Oracle® Fusion Cloud EPM
Working with Planning

ORACLE®

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Creating and Running an EPM Center of Excellence

A best practice for EPM is to create a CoE (Center of Excellence).

An **EPM CoE** is a unified effort to ensure adoption and best practices. It drives transformation in business processes related to performance management and the use of technology-enabled solutions.

Cloud adoption can empower your organization to improve business agility and promote innovative solutions. An EPM CoE oversees your cloud initiative, and it can help protect and maintain your investment and promote effective use.

The EPM CoE team:

- Ensures cloud adoption, helping your organization get the most out of your Cloud EPM investment
- Serves as a steering committee for best practices
- Leads EPM-related change management initiatives and drives transformation

All customers can benefit from an EPM CoE, including customers who have already implemented EPM.

How Do I Get Started?

Click to get best practices, guidance, and strategies for your own EPM CoE: Introduction to EPM Center of Excellence.

Learn More

- Watch the Cloud Customer Connect webinar: Creating and Running a Center of Excellence (CoE) for Cloud EPM
- Watch the videos: Overview: EPM Center of Excellence and Creating a Center of Excellence.
- See the business benefits and value proposition of an EPM CoE in *Creating and Running an EPM Center of Excellence*.

2
Welcome

Use Planning to create, analyze, and formalize your budgeting plans.

Related Topics

- About Planning
- Navigating Across EPM Cloud Business Processes
- Copying Direct URLs for Artifacts
- Sharing the Current Page URL for Cards, Tabs, and Sub Tabs
  Copy the URL for the currently displayed card, tab, or sub tab and share it with other users who have access.
- Other Navigation Tips
- Learning More

About Planning

Planning provides a friendly, structured set of processes to help you easily build and maintain plans. Keep your business strategy aligned with your implementation plans by using the built-in intelligence and analytic power.

To get going, start with Familiarizing Yourself with Planning.

> **Note:**
>
> Your administrator can customize the functionality—including connections and functionality from other cloud business processes—so your functionality may be different than described here. See Navigating Across EPM Cloud Business Processes.

Videos

Your Goal	Watch This Video
Get acquainted with Planning.	▶ Overview: Introducing the Oracle Planning and Budgeting Cloud Demo Application
Get an introduction to some of the key features in Planning.	▶ Overview: Tour of Planning in EPM Enterprise Cloud

Tutorials

Tutorials provide instructions with sequenced videos and documentation to help you learn a topic.

Your Goal	Learn How
Get an introduction to Planning.	Planning Overview
Get an introduction to: • A typical planning process using Planning • Planning, budgeting, and forecasting workflow concepts and tools • The benefits of planning using multiple scenarios • The budget submission process	Planning Process Overview
Log on to Planning, navigate Planning, and access Planning in Oracle Smart View for Office.	Navigating Planning

Navigating Across EPM Cloud Business Processes

After an administrator creates connections to other EPM Cloud business processes, the connections are listed in the **My Connections** pane on the **Navigator**.

You can toggle between the business processes from this location. You must have access to the other business processes in order to open them. Artifacts are accessible based on your role.

To open another Oracle Enterprise Performance Management Cloud business process:

1. From the Home page, click **Navigator** .

2. If business processes are connected and you have access to those business processes, you'll see a list of connected business processes in the **My Connections** pane. Click a business process to open it.

> **Note:**
>
> Click the icon to the right of the business process name to open it in a new window.

Copying Direct URLs for Artifacts

Use the **Copy URL** option on the artifact listing page to copy the unique URL for an artifact (dashboards, forms, infolets, and reports) in your Oracle Enterprise Performance Management Cloud business process.

> **Note:**
>
> **Copy URL** is available to all users so that direct URLs to artifacts can be shared. However, only users with access to the targeted artifact can perform actions on it.

To copy the unique URL for an artifact:

1. From the Home page, open the listing page for the artifact.

   For example, click **Dashboards**, **Data**, **Infolets**, or **Reports**.

2. From the listing page, click ••• next to the artifact, and then select **Copy URL**.

3. The **Copy URL** dialog displays the unique URL for the artifact. Copy the URL.

Copied URLs can, at times, become invalid. Possible reasons for invalid URLs include:

- The artifact is deleted.

- User access for the artifact is revoked.

- The artifact is renamed, which breaks the URL.

- The artifact is moved to a new folder, resulting in a new URL, which breaks the URL.

Sharing the Current Page URL for Cards, Tabs, and Sub Tabs

Copy the URL for the currently displayed card, tab, or sub tab and share it with other users who have access.

Use the **Share Current Page URL** option on the **Settings and Actions** menu to copy the URL for the currently displayed card, tab, or sub tab in your Oracle Enterprise Performance Management Cloud business process.

URLs can be copied and then shared with other users in an email, Slack, or any other messaging application. Also, copied URLs can be used in a slide show presentation such as PowerPoint. Note that users can only access cards, tabs, or sub tabs if they are authorized to access them.

When the copied URL is launched the page will be rendered with the full header, meaning they will be able to navigate to all of the pages to which they have access within the navigation flow. If the user launching the URL is not logged in, they will be redirected to a login page, then after login the URL page will open.

To copy a URL for sharing:

1. Navigate to the page (card, tab, or sub tab) in your application that you want to copy.

   For example, from the Home page, click Dashboards to view the Dashboards page.

2. Click the down arrow next to your user name (upper right corner of the screen).

3. On the **Settings and Actions** menu, select **Share Current Page URL**.

> **✎ Note:**
>
> The **Share Current Page URL** menu option only displays if you're currently viewing a card, tab, or sub tab. If you're currently viewing the Home page, the **Share Current Page URL** menu option won't display on the **Settings and Actions** menu.

4. Select the displayed URL and copy it by pressing Ctrl+C.

   After pasting it into a browser, the URL will enable direct access to the current page in the application.

Considerations

Note the following considerations when using the **Share Current Page URL** option:

- The page specified in the URL will not open if the navigation flow was deleted, modified, or made inactive. Instead, you'll be redirected to the home page of the currently active navigation flow.

- If you're using a classic environment, you cannot share URLs. URLs are not supported for classic pages.

- URLs cannot be embedded into dashboards as the content source.

- URLs cannot be embedded into navigation flows as the content source.

- URLs cannot be shared for pages with dynamic tabs. Dynamic tabs are local and limited to the current user session, and therefore cannot be shared.

- URLs cannot be shared for infolets. URLs are not supported for infolets.

Other Navigation Tips

Here are other navigation tips:

- To return to the Home page, click the Oracle logo (or your custom logo) at the top of the page or click the Home icon .

- To access functionality on the Navigator page, click the horizontal bars in the upper left corner of the page next to the Oracle logo (or your custom logo).

- Hover in the upper right corner of a form or dashboard to see options such as **Actions**, **Save**, **Refresh**, **Settings**, and **Maximize**.

Learning More

To access a variety of resources on using Planning, click **Academy**

on the Home page.

Administrators: To create and manage the application, see Administering Planning.

3

Preparing to Work in Planning

Related Topics

- Before You Begin
  Here are a couple of things to know before you start working in Planning.

- Familiarizing Yourself with Planning

Before You Begin

Here are a couple of things to know before you start working in Planning.

Your administrator may have created user variables that you must select before you can open a form. See Setting User Variables and Dynamically Setting User Variables.

You can also set preferences for such aspects as how you want numbers displayed and your time zone and date format. See Setting Your Preferences.

The Announcements panel on the left side of the Home page helps orient you.

- Your administrator can provide announcements.

- See your open tasks for the day.

- View your recent history, for example, the forms or dashboards you've used.

- Return to your frequently-used forms or forms by tagging them as a Favorite.

- If your administrator created infolets to show high-level important information, explore them by clicking the dots towards the top of the page.

  You can set which infolet you want as the default. See About Infolets in *Administering Planning*.

- Set your profile photo. See Setting Your Profile Picture.

Familiarizing Yourself with Planning

Planning helps you create and update plans quickly:

- Easily navigate pages among common planning tasks from the Home page.

- Enter data in forms. See Working with Data in Forms.

- Follow a structured process for creating plans using tasks lists. See Working with Task Lists.

- Monitor your tasks with a visible, automated, repeatable system of record for running an application using Task Manager. See Planning with Task Manager.

- View and analyze key information graphically using dashboards. See Using Dashboards to Work with Data.

- Get a quick overview of top-level information using infolets. See Viewing Key Information with Infolets.

- Focus your analysis with ad hoc grids. See Using Ad Hoc for Data Entry and Analysis.

- Predict performance based on historical data with Predictive Planning. See Improving Forecasting Accuracy with Predictive Planning.

- Adjust and spread values. See Adjusting and Spreading Data.

- Use the built-in calculator. See Working with Supporting Detail.

- Get your plans reviewed and approved. See Getting Plans Approved.

- View reports that summarize data. See Working with Reports.

- Leverage your experience with Microsoft Excel by using Oracle Smart View for Office. See Working with Business Process Data in Excel and *Oracle Smart View for Office User's Guide*.

- Run calculations. See Using Business Rules.

- Develop a plan privately in a *sandbox* before publishing it. See Building a Plan Privately.

- Work with multicurrencies. See Working with Currencies.

- Set preferences for how you want to work with Planning. See Setting Your Preferences.

4

Working with Data in Forms

Related Topics

- You Enter Data in Forms

- About Forms Versions

- Opening Forms

- Exporting Data to Microsoft Excel
  By exporting data from a form to Microsoft Excel, you can explore "what-if" scenarios in Excel before copying and pasting values back to your business process.

- Working in Forms 1.0

- Selecting Different Data to Work With

- Understanding Form Colors

- Viewing Server Status on Forms

- Navigating Quickly in a Form

- Basics of Working With Data

- About Entering Data
  This topic gives you some tips on entering and saving data.

- Entering Different Kinds of Data

- Entering Data Quickly Using Commands

- Searching in Forms

- Selecting Cell Ranges

- Copying and Pasting Data
  You can copy data within a form, from one form to another, or from another product, such as Microsoft Excel.

- Dynamically Setting User Variables
  If your administrator set up a form with at least one user variable and enabled dynamic user variables, then you can select and change user variable values directly in the form.

- Using Data with Forms
  When you're in a form, you can make the data more meaningful in many ways.

- More Ways to Manipulate Values
  Here are some easy ways to manipulate data:

- Entering Data for Suppressed or Excluded Members
  In forms, users can directly select a member from the drop-down list on the row dimension in the form, and then enter and save data for that member.

- Getting the Latest Data

- About Calculating Data
  Values are automatically totaled as you enter data. Here are other ways to calculate data:

- How Totals are Calculated
  Here's how values are subtotaled and totalled:

- **Reviewing Data**
  You can review and analyze data in many ways.

- **Promoting Data**
  After you enter data, annotate your assumptions, and are satisfied with your plan's data, you can promote your numbers (as an *approval unit*) to another person, typically for review or approval.

- **Personalizing How Data Displays**
  You can customize how data displays in a form, for example, with formatting and hiding rows and columns having no data.

- **Emphasizing Data with Formatting**
  In forms and ad hoc grids, a variety of formatting options help you emphasize certain data.

- **Hiding Rows or Columns That Have No Data or Zeros**
  To simplify the data in a form, you can hide rows that have no data or contain zeros.

- **About Cells That Have No Data**
  #MISSING in a cell indicates that the cell contains no data, whereas zero in a cell is a data value.

- **Printing Data**
  You can print data in forms as PDF files and customize its format if Adobe Acrobat Reader 5.0 is installed on your computer.

- **More About Working With Data**

- **Viewing Member Formulas**
  Your administrator can set up member formulas to perform calculations on members.

- **Working with Business Process Data in Excel**
  If you're familiar with working in Microsoft Excel, you may want to work with your business process data in Oracle Smart View for Office.

- **Using Your Own Excel Formulas in the Business Process**
  In Oracle Smart View for Office ad hoc analysis, you can create your own Excel formulas and members that calculate instantly without affecting other data. You can then open this *Smart Form* in your business process and execute the calculations that you created in Smart View.

- **About Smart View Formatting in Web Forms**
  Depending on how your administrator set up the form, a form may display the cell formatting that you saved in Oracle Smart View for Office.

- **Copying and Pasting Data Between Microsoft Excel and Your Business Process Forms**
  If you're accessing your business process from a desktop, you can copy and paste data between Microsoft Excel and forms.

