL_ADMINISTRATOR_JOB, ORA_ZPM_CHANNEL_OPERATIONS_MANAGER_JOB, ORA_ZPM_CHANNEL_PARTNER_MANAGER_JOB, ORA_ZPM_CHANNEL_PARTNER_PORTAL_ADMINISTRATOR_JOB, ORA_ZPM_CHANNEL_SALES_DIRECTOR_JOB, ORA_ZPM_CHANNEL_SALES_MANAGER_JOB
/Shared/Procurement	BI_PRC_REPORTING_DUTY	Procurement Folder Reporting Duty	ORA_AP_ACCOUNTS_PAYABLE_MANAGER_JOB, ORA_AP_ACCOUNTS_PAYABLE_SPECIALIST_JOB, ORA_AP_ACCOUNTS_PAYABLE_SUPERVISOR_JOB, ORA_PO_BUYER_JOB, ORA_PO_PROCUREMENT_APPLICATION_ADMIN_JOB, ORA_PO_PROCUREMENT_INTEGRATION_SPECIALIST_JOB, ORA_PO_PURCHASE_ANALYSIS_ABSTRACT, ORA_POQ_SUPPLIER_QUALIFICATION_DISCRETIONARY, ORA_POR_PROCUREMENT_REQUESTER_ABSTRACT, ORA_POZ_SUPPLIER_ADMINISTRATOR_ABSTRACT, ORA_POZ_SUPPLIER_MANAGER_ABSTRACT
/Shared/Projects	BI_PRJ_REPORTING_DUTY	Projects Folder Reporting Duty	ORA_OKC_CUSTOMER_CONTRACT_ADMINISTRATOR_JOB, ORA_OKC_CUSTOMER_CONTRACT_MANAGER_JOB, ORA_OKC_CUSTOMER_CONTRACT_TEAM_MEMBER_ABSTRACT, ORA_OKC_ENTERPRISE_CONTRACT_ADMINISTRATOR_JOB, ORA_OKC_ENTERPRISE_CONTRACT_MANAGER_JOB, ORA_OKC_ENTERPRISE_CONTRACT_TEAM_MEMBER_ABSTRACT, ORA_PJF_GRANTS_ACCOUNTANT_JOB, ORA_PJF_GRANTS_ADMINISTRATOR_JOB, ORA_PJF_GRANTS_DEPARTMENT_ADMINISTRATOR_JOB, ORA_PJF_PROJECT_ACCOUNTANT_JOB, ORA_PJF_PROJECT_ADMINISTRATOR_JOB, ORA_PJF_PROJECT_BILLING_SPECIALIST_JOB, ORA_PJF_PROJECT_

Catalog Folder	Duty Role	Duty Role Name	Associated Job Roles
			EXECUTION_ABSTRACT, ORA_PJF_PROJECT_EXECUTIVE_JOB, ORA_PJF_PROJECT_INTEGRATION_SPECIALIST_JOB, ORA_PJF_PROJECT_MANAGEMENT_DUTY_ABSTRACT, ORA_PJF_PROJECT_MANAGER_JOB, ORA_PJF_PROJECT_TEAM_MEMBER_ABSTRACT, ORA_PJF_PROJECTS_APPLICATION_ADMINISTRATOR_JOB, ORA_PJF_RESOURCE_MANAGER_JOB, ORA_PJF_TEAM_COLLABORATOR_ABSTRACT
/Shared/Public Sector	BI_PSC_REPORTING_DUTY	Public Sector Folder Reporting Duty	ORA_PSC_AGENCY_STAFF_ABSTRACT, ORA_PSC_BUILDING_INSPECTOR_JOB, ORA_PSC_BUSINESS_ANALYST_JOB, ORA_PSC_CHIEF_BUILDING_OFFICER_JOB, ORA_PSC_ECONOMIC_DEV_OFFICER_JOB, ORA_PSC_FINANCE_ADMIN_JOB, ORA_PSC_INSPECTIONS_SUPERVISOR_JOB, ORA_PSC_PERMIT_TECHNICIAN_JOB, ORA_PSC_PERMITS_APPLICATION_ADMINISTRATOR_JOB, ORA_PSC_PERMITS_SUPERVISOR_JOB, ORA_PSC_PLAN_COORDINATOR_JOB, ORA_PSC_PLAN_REVIEWER_JOB, ORA_PSC_PRINCIPAL_PLANNER_JOB, ORA_PSC_SYSTEM_ADMINISTRATOR_JOB
/Shared/Risk Management	BI_GRC_REPORTING_DUTY	Risk Management Folder Reporting Duty	ORA_GTG_APPLICATION_ACCESS_AUDITOR_JOB, ORA_GTG_APPLICATION_CONTROL_MANAGER_JOB, ORA_GTG_COMPLIANCE_MANAGER_JOB, ORA_GTG_ENTERPRISE_RISK_AND_CONTROL_MANAGER_JOB, ORA_GTG_RISK_MANAGEMENT_AUDITOR_JOB, ORA_GTR_USER_ACCESS_CERTIFICATION_MANAGER_JOB
/Shared/Sales	BI_ZBS_REPORTING_DUTY	Sales Folder Reporting Duty	ORA_ZBS_SALES_ADMINISTRATOR_JOB, ORA_ZBS_SALES_MANAGER_JOB, ORA_ZBS_SALES_REPRESENTATIVE_JOB, ORA_ZBS_SALES_RESTRICTED_USER_JOB, ORA_ZBS_SALES_VP_JOB, ORA_ZPM_CHANNEL_ACCOUNT_MANAGER_JOB, ORA_ZPM_CHANNEL_ADMINISTRATOR_JOB, ORA_ZPM_CHANNEL_OPERATIONS_MANAGER_JOB, ORA_ZPM_CHANNEL_PARTNER_