- **Drilling Through to Source Data**
  Your administrator can load data from a source using Data Integration or the business process import and export functionality. You can drill through to view details of the data source.

- **Cell Icons**
  Icons in a form's cell provide information. Here's what they mean.

- **Resolving Data Validation Errors**
  Your administrator can set up data validation rules to ensure that data meets company guidelines.

- **Pushing Data for Reporting**
  For meaningful and complete reporting, your administrator can set up forms so that you can analyze data coming from different cubes using **Smart Push Details**.

- **About Cell Comments**
  To explain data or provide background, you can add comments to a cell or to a range of cells across multiple dimensions.

- **Working with Attachments**
  You can provide background information on data by attaching a file to a cell.

- **Searching for Forms, Dashboards, and Infolets**
  You can easily search for specific forms, dashboards, and infolets from their listing page.

- **Why Cells May Be Read-Only**
  Learn why you can't change data in some cells.

- **Seeing What's Changed**
  If your administrator has enabled audit trails for certain items, you can see their history of changes.

- **Working in Forms 2.0**

- **Working with the Global Toolbar in Forms 2.0**

- **Working with the Quick Toolbar in Forms 2.0**

- **Working with POVs in Forms 2.0**

- **Opening the Member Selector in Forms 2.0**
  To select members in Forms 2.0, use the member selector.

- **Performing Calculations Without Having to Submit Your Changes (Calc on the Fly)**
  Use calc on the fly to change data values and see calculated changes instantly without submitting the updated values.

- **Printing Data in Forms 2.0**

You Enter Data in Forms

Administrators design *forms* as containers in which you enter, update, analyze, print, and report on data.

You enter data into the cells in structured forms, and each form has a special purpose. For example, the administrator may design a form solely for creating a revenue plan for your product line or for comparing last year's actual expenses against this year's projected expenses.

With the forms's objective in mind, the administrator sets up the form with certain dimensions and members, reflected in the row and column headings. An example of a dimension is Year, and its members may include FY21, FY22, and FY23. Cells display data for the selected members.

Forms 2.0 Planning Example

The following example shows a 2.0 version of a Planning form:

About Forms Versions

Forms are currently available in two versions:

- **Forms 1.0**: Uses Slick Grid with Oracle ADF Fuse components

- **Forms 2.0**: Uses Slick Grid with Oracle JET components

Both forms versions currently coexist in the same business process at the same time. Forms 1.0 is the default version for existing applications. Forms 1.0 behavior remains unchanged. You can still create and update these forms in your business process as you did before. All newly created and recreated applications will default to Forms 2.0.

Forms 2.0 Features

Forms 2.0 is available only if **Redwood Experience** is enabled. Forms 2.0 uses the existing Forms 1.0 runtime functionality and enhances it using Slick Grid with Oracle JET components for faster rendering, sophistication, ease of use, and consistency.

Forms 2.0 features include:

- Major improvements in usability and ease of use

- Better scalability and enhanced performance

- Runtime updates only; only runtime forms have adopted the new technology and user interface

- Standardized **Actions** menu for form actions

- New POV settings ⚙ menu

- New quick toolbar for performing certain common form grid actions

- Performance improvements for grids

- Improved comments updates, including multi-cell selection and comments entry

- Comments and Attachments can be added using a single option

- Seamless vertical or horizontal scrolling

- Better screen space utilization

- Faster cell to cell navigation

- Quick scrolling across data grids

- Forms and POV drop downs use a new sophisticated, hierarchical member selector with the ability to search

- Reduced popups

- Clean new icons and dialogs

- Built in sophisticated line item detail (replacing supporting detail)

- Wizard-based business rule runtime prompts; runtime prompts display as drawer from the right side

- Calc on the fly on the grid

- Stateless protocol for data retrieval

- Quicker refresh time on large grids

- Improved consistency between Web forms and Oracle Smart View for Office

- Improvements in web ad hoc

- Ability to **Save As** with a new form name

- Edit opens the Forms Designer in a new dynamic tab

Setting the Forms Version

If you've been using Forms 1.0, there's no migration needed to use Forms 2.0. You can easily switch between the two versions using an application setting. The forms will be rendered in the runtime environment to whichever version you specify. No form redesign is necessary.

To specify a forms version:

1. Click **Application**, and then click **Settings**.

2. Under **Other Options**, find the **Forms Version** setting.

3. Select a forms version. The default **Forms Version** for existing applications is **Forms 1.0**. Enabling **Forms 2.0** is only supported if Redwood Experience is enabled.

Considerations for Forms 2.0

- Forms 2.0 is not available in Task Manager. Task Manager will default to Forms 1.0 even when the **Forms Version** application setting is set to Forms 2.0.

- The Autosave option is not supported in Forms 2.0. Instead, perform calc on the fly to see your changes without having to submit changes to the database and refresh.

- Exporting to Excel is not supported in Forms 2.0. Use the **Actions** menu to open a form in Smart View and then save the Excel worksheet natively.

- Forms 2.0 runtime filtering supports column filtering. Runtime filtering on rows will be supported in a future update of Forms 2.0.

- Web form runtime formatting is not supported in Forms 2.0. It will be replaced with design time formatting in a future update.

- The Planning Modules Configuration Wizard is not supported in Forms 2.0.

- All future web form enhancements will be in Forms 2.0.

Related Topics

- [Working in Forms 1.0](#)
- [Working in Forms 2.0](#)

Opening Forms

Each form represents a subset of data in your business process.

See [You Enter Data in Forms](#).

To open a form:

1. On the Home page, click **Data**.

2. You can filter forms by folder or type.

3. Under **All Types**, depending on the type of form you want to use, click the appropriate icon:

   - **Simple** ⊞

   - **Ad Hoc** : Ad hoc grids aren't confined by the form's design.

     See [Using Ad Hoc for Data Entry and Analysis](#).

4. Click ▷ to expand the folder the form is in.

5. Click the name of the form to open it.

   For example, to update the accessories chart form, click "Accessories Chart".

To open a form in Oracle Smart View for Office, see Opening Forms and Ad Hoc Grids from Web Applications in *Smart View for Office User's Guide*.

Exporting Data to Microsoft Excel

By exporting data from a form to Microsoft Excel, you can explore "what-if" scenarios in Excel before copying and pasting values back to your business process.

About exporting data:

- Your business process doesn't export these details to Excel: Supporting Detail, cell comments, numerical formatting, the application name, user, form folder, attributes, currency tags, or percentages.

- Full decimal places are exported for numerical values, but scaling isn't applied to preserve accuracy. When you view the exported data in Oracle Smart View for Office, data displays like it does in the business process form.

- Member aliases display if your administrator sets the form to display them.

- Values pasted back to your business process from Excel must be unformatted data.

To export data from forms to Microsoft Excel:

1. Open a form.

2. Click **Actions**, then **Spreadsheet Export**, and then **Export**.

3. Either open or save the file.

   Use standard Excel procedures to make and save your changes.

Working in Forms 1.0

Administrators set who can view and change which data. You can enter or change data only in cells that you have Write permission to (cells with a white background).

After you promote or submit data for review and approval, you can't change the data (until you become the owner again). If the data is approved, you can't change the data unless the administrator who approved it restarts the approvals process. See Getting Plans Approved.

To select members in a 1.0 version of a form, use the member selector. See Using the Member Selector in *Administering Planning*.

Videos

Your Goal	Watch This Video
Learn about working with data in 1.0 forms.	Overview: Enter and Work with Data in Oracle Planning and Budgeting Cloud

Selecting Different Data to Work With

Under the form name, a bar displays boxes that show which member data you're working with. This top bar consists of the following parts:

- The POV axis is displayed as black text. Your administrator selects these members for the form; you can't select different members for this dimension.

- The Page axis is displayed as blue hyperlinks. Click the hyperlink to select different members to work with.

- Dynamic POVs are displayed as blue hyperlinks. Click the hyperlink to select different members to work with.

- The Global POV bar is displayed as a bar at the top of the dashboard, if it's enabled. If you change a page in the global POV bar and then click **GO**, the page changes for all objects that are based on forms.

When you make a change to the POV, the change is reflected within seconds in any of your parallel sessions without having to log out of the web interface. For example, if you change the

POV in a form in the web interface, the change is reflected for your session in Oracle Smart View for Office, in a REST API call, or in Reports. This ensures that any changes you make to the POV are reflected in all of your open sessions.

- If you make a change to the POV in any session other than the web interface, you must re-open the form in the web interface to see the updated member in the POV.

- If you are using vertical tabs in the web interface, if you make a change to the POV in a form on one tab, the change is reflected right away in a form on another vertical tab.

Understanding Form Colors

Background colors in cells indicate the following states:

- White means that you can enter data in these cells.

- Yellow cells indicate that you have changed values but haven't yet saved them.

- Grayish blue cells indicate that you can see, but not change, their values. They are read-only.

- Tan cells are locked.

  See Locking Cells.

- Teal cells have Supporting Detail.

  See Working with Supporting Detail.

Viewing Server Status on Forms

A status indicator on forms displays icons to indicate "busy" and "idle" server activity. Any client-server action performed in a form grid (for example, clicking a button to fetch or save data, executing a rule, launching a popup, and so on) will cause the status to change.

> **Note:**
>
> The status indicator doesn't display on forms that are embedded in a dashboard.

If the form's status is active, the "busy" icon is displayed, otherwise the "idle" icon is displayed.

- : Idle Status

- : Busy Status

Navigating Quickly in a Form

How you navigate depends on whether you just clicked into a cell or are editing cell data. For example, when you are editing data in a cell, you must click Tab to move to the next cell.

You can quickly move around a form with these shortcut keys:

Table 4-1   Keyboard Shortcuts

Key or Key Combination	Result
Tab	Moves to the next cell in the row. When focus is on the last cell of a row, Tab moves to the next row.
Enter	Moves to the next cell in the column.
Shift+Enter	Moves to the previous cell in the column.
Shift+Tab	Moves to the previous cell in the row.
Up Arrow, Down Arrow	Moves up or down to the previous or next row.
Right Arrow, Left Arrow	While editing in a cell, moves forward and backward in the cell data. If you are navigating the grid cells without editing, moves to the next cell or previous cell in the row.
Ctrl+Home	Moves to the first cell in the form.
Ctrl+End	Moves to the last cell in the form.
Ctrl+Left Arrow	Moves to the first cell in the current row.
Ctrl+Right Arrow	Moves to the last cell in the current row.
Shift+End	Moves to the last cell of the first row.
Ctrl+A	Selects all cells.
Shift+Space	Selects the row.
Ctrl+Space	Selects the column.
Esc	Discards the current changes in the cell, restoring the previous state.

> **Note:**
>
> These shortcuts are available only if you're accessing forms from the desktop.

Basics of Working With Data

Related Topics

- About Entering Data
  This topic gives you some tips on entering and saving data.

- Dynamically Setting User Variables
  If your administrator set up a form with at least one user variable and enabled dynamic user variables, then you can select and change user variable values directly in the form.

- Using Data with Forms
  When you're in a form, you can make the data more meaningful in many ways.

- More Ways to Manipulate Values
  Here are some easy ways to manipulate data:

- **Entering Data for Suppressed or Excluded Members**
  In forms, users can directly select a member from the drop-down list on the row dimension in the form, and then enter and save data for that member.

- **Getting the Latest Data**

- **About Calculating Data**
  Values are automatically totaled as you enter data. Here are other ways to calculate data:

- **How Totals are Calculated**
  Here's how values are subtotaled and totalled:

- **Reviewing Data**
  You can review and analyze data in many ways.

- **Promoting Data**
  After you enter data, annotate your assumptions, and are satisfied with your plan's data, you can promote your numbers (as an *approval unit*) to another person, typically for review or approval.

- **Personalizing How Data Displays**
  You can customize how data displays in a form, for example, with formatting and hiding rows and columns having no data.

- **Printing Data**
  You can print data in forms as PDF files and customize its format if Adobe Acrobat Reader 5.0 is installed on your computer.

About Entering Data

This topic gives you some tips on entering and saving data.

- Your administrator can set up a form so that when you move out of a cell, your changes are automatically saved, with no prompt or message. Cell values are totaled and the affected cells are displayed with a green background.

- In forms with drop-down member selectors enabled on row dimensions, you can directly choose a member from the drop-down list and enter data for that member. Depending on how the drop-down member selector was configured, you may be able to add data to member rows that would have otherwise been suppressed.

- If the structure of the form hasn't changed since you started working in it, when you click **Save**, your changed or new data is instantly saved.

- To revert to the data on the form before you changed it, click **Refresh**.

- If you're using a non-Redwood Experience theme on your desktop, right-clicking in forms (rows, columns, POV, or cells), displays the same options as the **Actions** menu. If Redwood Experience is enabled, right-clicking in forms displays more forms-specific options than the **Actions** menu.

> **Note:**
>
> Use the business process interface to navigate instead of your browser's interface. Using Refresh, Forward, and Back in your browser can cause instability. If this happens, log off and then log back on.

Videos

Your Goal	Watch This Video
Learn how to enter data and save it.	[▶] Entering and Saving Data in Cloud EPM

Tutorials

Tutorials provide instructions with sequenced videos and documentation to help you learn a topic.

Your Goal	Learn How
Learn how to enter business process data, which consists of numeric data, Smart List data, percentage data, and text data.	Entering Planning Data

Entering Different Kinds of Data

You can enter data in many ways, depending on how your administrator set up the form:

- Enter data directly in the cell.

- If a data cell displays the Down Arrow, you select a value from a list, called a *Smart List*. You can skip to a value by typing its first one or two letters. For example, in a list of months, skip to September by typing `s`.

- Members that are set up as percentages display with a percent sign (%) in the cell. You can enter a percentage value as a decimal or as a percentage, such as 60%.

- When you click into a cell that is set up for text data, a box displays. Enter your text into the box. When you enter text in cells, don't use angle brackets (< >). The maximum length of text data you can enter is 4000 characters.

- When you save data, business rules are run that your administrator set up to launch when the form is saved.

Entering Data Quickly Using Commands

You can use these shortcuts in forms. Enter the keys or symbols, and then press Enter.

Table 4-2   Commands for Quickly Entering Data

Keys or Symbol	Result	Example
K	Enters the value in thousands.	Enter `5K` for 5,000.
M	Enters the value in millions.	Enter `5M` for 5,000,000.
Add or +	Adds a number to the cell value.	If the cell value is 100, entering `Add10` after 100 results in 110.
Sub or ~	Subtracts a number from the cell value.	If the cell value is 100, entering `Sub10` after 100 results in 90.
Percent or per	Multiplies the cell value by the percentage you enter.	If the cell value is 100, entering `per10` after 100 results in 10% of the current cell value, or 10.
Increase or inc	Increases the cell value by the percentage you enter.	If the cell value is 200, entering `inc10` after 200 increases the cell value by 10% of 200 (20), to 220.

Table 4-2   (Cont.) Commands for Quickly Entering Data

Keys or Symbol	Result	Example
Decrease or dec	Decreases the cell value by the percentage you enter.	If the cell value is 200, entering `dec10` after 200 decreases the cell value by 10% of 200 (20), to 180.
Power or pow	Changes the cell value to the number, added as an exponent.	If the cell value is 100, entering `pow2` after 100 multiplies the cell value by an exponent of 2, to 10,000.
gr	Grows a cell by a percentage.	If the cell value is 200, entering `gr50` after 200 increases the cell value by 100, to 300.

> ✎ **Note:**
>
> These shortcuts are available only if you're accessing forms from the desktop.

Searching in Forms

In forms, you can easily locate a member name or data value in a form by using the **Find** icon

 . You can enter a partial name or value in the text box, and **Find** locates the first occurrence of the row, column, or data value. Click the forward or backward arrows to navigate to successive occurrences.

See also Navigating Quickly in a Form. To find a specific form, see Searching for Forms, Dashboards, and Infolets.

Selecting Cell Ranges

You can select and work with multiple cells if the selection is rectangular and contiguous. To select a cell range in an ad hoc grid, click in the range's upper-left cell, click Shift, and then click in the range's lower-right cell. To select a cell range in a form, hover over the cell until the icon changes; then you can extend the range.

To select a row or column, click its heading. After you select a group of cells, you can copy and paste them or adjust the data values.

See:

- Copying and Pasting Data
- Adjusting and Spreading Data

Copying and Pasting Data

You can copy data within a form, from one form to another, or from another product, such as Microsoft Excel.

When you're in a form, copy and paste data by selecting the data, and then clicking **Data**, and then an icon under **Edit**.

See also Copying and Pasting Data Between Microsoft Excel and Your Business Process Forms.

About copying and pasting data:

- When you copy within or among forms, the business process copies and pastes the cells' stored values, not the values that display based on the precision setting.

- When pasting data to time periods, your business process applies the spreading rules for each cell in succession, starting from left to right and from top to bottom. The resulting data from a paste operation may not match the original copied data. Understand how values are spread before you paste them into time periods.

  See How Spreading Data Works.

- Copying and pasting data from a text editor (for example, TextPad, Notepad, or WordPad) fails if the data is space-delimited. Use tab-delimited values instead.

Dynamically Setting User Variables

If your administrator set up a form with at least one user variable and enabled dynamic user variables, then you can select and change user variable values directly in the form.

For example, for a variable called Department, you can select Sales members to plan sales expenses and then select Marketing members to plan marketing expenses. You can also set values for user variables in user preferences.

See Setting User Variables.

If the form was defined with the **Use Context** option, then user variables can be used in the POV. With this setting, the value of the user variable changes dynamically based on the context of the form.

> ✏ **Note:**
>
> You must select a value for user variables before working in the form.

To dynamically change values for user variables:

1. Click the text that displays the user variable.

   The variable and its currently selected value display under the POV.

2. Select the members that you want, and then click **OK**.

   The form displays the selected members.

Using Data with Forms

When you're in a form, you can make the data more meaningful in many ways.

- Explore Form Functionality
- View Form Properties
- Focus the Data
- Enter Data for Suppressed or Excluded Members
- Emphasize Data with Formatting
- Adjust and Spread Data
- Add Comments and Attachments and View History
- Sort and Filter Data

- View Supporting Detail

Explore Form Functionality

Explore ways to access, calculate, manipulate, create, analyze, or comment on data. Click **Actions**, and then select from the following options:

- **Analyze**: Perform ad hoc analysis on a form.

  See Get Started Performing Ad Hoc.

- **New Ad Hoc Grid**: Create an ad hoc grid.

  See Creating an Ad Hoc Grid.

- **Show Reasons for Read-Only Cells**: Learn why you can't change data in some cells.

  See Why Cells May Be Read-Only.

- **Predictive Planning**: Predict future values based on historical data. See Improving Forecasting Accuracy with Predictive Planning.

- **Business Rules**: View the business rules that are used in a form and launch them.

  See Using Business Rules.

- **Smart Push Details**: Analyze data coming from different cubes.

  See Pushing Data for Reporting.

- **Grid Validation Messages**: Check how the data conforms to rules that an administrator set up.

  See Resolving Data Validation Errors.

- **Clear Formatting**: Clear the formatting that you set.

  See Emphasizing Data with Formatting.

- **Spreadsheet Export**: To explore "what-if" scenarios in Excel before copying and pasting values back to your business process, click **Actions**, and then select **Spreadsheet Export**.

  See Exporting Data to Microsoft Excel. See also More Ways to Manipulate Values.

- **Open in Smart View**: Work with a form in Oracle Smart View for Office. See Opening Forms and Ad Hoc Grids from Web Applications in *Smart View for Office User's Guide 23.100*.

View Form Properties

View the properties of a form by clicking .

Focus the Data

Explore what you can do with ad hoc grids. In a form, click , and then click .

See Using Ad Hoc for Data Entry and Analysis.

Enter Data for Suppressed or Excluded Members

Enter data for members that are not included in or not immediately visible on the form.

See Entering Data for Suppressed or Excluded Members.

Emphasize Data with Formatting

Improve the presentation quality of the data. Click [icon], and then click [icon] to explore options for setting the font, font size, font color, underscore, and background color.

See Emphasizing Data with Formatting.

Adjust and Spread Data

Change values by a specific amount. Select the cell or cells. Click [icon], then [icon], and then click any of the following:

- **Adjust** to increase or decrease the cell data by a value or percentage.

- **Spread** to specify an amount or percentage by which to increase or decrease values across multiple dimensions, based on the existing values in the target cells. You can select a **Proportional**, **Evenly Split**, or **Fill** spread pattern.

  To use **Spread**, your administrator must enable **Grid Spread** as a form property.

  Watch this video to learn how to adjust and spread data.

  [icon] Adjusting and Spreading Plan Data in Oracle Planning and Budgeting Cloud

  See Adjusting and Spreading Data.

- **Allocate**. Only administrators who are assigned the Allocate role can use this powerful feature. Also, **Allocate** must be enabled as a form property.

  See Spreading Values Using Allocations.

- **Lock** to temporarily lock cells while you calculate and fill in other values. To unlock the cells, click **Lock** again.

  See Locking Cells.

Add Comments and Attachments and View History

Explain assumptions behind the data or, if enabled, view change history. Click a cell, then [icon], and then [icon]. Under **Details**, click:

- [icon] to attach an external file.

  See Working with Attachments.

- [icon] to add a comment.

  See About Cell Comments.

- [icon]

  if your administrator enabled auditing for Data, see who changed cell values and when they did so.

  See Seeing What's Changed.

Watch this video to learn how to add attachments and comments.

 Adding Plan Information in Oracle Planning and Budgeting Cloud

Sort and Filter Data

Simplify the data presentation. Control which rows or columns are displayed (or hidden) by clicking , then , and then **Keep** or **Exclude** under **Filter**.

To limit the view to certain comparison results, click the **Filter Compare** menu to choose an operator and then specify a value for comparison in the **value** field.
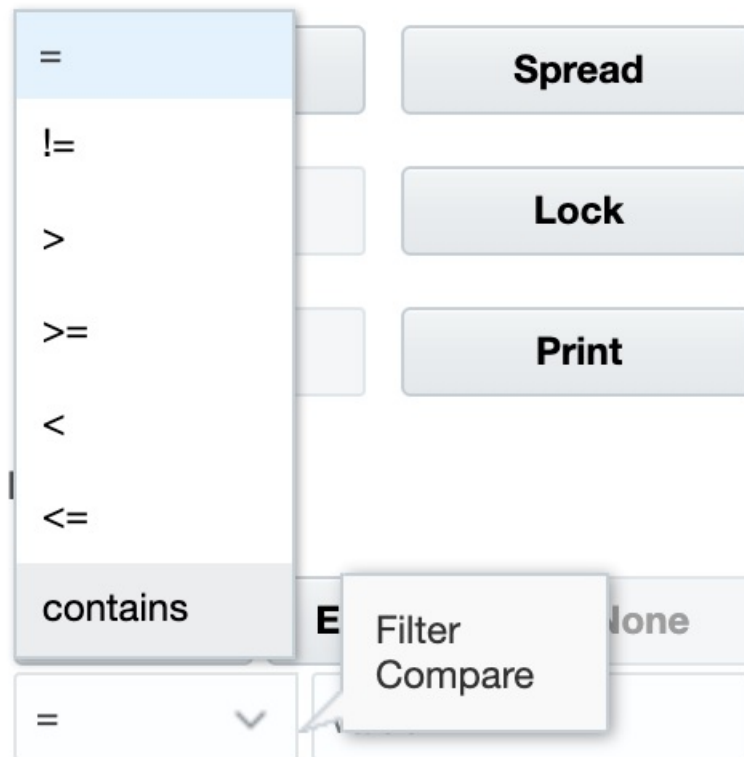
You can also sort the values in a row or column by ascending or descending order by selecting the row or column, and then clicking an arrow under **Sort**.

View Supporting Detail

Build logic into a data value. Click a cell, then , and then , and then **Supporting Detail**.

See About Using Supporting Detail.

More Ways to Manipulate Values

Here are some easy ways to manipulate data:

- Spread values from a parent cell to its children. For example, you can enter "300" in Q1 (the parent), and 300 is spread to its children: Jan, Feb, and March, automatically filling "100" into each of those months.

  To learn more, see How Spreading Data Works.

- Enter an operator (+, –, *, /, or %) and then a number. For example, if a cell's initial value is 100, you can enter *5, which changes the value to 500.

  See also Entering Data Quickly Using Commands and Performing What If Analysis.

Entering Data for Suppressed or Excluded Members

In forms, users can directly select a member from the drop-down list on the row dimension in the form, and then enter and save data for that member.

Depending on how your Service Administrator or Form Designer configured the drop-down member selectors, you may add data to member rows that would have otherwise been suppressed or excluded.