Catalog Folder	Duty Role	Duty Role Name	Associated Job Roles
			MANAGER_JOB, ORA_ZPM_CHANNEL_PARTNER_PORTAL_ADMINISTRATOR_JOB, ORA_ZPM_CHANNEL_SALES_DIRECTOR_JOB, ORA_ZPM_CHANNEL_SALES_MANAGER_JOB, ORA_ZSP_SALES_ANALYST_JOB
/Shared/Service	BI_SVC_REPORTING_DUTY	Service Folder Reporting Duty	ORA_CSO_KNOWLEDGE_ANALYST_JOB, ORA_CSO_KNOWLEDGE_MANAGER_JOB, ORA_SVC_CUSTOMER_SERVICE_MANAGER_JOB, ORA_SVC_CUSTOMER_SERVICE_REPRESENTATIVE_JOB, ORA_SVC_HUMAN_RESOURCE_HELP_DESK_ADMINISTRATOR_JOB, ORA_SVC_HUMAN_RESOURCE_HELP_DESK_AGENT_JOB, ORA_SVC_HUMAN_RESOURCE_HELP_DESK_MANAGER_JOB, ORA_SVC_INTERNAL_HELP_DESK_ADMINISTRATOR_JOB, ORA_SVC_INTERNAL_HELP_DESK_AGENT_JOB, ORA_SVC_INTERNAL_HELP_DESK_MANAGER_JOB, ORA_ZBS_SALES_ADMINISTRATOR_JOB, ORA_ZCA_CUSTOMER_RELATIONSHIP_MANAGEMENT_APPLICATION_ADMINISTRATOR_JOB
/Shared/Subscription Management	BI_OSS_REPORTING_DUTY	Subscription Management Folder Reporting Duty	ORA_OSS_SUBSCRIPTION_SPECIALIST_JOB
/Shared/Supply Chain Management	BI_SCM_REPORTING_DUTY	Supply Chain Management Folder Reporting Duty	ORA_ACD_PRODUCT_DESIGN_ENGINEER_JOB, ORA_ACD_PRODUCT_DESIGN_MANAGER_JOB, ORA_ACE_PRODUCT_MANAGEMENT_VP_JOB, ORA_ACE_PRODUCT_PORTFOLIO_MANAGER_JOB, ORA_CMF_FISCAL_DOCUMENT_SPECIALIST_JOB, ORA_CMF_RECEIVING_SPECIALIST_JOB, ORA_CMR_RECEIPT_ACCOUNTING_DISCRETIONARY, ORA_CSE_ASSET_ADMINISTRATOR_JOB, ORA_CST_COST_ACCOUNTANT_JOB, ORA_DOO_ORDER_ADMINISTRATOR_JOB, ORA_DOO_ORDER_MANAGER_JOB, ORA_EGI_PRODUCT_DATA_STEWARD_JOB, ORA_EGP_PRODUCT_MANAGER_JOB, ORA_ENQ_QUALITY_ANALYST_JOB, ORA_ENQ_QUALITY_ENGINEER_JOB, ORA_FOS_SUPPLY_CHAIN_CONTROLLER_JOB, ORA_INV_INVENTORY_MANAGER_