See Guidelines for Entering Data for Suppressed or Excluded Members for additional information.

To access a drop-down member selector in a form and add members and data:

1. Open a form and locate a drop-down member selector by hovering over the row dimensions.

   If a dimension member contains a drop-down member selector, an arrow appears in the cell; for example:

2. Click the down arrow in the cell to launch the member selector, then scroll or search for the member to add.

   Here's an example of the member selector after clicking the down arrow in the `7645: Airfare` cell. You can enter a member name in the **Search** box or scroll through the list to locate the member to add. For this example, we'll choose `7620: Legal Services`.

Click in editable cells to add or change data. For example, the `7620: Legal Services` data cell shown here can be edited:

3. In the row you have just added, modify or add data in the editable cells, as you require, and then click **Save**.

The row member you selected and the data you entered are added to the form.

In this example, the `7620: Legal Servics` member and the data that was entered (5,000) is added to the form.

			YearTotal	
	7110: Advertising		2,236,991	
	Total Office Expenses		**2,236,991**	
	7620: Legal Services		5,000	
	Total Facility Services Expenses		**5,000**	
	7640: Airfare		7,972	
	7650: Car Rental		879	
	7660: Shipping		326,660	
	7670: Accommodation		2,335	
	7690: Meals		521	
	7699: Miscellaneous Travel Expenses		466	
	Total T&E Expenses		**338,832**	
	Total Operating Expenses		**2,580,823**	
	7310: Existing Depreciation		432,877	
	Total Depreciation & Amortization		**432,877**	
	OpEx before Allocations		**3,013,700**	

Scenario: Plan, Version: Working, Entity: HR and Administration Management, Year: FY17

4. Repeat this procedure to add other members and data to the form.

Guidelines for Entering Data for Suppressed or Excluded Members

When using the drop-down member selector, keep in mind the following:

- The drop-down content (list of members) is controlled by the form definition for the corresponding segment.

- Selections are not retained. If you perform a Refresh after selecting a member from the drop-down but before saving, the selection is lost and the form returns to its original state.

- The drop-down selection will be lost on saving data. Modifying data cells and saving data will not retain modified drop-down selections.

The drop-down member selector on row dimensions requires configuration in the Form Designer in the web interface. The Service Administrator or form designer specifies the drop-down selectors as segment properties for particular row dimensions. For example, suppose there are two dimensions placed on row axes, Entities and Line item; the member selector drop-down may be enabled for the Entity dimension members, for the Line item dimension members, or for both. Configuration is described in the administration guides for your business process.

Getting the Latest Data

To ensure that you are working with the latest data, especially if other people are working on the same budget, refresh the data by clicking **Refresh**.

About Calculating Data

Values are automatically totaled as you enter data. Here are other ways to calculate data:

- Launch a business rule.

  See Using Business Rules.

- Use a formula that was created in your business process.

- Use a formula that you created in Oracle Smart View for Office.

  See Using Your Own Excel Formulas in the Business Process.

- Use the **Adjust** or **Spread** feature.

  See Adjusting and Spreading Data.

- Use Supporting Detail.

  See About Using Supporting Detail and Working with Supporting Detail.

How Totals are Calculated

Here's how values are subtotaled and totalled:

- Subtotals are calculated based on factors that your administrator set, such as the member hierarchies, member properties, and the logic of the hierarchy.

- To recalculate subtotals, click **Save**. If the Calculate Form rule is selected to launch during **Save**, all subtotals are recalculated based on their members' aggregation properties and the form's design.

- Saving data calculates members that are set to dynamically calculate, excluding the bottom-most (level-0) members.

- Calculations are based on the stored (not the displayed) values. Displayed values might be based on scaling or precision settings.

- Only displayed members are calculated. If you have read but not write permission to some members, then subtotals correctly include their values even if they are read-only.

  See also Adjusting Cell Values and How Spreading Data Works.

Reviewing Data

You can review and analyze data in many ways.

For example:

- In ad hoc grids.

  See Using Ad Hoc for Data Entry and Analysis.

- In dashboards.

  See Reviewing Data.

- In reports.

  See Working with Reports.

- In sandboxes. See Building a Plan Privately.

Watch this video for tips on reviewing data in your business process. You learn how to view a member formula for an account to see how that value is calculated. See how to filter rows and

columns to select what data to display. Finally, see how you can organize rows and columns so data is displayed in ascending order, descending order, or in the order of the dimension hierarchy.

Reviewing Data in Oracle Planning and Budgeting Cloud

Promoting Data

After you enter data, annotate your assumptions, and are satisfied with your plan's data, you can promote your numbers (as an *approval unit*) to another person, typically for review or approval.

On the Home page, click **Approvals**

, and then start or promote the approval unit. After you promote an approval unit, its new owner can write to it (assuming the owner has write permission), but you can no longer write to the approval unit. See Getting Plans Approved.

Personalizing How Data Displays

You can customize how data displays in a form, for example, with formatting and hiding rows and columns having no data.

See the next topics.

Emphasizing Data with Formatting

In forms and ad hoc grids, a variety of formatting options help you emphasize certain data.

For example, you can increase or decrease the font size and set the font color and background. You can even select a custom color. You can save or clear the formatting that you set. And in text cells, you can wrap the text.
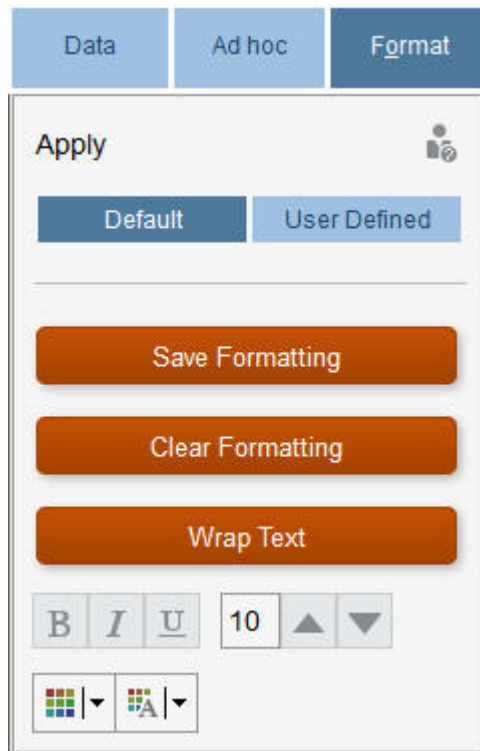
About formatting:

- **Default**: Formatting that your business process applies to indicate a state (for example, that the cell has **Supporting Detail**).

- **User Defined**: Formatting that you've applied.

> **✎ Note:**
>
> Where formatting styles conflict, the default formatting takes precedence. For example, you might format a cell and then change its value. The default formatting for a changed but not-yet-saved value overrides the formatting that you applied to that cell.

Hiding Rows or Columns That Have No Data or Zeros

To simplify the data in a form, you can hide rows that have no data or contain zeros.

To hide rows that have no data or contain zeros:

1. Click **Actions**, and then **Filter**.

2. Click an option:

    - **Hide rows with no data**: To toggle between hiding and showing rows that have no data (displayed as #MISSING or blank, depending on how your administrator set this property). This option is not displayed if your administrator has set the form's property to Suppress Missing Data.

    - **Hide rows with zeros**: To toggle between hiding and showing rows that have zeros for values.

- **Hide rows with zeros and no data**: To toggle between hiding and showing rows that have either no data or zeros, or both.

To hide columns that have no data or contain zeros, follow these steps, but select columns instead of rows.

About Cells That Have No Data

#MISSING in a cell indicates that the cell contains no data, whereas zero in a cell is a data value.

#MISSING decreases the database size and improves performance. To improve performance, your administrator can set cells having no data as `#MISSING`.

See Writing #MISSING Values.

Printing Data

You can print data in forms as PDF files and customize its format if Adobe Acrobat Reader 5.0 is installed on your computer.

You can also export formatted reports to Oracle Smart View for Office.

See Exporting Formatted Reports to Excel.

To print a form's data to a PDF file:

1. With a form open, click the **Data** tab, and then **Print**.
2. Select the print options that you want.
3. Click **Print Preview**.
4. Click **Open with** to open the file in Adobe Acrobat Reader or click **Save** and name the file.

To revert to the printing options that you set in preferences, click **Restore Form Settings**.

More About Working With Data

Related Topics

- Viewing Member Formulas
  Your administrator can set up member formulas to perform calculations on members.

- Working with Business Process Data in Excel
  If you're familiar with working in Microsoft Excel, you may want to work with your business process data in Oracle Smart View for Office.

- Drilling Through to Source Data
  Your administrator can load data from a source using Data Integration or the business process import and export functionality. You can drill through to view details of the data source.

- Cell Icons
  Icons in a form's cell provide information. Here's what they mean.

- Resolving Data Validation Errors
  Your administrator can set up data validation rules to ensure that data meets company guidelines.

- Pushing Data for Reporting
  For meaningful and complete reporting, your administrator can set up forms so that you can analyze data coming from different cubes using **Smart Push Details**.

- **About Cell Comments**
  To explain data or provide background, you can add comments to a cell or to a range of cells across multiple dimensions.

- **Working with Attachments**
  You can provide background information on data by attaching a file to a cell.

- **Searching for Forms, Dashboards, and Infolets**
  You can easily search for specific forms, dashboards, and infolets from their listing page.

- **Why Cells May Be Read-Only**
  Learn why you can't change data in some cells.

- **Seeing What's Changed**
  If your administrator has enabled audit trails for certain items, you can see their history of changes.

Viewing Member Formulas

Your administrator can set up member formulas to perform calculations on members.

To view a member's formula, click the formula icon .

Working with Business Process Data in Excel

If you're familiar with working in Microsoft Excel, you may want to work with your business process data in Oracle Smart View for Office.

Smart View provides a common Microsoft Office interface for your business process. Using Smart View, you can view, import, manipulate, distribute, and share data in Microsoft Word and PowerPoint.

To learn more, see *Oracle Smart View for Office User's Guide*.

To install Smart View:

1. Click ▼ on the top right of the Home page.
2. Under **Settings and Actions**, click **Downloads**.
3. Under **Smart View**, click **Download from Oracle Technology Network**, and then follow the prompts.

Using Your Own Excel Formulas in the Business Process

In Oracle Smart View for Office ad hoc analysis, you can create your own Excel formulas and members that calculate instantly without affecting other data. You can then open this *Smart Form* in your business process and execute the calculations that you created in Smart View.

For example, say you're analyzing business process data in Smart View, which is the Microsoft Office interface to your business process. You want to calculate the average profit margin for four products. You can add a row called "Average Profit Margin" to the grid, and then create a formula on the four rows listing the products' profit margins. Select the four rows. Then, in the new "Average Profit Margin" row, add the Excel formula `=AVERAGE(D5:D8)`. The average profit margin is instantly displayed in the new row, but the new row is saved only in this Smart Form, and not the rest of the business process.

To make this customized ad hoc grid available in your business process, when you save it, select the option **Save as a Smart Form**. Then you can open and use this customized Smart Form, including the rows, columns, and calculations that you added, in your business process.

See Opening Forms.

You can even create a sandbox from a Smart Form (see Keeping Your Work Private with Sandboxes.

To learn more, see *Oracle Smart View for Office User's Guide*.

Videos

Your Goal	Watch This Video
Learn about calculating data using Smart Forms.	▶ Adding Excel Formulas in Cloud EPM

About Smart View Formatting in Web Forms

Depending on how your administrator set up the form, a form may display the cell formatting that you saved in Oracle Smart View for Office.

Microsoft Excel formatting is supported in Smart View and your business process except for:

- Your business process supports Excel's font styles except for underline and alignment.

- Your business process supports Excel's borders except for solid borders.

- Smart View supports Excel's cell formatting, including many of Excel's number and date formatting. Your business process doesn't support Excel's numbers and dates formatting.

- Your business process supports Excel's row formatting except for Excel's read-only, column width, or row height formatting.

See the *Oracle Smart View for Office User's Guide*.

Copying and Pasting Data Between Microsoft Excel and Your Business Process Forms

If you're accessing your business process from a desktop, you can copy and paste data between Microsoft Excel and forms.

> **Note:**
>
> This functionality is available on desktops only, not on mobile devices.

To copy and paste data from Microsoft Excel to your business process forms:

1. In Microsoft Excel, highlight the data in a single cell or a range of cells, and then press **Ctrl+C** to copy the data to the clipboard.

2. Select the target cell or cells in the business process form, and then press **Ctrl+V**.

3. When the Clipboard helper displays, press **Ctrl+V** again. The data is pasted to the Clipboard helper.

4. Click **Paste** to paste the data into the business process form.

> **Note:**
>
> Data that you copy and paste from Microsoft Excel to your business process reflects the formatting that's set up in Microsoft Excel. For example, if you set the number of decimal places in Microsoft Excel to zero, when you enter the value 459.123 in Microsoft Excel, the value displays as 459. If you copy this value into a business process form, then the value 459 is pasted.

Drilling Through to Source Data

Your administrator can load data from a source using Data Integration or the business process import and export functionality. You can drill through to view details of the data source.

In a multicurrency environment, all currencies in the source system can be loaded for an entity. Exchange rates are converted within Planning.

To drill through to source data:

1. Open a form containing loaded source data.

    The icon ▮100▮ in the right top corner of a cell indicates that it has drill-through data.

2. From a cell that contains drill-down data, click **Actions**, and then **Drill Through**.

3. Click the link in the top left corner **Drill Through to Source**.

4. From the **Drill Through Summary**, you can drill through to the source.

Cell Icons

Icons in a form's cell provide information. Here's what they mean.

*   ▯: The cell has an attachment.

*   ▤: The cell has a member formula.

*   ▯: The cell has comments.

*   ▮100▮: You can drill down on this cell.

    See Drilling Through to Source Data.

*   ▯▼▪: Select a value from a Smart List.

*   Marketing ▼ 100 : Click the Down Arrow by the member name to select and enter data for other members that are currently suppressed from displaying (either because they have no data and the administrator set the **Suppress Missing Data - Rows** option in form layout, or the administrator specifically excluded the other members during form definition).

Resolving Data Validation Errors

Your administrator can set up data validation rules to ensure that data meets company guidelines.

For example, your administrator can set:

- Criteria for the data you enter, called *data validation rules*
- Background colors to call your attention to data validation errors
- Messages that tell you what the criteria is

If the data in a form doesn't meet the criteria in data validation rules, follow these steps to fix the errors.

To resolve data validation errors:

1. In a form with errors, hover your cursor over the cell (or on mobile devices, tap into) having a non-default colored background.
   Your administrator typically calls your attention to cells having data validation rules by displaying them with a colored background. Pop-up text displays the cell intersection and the text `This cell contains Data Validation Messages`.

2. Click **Actions**, and then **Data Validation Messages**.

3. If there's more than one message, expand the list, and then click each hyperlink to go to the cell to be corrected.

4. Resolve each error based on the instructions in the data validation message.

5. When you've resolved all errors, save the form.
   The cells' colored backgrounds and Data Validation Messages no longer display.

> **Tip:**
>
> If your Page/POV doesn't include valid members, in the member selector you can clear the current members by clicking
>
> ⚙
>
> and then **Clear Page Selections**. You can then select members from other dimensions that are included in the valid intersection definition.

Pushing Data for Reporting

For meaningful and complete reporting, your administrator can set up forms so that you can analyze data coming from different cubes using **Smart Push Details**.

For example, say you have expense data in one cube and revenue planning in another cube. Using **Smart Push Details**, you can quickly push the data from both cubes to a reporting cube. You can then analyze the consolidated data in the reporting cube. Smart Push includes data, comments, attachments, and Supporting Detail.

Watch this video to learn how to instantly push data for reporting.

 [Instantly Push Data for Reporting in Oracle Planning and Budgeting Cloud](#)

Your administrator can set up forms to automatically push data when you save the data in the form. Or, the administrator can set up the form so that you can initiate the Smart Push. If so, click **Actions**, then **Smart Push Details**, and then click the link in the Smart Push dialog box. If Smart Push is set to run on save, it doesn't display in Smart Push Details.

> **Note:**
>
> - Smart Push always clears data in the reporting cube before it pushes data.
> - In Forms 1.0, a message displays indicating Smart Push was executed on Save. No such message will display in Forms 2.0.

About Cell Comments

To explain data or provide background, you can add comments to a cell or to a range of cells across multiple dimensions.

To add and view comments, click a cell (or select a cell range), then the **Data** tab, and then **Comments** . A small triangle in the upper right of a cell indicates that it has a comment.

You can also view comments in a PDF file or a printed report.

> **Note:**
>
> Forms 2.0 does not support adding comments or attachments to formula cells.

Working with Attachments

You can provide background information on data by attaching a file to a cell.

If your administrator selects the **Enable Cell-Level Document** property for the form, you can add attachments to cells.

Valid attachment file types are as follows:

- Image types permitted: `.jpg, .gif, .png, .7z`
- Non-image file types permitted: `.csv, .xls, .xlsx, .txt, .zip, .jlf, .doc, .docx, .ppt, .pptx, .rtf, .pdf, .gdoc, .gsheet, .gslides, .msg`

You could attach several documents to a cell, each with updated assumptions behind the cell's sales data. You cannot attach the same attachment to more than one cell. The attachment icon indicates that a cell has an attachment.

> **Note:**
>
> In Forms 2.0, you can attach files with file sizes of up to a maximum of 20 MB to formula cells.

To add an attachment:

1. In the form, select the cell.

2. Click **Actions**, and then **Attachments** [icon] .

3. Browse to the file, and then click **Upload**.

   To view the attachment, click its hyperlink.

Searching for Forms, Dashboards, and Infolets

You can easily search for specific forms, dashboards, and infolets from their listing page.

On the listing page for these artifacts, you can toggle between viewing these artifacts by a flat view or a tree view:

[icons]

Then you can search for forms, dashboards, or infolets using the following search options:

* Use

  [search icon]

  for a keyword search.

  > **Note:**
  >
  > The flat view displays only the artifacts that meet the search criteria, not the folders that contain them. The tree (or hierarchical) view displays artifacts in the context of the folders that contain them.

* Use [icon] to narrow the search by folder.

To search on another keyword, clear the search criteria by clicking **X** in the Search box, and then click

[search icon]

.

Why Cells May Be Read-Only

Learn why you can't change data in some cells.

Grayish blue cells in a data form indicate that you can see, but not change, their values. They are read-only.

To find out why a cell is read-only:

1. Refresh the grid to load the reasons why cells are read-only by clicking **Actions**, and then **Show Reasons for Read-Only Cells**.

2. Put the cursor in a read-only cell, right-click, and then select **View Reasons for Read-Only Cell**.
   Reasons why a cell may be read-only:

Table 4-3   Reasons Why a Cell May Be Read-Only

Reason Given	Explanation
Not Found or No Access	Either: • You don't have access to the data because the administrator has set the **Apply Security** property, but hasn't granted you Write access permissions to every dimension member of the data intersection. *Getting Started with Oracle Enterprise Performance Management Cloud for Administrators* describes how the administrator grants global roles, and your business process administration guides describe how the administrator assigns permissions to your business process artifacts. • The cell is read-only because the member isn't found. For example, maybe the member isn't valid for the form's cube or maybe there's a typo in the member name.
Approvals Security	The cell is part of an approval unit that you've submitted or promoted. You can't change the data until you become the owner again. See Getting Plans Approved.
Upper Level Bottom Up Cell	The cell is an upper level in a form that is based on a bottom up version. With bottom up versions, you enter data only into bottom level members. See Target and Bottom Up Versions in *Administering Planning*.
Invalid Intersection	The cell is invalid according to the valid intersection definition. See Understanding Valid Intersections in *Administering Planning*.
Cell-Level Security	The cell is secured according to a cell-level security definition. See Understanding Cell-Level Security in *Administering Planning*.
Read Only Form	The form is read-only. See About Assigning Permissions to Artifacts, Rules, and Folders in *Administering Planning*.
Formula Cell	The cell has a member formula. See Working with Member Formulas in *Administering Planning*.
Invalid Scenario Time Period Range	The cell is outside the range defined for the scenario time period. See About Scenarios in *Administering Planning*.
Supporting Detail Cell	The cell has Supporting Detail. See Working with Supporting Detail.
Account Source Cube	The source cube of the account is not the same as the form's cube.
Ad Hoc - Read Only User Role	You're assigned the role Ad Hoc - Read Only User, so you can't change data in the form.
Non Local Currency Member	The currency for the cell member isn't an input currency. You can enter or change data only into input currencies. See About Simplified Multicurrency.

Table 4-3　(Cont.) Reasons Why a Cell May Be Read-Only

Reason Given	Explanation
Archive Mode	The application's database is being archived, which temporarily prevents users from entering or changing data.
Attribute, Dynamic Calc, or Label Only	The cell is read-only for a variety of reasons, such as: • It's a calculated attribute value. • It's dynamically calculated. • Its storage type is **Label Only**. • It's an upper-level cell in an Aggregate Storage cube.
Summary Time Period Ineligible For Spreading	Some possible reasons why the data in a summary time period is read-only: The Period doesn't have members that it can spread to or they're locked, for example.
Read Only Segment	The **Segment** form property is set to read-only.

Seeing What's Changed

If your administrator has enabled audit trails for certain items, you can see their history of changes.

For example, if your administrator enabled auditing for **Data**, you could see who changed cell values and when they did so.

To see the history of tracked changes:

1. Click

   .

2. Click

   .

3. Under **Details**, click

   .

Working in Forms 2.0

> **✎ Note:**
>
> To work in Forms 2.0, the **Forms Version** setting in application settings must be set to **Forms 2.0**. Forms 2.0 is available only if **Redwood Experience** is enabled.
>
> See About Forms Versions.

Opening a form from the **Data Entry** page, opens the form in the *runtime* environment.

To open forms, see Opening Forms.

Administrators set who can view what data and who can change it. You can enter or change data only in cells that you have Write permission to (cells with a white background).

After you promote or submit data for review and approval, you can't change the data (until you become the owner again). If the data is approved, you can't change the data unless the administrator who approved it restarts the approvals process. See Getting Plans Approved.

These topics contains helpful information as you work with 2.0 forms in the runtime environment:

- Working with the Global Toolbar in Forms 2.0
- Working with the Quick Toolbar in Forms 2.0
- Working with POVs in Forms 2.0
- Opening the Member Selector in Forms 2.0
- Performing Calculations Without Having to Submit Your Changes (Calc on the Fly)
- Printing Data in Forms 2.0

Videos

Your Goal	Watch This Video
Learn about working with data in Forms 2.0.	▶ Overview: Introduction to Forms 2.0 in Cloud EPM

Working with the Global Toolbar in Forms 2.0

The icons and menus at the top of each form enable you to view instructions or perform the following actions on the form:

Table 4-4   Form Global Toolbar

Object	Description
ⓘ	**Instructions**: Displays instructions if they were added for a form.
↻	**Refresh**: Updates the data on the form.
🔍	**Search**: Enter a keyword in the **Find** box and then click the **Previous** or **Next** arrow to find data within the form.

Table 4-4   (Cont.) Form Global Toolbar

Object	Description
	Property Panel: Displays specific information for a form, like Data Validation messages.
	For ad hoc forms, the **Property Panel** displays properties for **General**, **Ad Hoc User Options**, and **Layout**.
	For Predictive Planning, the**Property Panel** displays Predictive Options like Chart Settings and Chart View.
	Note: In the future, the **Property Panel** will be used to show other details such as cell formatting, and so on.

Table 4-4   (Cont.) Form Global Toolbar

Object	Description
Actions menu	Displays the following form actions: • **Edit**: Opens the form in the Form Designer. The Form Designer opens in a dynamic tab next to the current tab. You must have the correct permissions to edit forms. Any updates you make to the layout can be visualized after saving in the Forms Designer. When editing forms, you have the option to **Save As**, which saves the form with a new form name. • **Rules & Smart Push**: View the rules that are used in a form and launch them. See Using Business Rules. Analyze data coming from different cubes. See Pushing Data for Reporting. For Forms 2.0, there are usability improvements for rules: – Search functionality is included. – When the rule is executed, prompts can be entered in the right-hand side drawer. – Prompts for multiple rules can be entered in stations and launched all at once. • **Predictive Planning**: Starts a prediction. Predictive Planning details can be viewed right below the data grid. See Predicting Future Values Based on Past Performance. • **Analyze**: Perform ad hoc analysis on a form. See Get Started Performing Ad Hoc. • **Show Reasons for Read Only Cells**: Learn why you can't change data in some cells. See Why Cells May Be Read-Only. • **Open in Smart View**: Work with a form in Oracle Smart View for Office. See Opening Forms and Ad Hoc Grids from Web Applications in *Smart View for Office User's Guide 23.100*. • **New Ad Hoc Grid**: Create an ad hoc grid. See Creating an Ad Hoc Grid. • **Show/Hide Toolbar**: Shows or hides the quick toolbar that is displayed below the form title.
Save	Saves the data in the form.