Catalog Folder	Duty Role	Duty Role Name	Associated Job Roles
			JOB, ORA_INV_WAREHOUSE_MANAGER_JOB, ORA_MNT_MAINTENANCE_MANAGER_JOB, ORA_MNT_MAINTENANCE_TECHNICIAN_JOB, ORA_MSC_BACKLOG_MANAGER_JOB, ORA_MSC_DEMAND_AND_SUPPLY_PLANNER_JOB, ORA_MSC_DEMAND_PLANNER_JOB, ORA_MSC_MATERIALS_PLANNER_JOB, ORA_MSC_REPLENISHMENT_PLANNER_JOB, ORA_MSC_SALES_AND_OPERATIONS_PLANNER_JOB, ORA_MSC_SUPPLY_CHAIN_PLANNER_JOB, ORA_RCL_FIELD_SERVICE_ADMINISTRATOR_JOB, ORA_VCS_SUPPLY_CHAIN_COLLABORATION_PLANNER_JOB, ORA_WSH_SHIPPING_MANAGER_JOB
/Shared/Functional Setup	BI_FSM_REPORTING_DUTY	Functional Setups Folder Reporting Duty *Not inherited by Custom BI Web cat Reporting Duty	ORA_ASM_APPLICATION_IMPLEMENTATION_CONSULTANT_JOB
/Shared/Security	FBI_SECURITY_TRANSACTION_ANALYSIS_DUTY	Security Transaction Analysis Duty *Not inherited by Custom BI Web cat Reporting Duty	ORA_FND_IT_SECURITY_MANAGER_JOB

Predefined Catalog Lockdown

If you try to modify the predefined catalog content including folder permissions, you get an alert indicating that you're not allowed to modify content and asking that you save your own content in the **/Shared/Custom** folder.

Here are a few things to know about catalog folders:

- You must save all modified content in the **/Shared/Custom** folder or in new folders in the **/Shared** folder.
- Existing modified content in the **/Shared/Custom** folder or custom folders in the **/Shared** folder and their subfolders is preserved. If you have modified the content in the predefined catalog folders, all changes are lost during any upgrade. To preserve content, archive your catalog content and unarchive it in the **Shared/Custom** folder after upgrade.
- All existing content in parent folders in the **/Shared** folder is preserved.
- You can't change folder or object permissions on the predefined catalog folders or content. For example, you can't change folder permissions to hide folders or objects.

Related Topics

- Archive and Move Analytics
- Submit Scheduled Processes and Process Sets
- Role Inheritance

How to Create OTBI Folders

You manage OTBI analyses and reports in the business intelligence catalog, where you create folders to organize them.

To create folders:

1. In the catalog, navigate to the desired location of the new folder in the Folders pane.
2. In the catalog toolbar, click **New**, and select **Folder**.
3. In the New Folder dialog box, enter the folder name, and click **OK**.

Set Folder Permissions and Attributes

You can access the properties of user objects or the Custom folder and any of its subfolders in the catalog to set folder permissions and other attributes. You can view system information, and change attributes or ownership. Other users can access and modify the

Set Folder Properties

Follow these steps:

1. In the catalog, click Shared Folders > Custom, and navigate to the custom folder you want to assign properties to.

   > **CAUTION:** Don't modify permissions on predefined catalog objects. Saving content in the Custom folder is the only way to make sure that it remains untouched during updates.

2. In the Tasks pane, click **Properties**.
3. In the Properties dialog box, select any of the options in the Attributes section:
   - Hidden: Hides the object.
   - System: Makes the object a system object.
   - Read Only: Makes the object read-only.
   - Do Not Index: Excludes the object from the index used by the full-text catalog search. Excluded objects don't display in the results of any full-text catalog search; the object can still be found using the basic catalog search.
4. Use the Ownership section to take ownership of a folder or object in the catalog. This area displays only if the proper privileges were assigned to the user, group, or role. Note that the owner of an object or folder can't automatically access the object or folder.
   - Set ownership of this item: Click to become the owner of the folder or object.
   - Set ownership of this item and all subitems: Click to become the owner of the folder and any sub folders or sub items contained within the item. For example, if you click this link for a dashboard folder, then you take ownership of all of the dashboard's components.

Related Topics

- What happens to modified analytics and reports when a release update is applied?

Set Folder Permissions

You can assign permissions on folders and other objects.