Working with the Quick Toolbar in Forms 2.0

In Forms 2.0, instead of using a context (right-click) menu, certain common actions have been placed in the quick toolbar for easier accessibility.
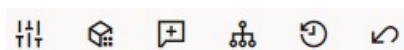
You can perform the following actions using the quick toolbar:

Table 4-5   Quick Toolbar

Icon	Description
	Adjust: Increase or decrease the selected cell data by a positive or negative value, or a percentage value. See Adjusting and Spreading Data.
	Grid Spread: Specify an amount or percentage by which to increase or decrease values across multiple dimensions, based on the existing values in the target cells. You can select a **Proportionally**, **Evenly**, or **Fill** spread pattern. To use grid spread, your administrator must enable Grid Spread as a form property. See Spreading Values Using Grid Spread.
	Comment: Explain data or provide background, and attach external files. You can add comments and attachments to a cell or to a range of cells across multiple dimensions. Multiple comments can be posted for the same cell. The comments popup can be used to upload attachments. Posted comments and attachments can also be deleted. ✎ **Note:** In Forms 2.0, you can attach files with file sizes of up to a maximum of 20 MB to formula cells. See About Cell Comments and Working with Attachments.
	Line Item Details: Build logic into how a cell value is calculated. Line item details is an upgraded (alternative) functionality for supporting details: • Line item details can be invoked from the context (right-click) menu or from the Quick Toolbar • Add child or siblings with provisioning to make arithmetic calculations (add, subtract, multiply, and so on) • Support only for rows (not for columns) See About Using Line Item Details.
	Change History: Displays the history of the changes made to the cell data. See Seeing What's Changed.
	Undo: Cancel the last change you made.

Working with POVs in Forms 2.0

About POVs

The information directly below the quick toolbar lets you select different data to work with. This is called the form's point of view (POV).

For a description of the POV bar, see Selecting Different Data to Work With.

When a form contains a POV, changes to the POV are automatically applied. If you don't want to automatically apply changes, you can deselect auto-apply for the POV bar in the form's **POV Settings** menu. You can also hide dimension labels on the POV bar, and clear POV selections.

Changing POV Settings
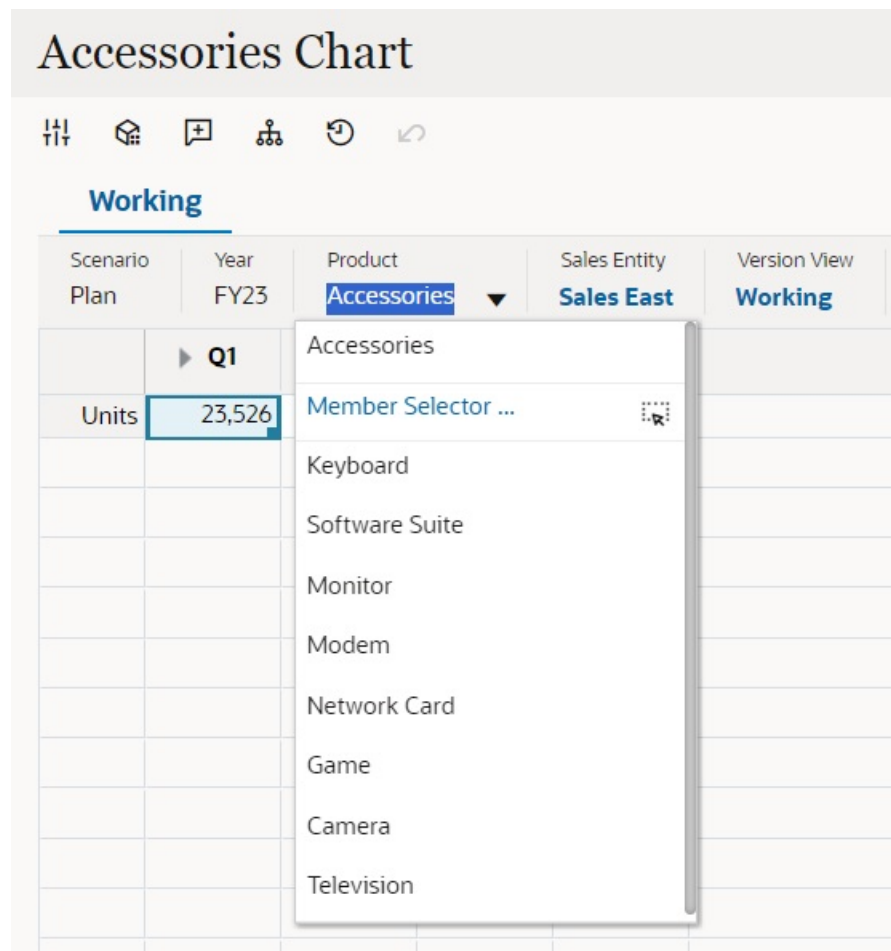
To access POV settings:

1. Click ⚙.

2. Select from the following options:

    • **Hide Dimension Labels**: Makes the form look more compact

    • **Auto-Apply**: Automatically refreshes the data grid every time POV values are changed

    • **Clear Selections**

Searching for POV Members in Forms 2.0

When working in Forms 2.0, you can easily find new POV members. To search, click a POV link. The search interface displays a list of the most recently used members from which you can choose.

Figure 4-1   Forms 2.0 POV Most Recently Used Members List

You also can search using the member selector. Click a POV link, then click the member selector icon [icon] to launch the member selector. Members in the member selector are displayed as a hierarchy or you can type a member name in the **Search** box. If a member is located using the **Search** box, you'll see a result displayed under the Search box.

Figure 4-2   Forms 2.0 Select Members Search Results
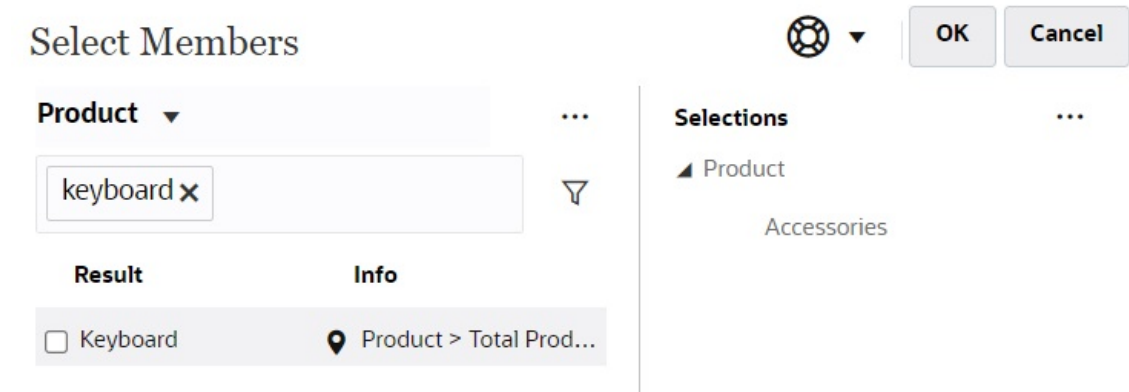
You can view where the member is located within the hierarchy by hovering over the result's **Info** column and clicking [icon].

Figure 4-3   Forms 2.0 Select Members Search Results in Hierarchy
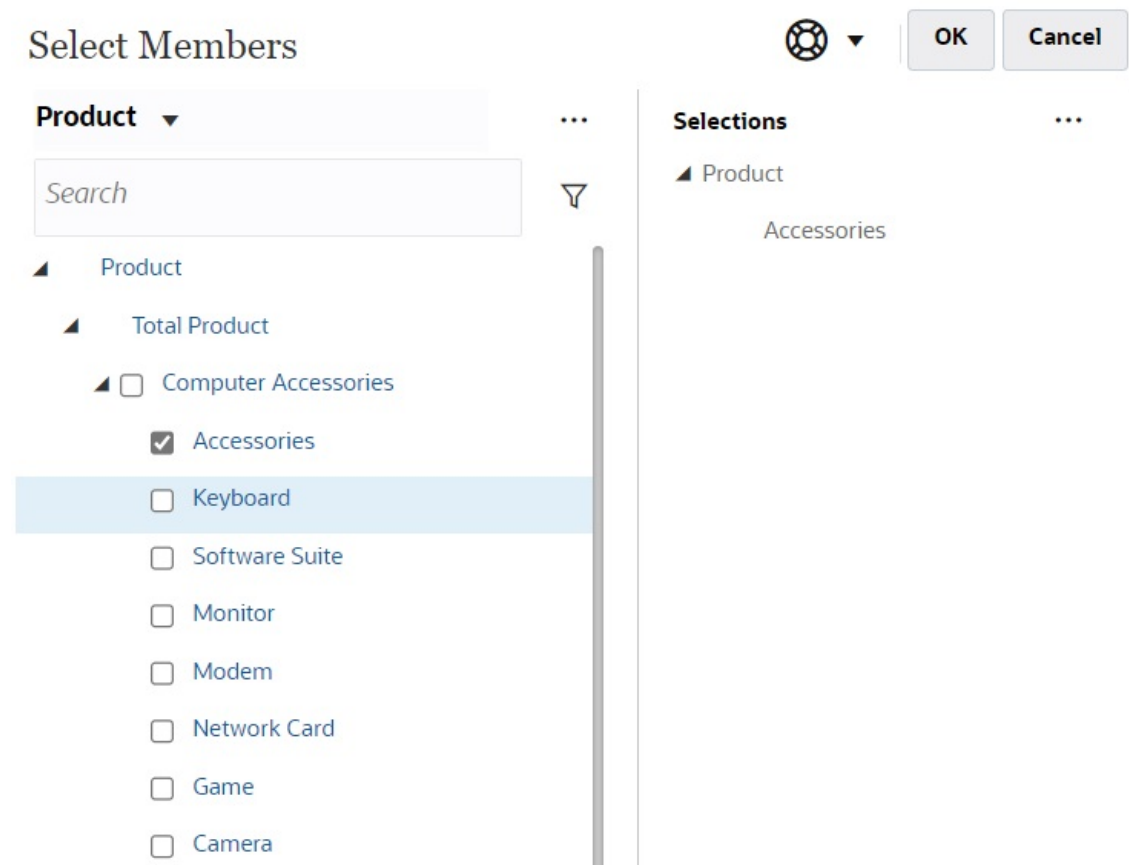
Opening the Member Selector in Forms 2.0

To select members in Forms 2.0, use the member selector.

To open the member selector from a Forms 2.0 form:

Click a member on the POV bar:

You can also click the Page drop-down list, and then select **Member Selector**:

In a business rules run-time prompt, when the prompt is for members, click the **Member Selector** icon:

For more information about using the member selector, see Using the Member Selector.

Performing Calculations Without Having to Submit Your Changes (Calc on the Fly)

Use calc on the fly to change data values and see calculated changes instantly without submitting the updated values.

When working with Forms 2.0, or during ad hoc analysis, you can perform calc on the fly without having to submit changes to the database and refresh. This capability saves you time and enables you to do multiple changes to the grid at once.

For Forms 2.0, this option is available if your administrator enabled this feature for the form. When this feature is enabled, in a 2.0 version of a form, when you hover over a cell with a member formula attached, you see the member formula associated with the cell and you can perform calc on the fly.

For ad hoc analysis, your administrator might have enabled this feature for you. Or, you can set a display preference for calc on the fly by selecting **Yes** for **Enable User Formulas in Ad Hoc** on the **Display** tab in **User Preferences**. When this setting is enabled, in an ad hoc grid, when you hover over a cell with a member formula attached, you see the member formula associated with the cell and you can perform calc on the fly.

To perform calc on the fly:

1. Open a 2.0 version of a form or an ad hoc grid, and hover over cells to see members with formulas attached, for both member formulas and consolidation operators.
   In this example, you can see the formula for **Sales** for **Jan**.

	Trips	Trips	Trips	Trips
	Jan	Feb	Mar	Q1
International Sales	20	20	20	60
Sales East	30	30	30	90
Sales NorthEast	25	25	25	75
Sales Mid-Atlantic	20	20	20	60
Sales SouthEast	15	15	15	45
Sales South	12	12	12	36
Sales Central	10	10	10	30
Sales West	12	12	12	36
Sales	144	144	144	432

Row Sales Column BaseData Trips Jan member(403):
410 +420 +421 +422 +423 +430 +440 +450 +66
grid math:
= EssSum(essMissing(1/0) , B4, B5, B6, B7, B8, B9, B10, B11)

There must be enter-able cells (level zero members) in the form or ad hoc grid in order for formulas to appear.

2. Perform calculations as needed, and then move the cursor from the cell:
   • Modify values that contribute to a calculated cell. The calculated cell value is updated.

- Modify a calculated value. The cells that are on the form or ad hoc grid that contribute to the calculated cell are updated.
  For formula spreading to work correctly, all source cells for the calculated value must be visible on the form or ad hoc grid.

A color change indicates a modified cell. Cells refresh immediately to display the newly calculated values, without submitting the changes to the database.

In this example of modifying values that contribute to a calculated cell, modify the value of **Sales West** for **Jan**:

	Trips	Trips	Trips	Trips
	Jan	Feb	Mar	Q1
International Sales	20	20	20	60
Sales East	30	30	30	90
Sales NorthEast	25	25	25	75
Sales Mid-Atlantic	20	20	20	60
Sales SouthEast	15	15	15	45
Sales South	12	12	12	36
Sales Central	10	10	10	30
Sales West	15	12	12	36
Sales	144	144	144	432

When you press Tab, calc on the fly calculates updated values for **Sales** for **Jan**, **Q1** for **Sales West**, and **Q1** for **Sales**. Note the color change for the newly calculated values.

	Trips	Trips	Trips	Trips
	Jan	Feb	Mar	Q1
International Sales	20	20	20	60
Sales East	30	30	30	90
Sales NorthEast	25	25	25	75
Sales Mid-Atlantic	20	20	20	60
Sales SouthEast	15	15	15	45
Sales South	12	12	12	36
Sales Central	10	10	10	30
Sales West	15	12	12	39
Sales	147	144	144	435

In this example of modifying a calculated value, modify the calculated value **Sales** for **Feb**:

	Trips	Trips	Trips	Trips
	Jan	Feb	Mar	Q1
International Sales	20	20	20	60
Sales East	30	30	30	90
Sales NorthEast	25	25	25	75
Sales Mid-Atlantic	20	20	20	60
Sales SouthEast	15	15	15	45
Sales South	12	12	12	36
Sales Central	10	10	10	30
Sales West	12	12	12	36
Sales	144	288	144	432

When you press Tab, the values that contribute to the calculated cell are updated. Note the color change for the newly calculated values.

	Trips	Trips	Trips	Trips
	Jan	Feb	Mar	Q1
International Sales	20	40	20	80
Sales East	30	60	30	120
Sales NorthEast	25	50	25	100
Sales Mid-Atlantic	20	40	20	80
Sales SouthEast	15	30	15	60
Sales South	12	24	12	48
Sales Central	10	20	10	40
Sales West	12	24	12	48
Sales	144	288	144	576

3. When you've completed all of your modifications and are satisfied with the calculations, you can submit the modified values to the server, or you can discard your changes without submitting them.

You can also perform calc on the fly in Oracle Smart View for Office in 2.0 versions of forms or in ad hoc grids. See Performing Calculations Without Having to Submit Your Changes in *Working with Oracle Smart View for Office*.

Review the supported formula functions and operators. See Supported Functions and Operators for Calc on the Fly in *Working with Oracle Smart View for Office*.

Not all formula functions support calc on the fly. See Unsupported Functions and Formulas for Calc on the Fly in *Working with Oracle Smart View for Office*.

For additional considerations when performing calc on the fly, see Guidelines and Considerations in *Working with Oracle Smart View for Office*.

Tutorials

Tutorials provide instructions with sequenced videos and documentation to help you learn a topic.

Your Goal	Learn How
In this tutorial, you learn how to perform calc on the fly during ad hoc analysis using member formulas. You can work with calc on the fly either in the web or with Smart View.	Performing Calc on the Fly in Cloud EPM

Printing Data in Forms 2.0

If you require printing, you can print data in forms 2.0 using the browser's print feature or the Excel Print feature in Oracle Smart View for Office.

To work with a form in Smart View, open a form, click **Actions**, and then select **Open in Smart View**.

See Opening Forms and Ad Hoc Grids from Web Applications in *Smart View for Office User's Guide*.

5
Working with Task Lists

Task lists help you organize, track, and prioritize your workload.

Administrators set up tasks to guide you through the planning process.

There are two Task Flow Type options for the application:

- Task Manager: This is the default option for new applications. Task Manager provides centralized monitoring of all tasks and provides a visible, automated, repeatable system of record for running an application. For more information about working with Task Manager, see Planning with Task Manager.

- Task List: Task lists are a classic feature which guides users through the planning process by listing tasks, instructions, and end dates. For more information about working with task lists, see Using Tasks with Task Lists.

Using Tasks with Task Lists

Task lists help you organize, track, and prioritize your workload.

Related Topics

- Why Use Tasks?
- Using Tasks to Plan

Why Use Tasks?

Administrators set up tasks lists to guide you through the planning process. Task lists help you organize, track, and prioritize your workload.

For example, a task might help you complete forms or launch business rules or promote approval units. They can also launch a website or internal company page.

For information on creating task lists and tasks, see Working with Task Lists in *Administering Planning*.

Using Tasks to Plan

Get a high-level view of the status of your task lists on the **Tasks** page.

Click **Tasks**

on the Home page. The summary bar on the top of the **Tasks** page helps you track the number of tasks that are:

- Assigned to you
- Incomplete
- Due today, this week, or in the future

- Completed

Using tasks:

- To view task lists, click ▽ .

- To launch a task to complete its activities, click its name.

- To search for tasks or view a task list report, click the icons on the right.

- To mark a task as complete, on the task page, click the box by **Complete**.

- To control how your tasks are displayed, click ☰ to view the lists in a flat list. Click ⊟ to display the tasks in a tree, or hierarchical, view.

> **✎ Note:**
>
> If your administrator sets email alerts, you can receive email reminders about tasks that are approaching or are past their due date.

6
Planning with Task Manager

Task Manager provides centralized monitoring of all tasks and provides a visible, automated, repeatable system of record for running an application. Administrators set up tasks in Task Manager.

Task Manager is the default option for new applications. This chapter describes how to work with Task Manager tasks, schedules, alerts, views, filters, and dashboards. To work with classic task lists, see Using Tasks with Task Lists.

Related Topics

- Working with Task Manager
- Working with Alerts
- Working with Views and Filters
- Working With Operational Dashboards

Working with Task Manager

Related Topics

- Task Manager Overview
- Working with Tasks

Task Manager Overview

Task Manager helps to define, execute, and report the interdependent activities of a business process. It provides centralized monitoring of all tasks and provides a visible, automated, and repeatable system of record for running a business process.

You can:

- Define the tasks and schedule to ensure the most efficient task flow.
- Automate the business process, track status, and provide notifications and alerts.
- Notify users by email for delinquencies, due dates, and status changes.
- Monitor business process status from a dashboard.
- Act quickly to fix errors and delays.
- Analyze the effectiveness of the business process.

Example 6-1   Video

Your Goal	Watch This Video
Learn the features of Oracle Cloud EPM Task Manager, common terms used, and a typical Oracle Cloud EPM Task Manager process flow.	▶ Overview: Task Manager in Oracle Cloud EPM

Working with Tasks

Related Topics:

- Accessing Tasks
- Updating Task Information
- Managing Tasks
- Working with Tasks in Smart View

Example 6-2   Video

Your Goal	Watch This Video
Learn the features of Oracle Cloud EPM Task Manager by navigating through the sections of a task.	▶ Overview: Navigating Tasks in Oracle Cloud EPM Task Manager

Accessing Tasks

Related Topics:

- Viewing Tasks from the Home Page
- Viewing Tasks from the Schedule Tasks Page
- Viewing the Worklist for Task Manager

Viewing Tasks from the Home Page

The Home page displays a summary of tasks assigned to you and their status, such as **Open**, **Late**, **Due Today**, or **Due in 7 Days**. A number to the left of the status indicates the number of tasks with that status. If your administrator has enabled the **Upcoming Tasks** option, you can also see items in the upcoming workflow, as well as tasks currently available. When you click a link in the Tasks summary panel, the Tasks page opens, where you can further filter the list of tasks.

You can filter the list of tasks by **Year** and **Period**, or you can select **All**, to display items from any year or period in the Worklist.

From **Tasks** on the Home page, you can view these tasks and their details:

- **Worklist** displays all tasks for a specified POV that you're authorized to view. Alerts and their status are also displayed at the top of the list on the Worklist page and in the Summary panel.
- **Schedule Tasks** displays tasks for Task Manager.
- **Alerts** displays an Alerts List and enables you to create and work with alerts.

Viewing Tasks from the Task Actions Page

You can also view and update tasks from the Task page, which you can launch from a link in your email notification.

The Task page shows a status icon with a description that indicates the current task status. The Alert page shows a status icon with a description of the current status of an alert.

Viewing the Worklist for Task Manager

The Worklist displays all tasks for a selected schedule or template for a specified POV which you're authorized to view, including tasks for Task Manager. The tasks are listed, and can be easily filtered to display only the ones in which you are interested.

A schedule containing the selected dates for the task is created by the Administrator.

A Summary of the status for All Tasks/Forms or My Tasks/Forms is displayed, as well as a dashboard for the source of the tasks/forms.

From Worklist, you can perform the following tasks:

*   Export to Excel

*   Open Tasks

*   Submit Tasks

*   Force Close or Abort a Task

*   Reassign a Task

Search and Filter Capability

An easy way to filter the items within your list is to use the **Search** field. It will search across any of the displayed columns in the list, excluding dates and icon based columns. For example, you could search for a user to see all items where the user has been assigned as the Assignee or Approver (in case of Task Manager) and Preparer or Approver (in case of Supplemental Data Manager). The search will return any item where the search term is found in any displayed column.

You can also use the specific filtering capability to access particular items using the **Filter** bar or click **Add a Filter** and then set the filters you want per attribute.

To view the Worklist:

1. From the Home page, click **Tasks**. Click **Worklist**.

2. **Optional:** In **Search**, perform the following steps to locate a task:

    *   Click the Tasks icon [icon] to toggle the display between All Tasks or My Tasks.

    *   Type the name of the required task. You can search on any field (text or numeric) on the Worklist, except for **Date**.

3. **Optional:** Click the **Filter** icon next to **Search** to hide or show the filter bar. Click [icon] on the right side of the filter bar to clear all filters.

4. **Optional:** Use the drop-down on the upper right side of the screen to select any filters you want to use to manage the worklist:

    *   **Type**

    *   **Name**

    *   **Description**

    *   **Status (Detailed)**

    *   **Status**

    *   **My End Date**

5. **Optional:** Click the following dimension names to modify the POV:

- **Year**

- **Period**

- **Due**: (None Selected, Late, Seven Days, or Today)

- **Status**: (None Selected, Closed, Open, or Pending)

- **Source**: (Alerts, Tasks, Forms, Journals, or Reassignment Request)

> ✏️ **Note:**
>
> Click multiple entries to add multiple options. Click the selected entry again to remove it from the list.

6. **Optional:** Click ▪▪▪ next to a task to open a selected task and view its details. Select the icons to add or modify options, such as **Properties**, **Instructions**, **Alerts**, and so on.

7. Under **Actions**, you can perform one of the following actions:

   - **Submit Task**. See Submitting Tasks.

   - **Abort Task**: Cancel a task, as opposed to performing a forced close, to prevent successors from continuing and to keep the process moving:

     – When a Finish-to-Start or Finish-Error-to-Start predecessor is canceled, its successors remain as Pending. To keep the process moving, you must edit the successors to remove the canceled predecessor and to start the successors.

     – When a Finish-to-Finish or Finish-Error-to-Finish predecessor is canceled, to keep the process moving, the task owner, schedule owner, or administrator must force a close of the successor.

   - **Force Close Task**: **Force** a task with a status of **Open** or **Error** to have a status of **Close**.

   - **Request Reassignment**: Temporarily or permanently reassign a task to another user.

   - **Refresh**

Viewing Tasks from the Schedule Tasks Page

From the Schedule Tasks page, you can search and filter the tasks. You can change views to display a visual representation of the data or display the data as rows and columns.