Access and Set Permissions

You can set permissions or change ownership for any catalog object or folder. Nonadministrative users can access and modify the permissions of the objects that they create or own.

To set folder permissions:

1. In the catalog, select the folder or object.
2. In the Tasks pane click **Permissions**.
3. In the Permissions dialog box, the owner and any other users, roles, or groups with permissions are listed in the Permissions list.
    - To add a user or role, click **Add users/roles** in the toolbar and search for users or roles to add them to the Selected Members list in the Add Application Roles, Catalog Groups and Users dialog box.
    - To delete a user or role, select the account or role in the Permissions list and click Delete selected users/roles.
4. In the Permissions list, to set ownership for a user, select Custom in the Permissions list for the account, then select **Set Ownership** in the Custom Permissions dialog box and click **OK**. You can also select the Owner option for the user or role.
5. Use the Permissions list to set permissions for the object. Object permissions vary by object.
6. Use the Apply permissions to sub-folders option to assign permissions to the folder's subfolders.
7. Use the Apply permissions to items within a folder to assign them to objects in the folder but not to subfolders.

Archive and Move Analytics

You can archive your analytic objects and move them to a new location. You can bundle the whole catalog, specific folders, or multi-component objects as a .catalog file and upload the file to unarchive its data in another location.

> **Note:** It's important to note that folders that contain seeded content should not be changed. Moving or adding a child folder to a seeded folder results in analytics not being visible in dashboards or infolets.

Create an Archive

1. Locate the object in the catalog.

2. Select **More** and then select **Archive**.
3. In the Archive dialog box, select one or more of the following options:
    - Keep Permissions: Maintain the object or folder's existing permissions. If you don't select this, the archiving process doesn't include any permissions. Once unarchiving, the parent folder's permissions are assigned to all of the objects and folders.
    - Keep Time stamps: Maintain the Creation Time, Last Modified, and Last Accessed times assigned to the object or folder. Upon unarchiving, the Last Modified time is updated to indicate the time when the object or folder is unarchived. If you select this option, the Old option in the Paste Overview area of the Preferences dialog box is available when unarchiving. Use the Old option to overwrite existing catalog items older than the items in the archive.

      If you don't select this option, then the archiving process doesn't include time information and the Old option in the Paste Overview area of the Preferences dialog box isn't available.
4. Click **OK** to download the archive file.

Move an Archived Object to a New Location

1. Select the folder in the catalog where you want to upload the archived file.
2. In the **Tasks** pane click **Unarchive**.
3. In the Unarchive dialog box, browse for and select the archive file.
4. Use the Replace option to specify whether to replace an existing folder or object with the same name.
    - All: Replace any existing folders or objects with the same names as folders or objects included in the archive file that you're uploading.
    - Old: Replace folders or objects except those folders or objects that exist, unless they're older than the source.
    - None: Add any new folders or objects, but preserve any existing folders or objects.
    - Force: Add and replace all folders or objects.
5. Use the Access Control Lists option to specify how the folders or objects are assigned permissions using Access Control Lists Access when unarchived.
    - Inherit: Inherits the folder or object's permissions from its new parent folder.
    - Preserve: Preserves the folder or object's permissions as it was in the original, mapping accounts as necessary.
    - Create: Preserves the folder or object's permissions as it was in the original, creating and mapping accounts as necessary.
6. Click **OK**.

What happens to modified analytics and reports when a release update is applied?

Updates don't affect the Custom folder or My Folder in the catalog, anything saved there is preserved in updates.

This includes analytics and reports you edited or created. But anything saved outside those folders, in the predefined catalog, is preserved only if the update doesn't include doesn't include a new version of those objects.

If an update includes a new version of a predefined object that you edited outside the Custom folder, the changes you made are saved as a new object. The new version from the update overwrites the existing predefined object. And a copy of the existing object (with your edits) is automatically created in the same folder, with a new name that indicates it's a new version.

If the update includes a new version of both the predefined object and a folder in its file path, the new folder name, along with the new version of the object, overwrites the existing predefined folder and object. And a copy of the existing folder (along with your edited object) is automatically created. The folder is renamed to indicate that it's a new version, but your edited object isn't renamed.

If folders named backup_nnn are automatically created in the catalog due to conflicts, after reviewing and resolving any conflicts, Oracle recommends that you manually delete the backup folders from the catalog. You can contact your help desk to request an automated removal if you have many folders to delete.

> **Note:** Future updates won't affect renamed objects or anything within a renamed folder.