To view tasks from the Schedule Tasks page:

1. From the Home page, click **Tasks**, then click the **Schedule Tasks** tab on the left.
   From the Home page, click **Tasks**, then click the **Tasks** tab on the left.

2. **Optional:** In **Search**, type the name of the required task. It will search across the columns in the list, except for dates and any icon-based columns.

3. Select a **Schedule** for the task.
   If you select multiple schedules that are using the same POV, all tasks from all schedules for that POV are displayed.

4. **Optional:** Create a filter to view the tasks. See Working with Filters.

5. **Optional:** Change the POV by clicking the selection under the dimension name to display valid values.

> **✎ Note:**
>
> Click multiple entries to add multiple options. Click the selected entry again to remove it from the list.

6. **Optional:** On the right side of the screen, click the ▤ icon and select a view. See Working with Views

7. Review the selected tasks.

Updating Task Information

You can update information for tasks with the Open status. You can answer questions, add comments, and attach references. You can also view status, priority, owner, assignee, schedule, start and end date, instructions, supporting documents or Web links, and workflow. The workflow shows the approval chain of the task and displays the user name, access role (assignee or approver), status, and dates on which users performed their actions. If an administrator has included instructions with references for which there are links, you can link directly to the task.

Related Topics:

- Viewing Task Properties
- Viewing Instructions
- Viewing Task Alerts
- Viewing Task Attributes
- Viewing Task Questions
- Adding Comments for Tasks
- Viewing Related Tasks
- Viewing Parameters
- Viewing Task History

Viewing Task Properties

To view the task properties of a particular task:

1. On the Home page, click **Tasks**, and then click **Tasks**.

2. Double-click a task to open it.

3. Click the **Properties** tab on the right.

Properties

Name	01 Consolidation Process Kick Off
Task ID	01_Admin
Status	Open
Schedule	June close
Schedule Status	Open
Priority	Medium
Task Type	Parent Task

Owner		Casey Brown

Start Date	Apr 10, 2020 7:00 PM
End Date	Apr 30, 2020 8:00 PM
Duration	20 days, 1 hour

Actual Start Date	Jun 15, 2020 9:38 PM
Actual End Date	
Actual Duration	

Viewing Instructions

To view task instructions on a particular task:

1. On the Home page, click **Tasks**, and then **Tasks**.

2. Double-click a task to open it.

3. Click the **Instructions** tab on the right.
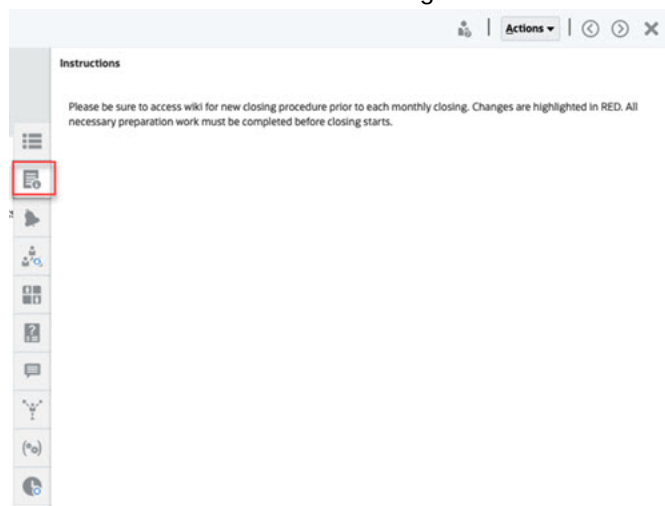
Viewing Task Alerts

To view the alerts on a particular task:

1. On the Home page, click **Tasks**, and then **Tasks**.

2. Double-click a task to open it.

3. Click the **Alerts** tab on the right.
   See also: Working with Alerts
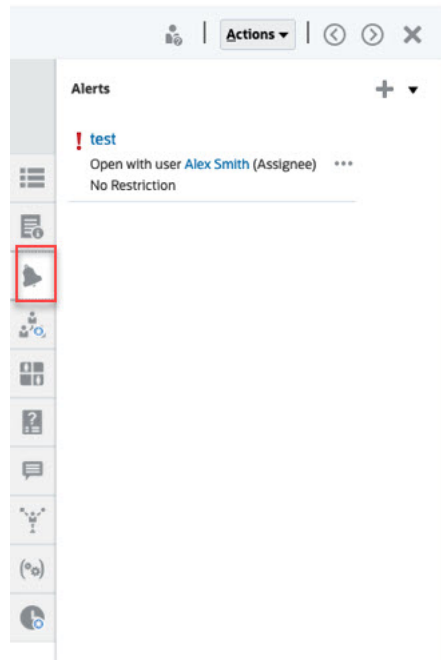
Viewing Task Attributes

To apply an attribute on a particular task:

1. On the Home page, click **Tasks**, and then **Tasks**.

2. Double-click a task to open it.

3. Click the **Attributes** tab on the right.
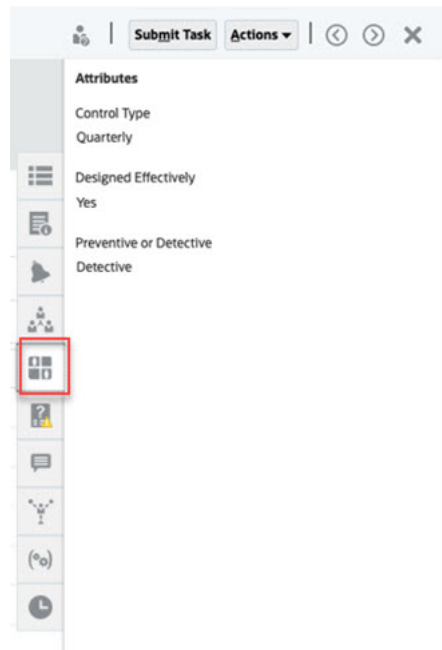
Viewing Task Questions

To view or answer questions on a particular task:

1. On the Home page, click **Tasks**, and then click **Tasks**.

2. Double-click a task to open it.

3. Click the **Questions** tab on the right.
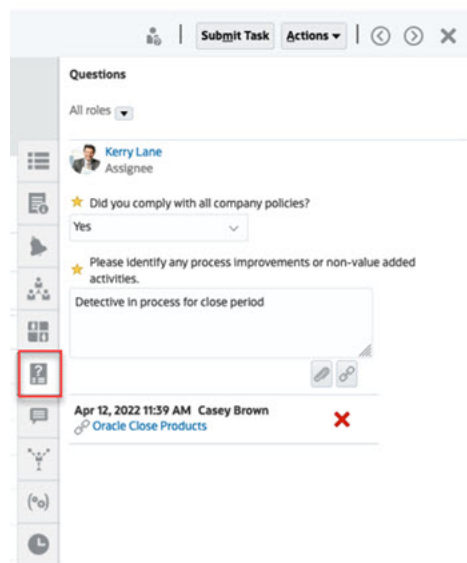
Adding Comments for Tasks

To view comments on a particular task:

1. On the Home page, click **Tasks**, and then click **Tasks**.

2. Double-click a task to open it.

3. Click the **Comments** tab on the right.
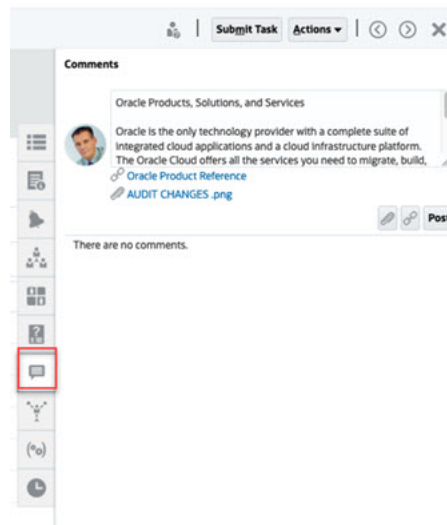
Adding Comments

From the **Tasks** page, you can add comments for any task and also attach references. You can also add a reference file or URL to multiple tasks at one time from the **Tasks** page and create comments.

Here's a table that describes the activities you can perform based on the status of the activity and your role:

> **Note:**
>
> Users with the same access role on a task can create, delete, and manage each other's comments.

Table 6-1   Permissions Based on Role and Status

Role	Status: Open with Assignee	Status: Open with Approver	Status: Closed
Assignee	• Can add Comments • Can delete Comments at their level • Can delete Comments that they created	• Can add Comments • Can delete Comments that they created	Can add comments
Approver	• Can add Comments • Can delete Comments that they created	• Can add Comments • Can delete Comments at their level • Can delete Comments that they created	Can view comments

Table 6-1   (Cont.) Permissions Based on Role and Status

Role	Status: Open with Assignee	Status: Open with Approver	Status: Closed
Administrator, Schedule Owner, or Task Owner	• Can add Comments • Can delete any Comment	• Can add Comments • Can delete any Comment	Can add comments
Viewer	• Can add Comments • Can delete comments that they created	• Can add Comments • Can delete Comments that they created	Can view Comments

> **Note:**
>
> • Bulk upload of a local file or URL to multiple tasks creates a comment since an attachment must be associated with a comment in Task Manager.
>
> • For users to be able to delete their own comments, an Administrator must have allowed this by turning on the **Allow Comment Deletion** setting. Users with the same role on a Task can create, delete, and manage each other's comments.
>
> See Allowing Comment Deletions in *Administering Planning*.

To Add Comments

Here are the steps to add comments:

1. From the **Home** page, select **Tasks**, to view the tasks and their details.

2. Select a task from your Worklist or from within Schedule Tasks. Click **Actions,** and then either select **Open** or double-click the task in the list page.

> **Note:**
>
> The selected task must be in the **Open** status not in **Pending** status.

3. Click the **Comments** tab.

4. In the text box, enter a comment.

> **Note:**
>
> To delete a comment, select it and click **Delete** or select **Actions**, and then click **Delete Comment**.

5. **Optional:** To add an attachment to an external document or a web page to the comment, select one of the following options:

   • Click **Attach a File** (paperclip icon) to browse to select a file as the attachment.

- • Click **Attach a Link** (link icon) to add the URL and Name of the attachment.

6. Click **OK**.

> **Note:**
>
> If you want to add an attachment (file or URL) to multiple tasks at one time, you can perform this action from the **Schedule Tasks** view. Highlight more than one row or select the tasks using the Shift key to select the ones you want. Then click **Actions**, then **Add Reference**, and then choose either **File** or **URL**.

Viewing Related Tasks

The **Related Tasks** section enables you to view the predecessor and successors for a task. The predecessor/successor tasks show the Task Assignees and Task Owners for the dependent tasks.

Related Tasks also displays prior runs of the task in other schedules. This enables you to view comments or references from the prior task, which may help you complete the current task run. From the **Prior Tasks** list, you can click on a task name to launch the Task Actions dialog box for that task and you can reassign a task to another user.

To view related tasks:

1. On the Home page, click **Tasks**, and then click **Tasks**.

2. Double-click a task to open it.

3. Click the **Related Tasks** tab on the right.

4. From **Display**, select **Predecessors** or **Successors**.

5. Optional: To view information on a prior run of the task, click a task in the **Prior Task** list.

6. Optional: To reassign the task, click **Reassign** and select the user to whom you want to assign the task.

7. When finished, click **Close**.
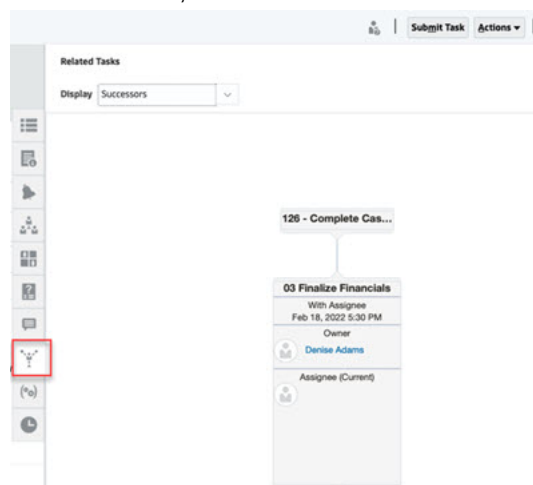
Viewing Parameters

To view the parameters of a particular task:

1. On the Home page, click **Tasks**, and then **Tasks**.

2. Double-click a task to open it.

3. Click the **Parameters** tab on the right.
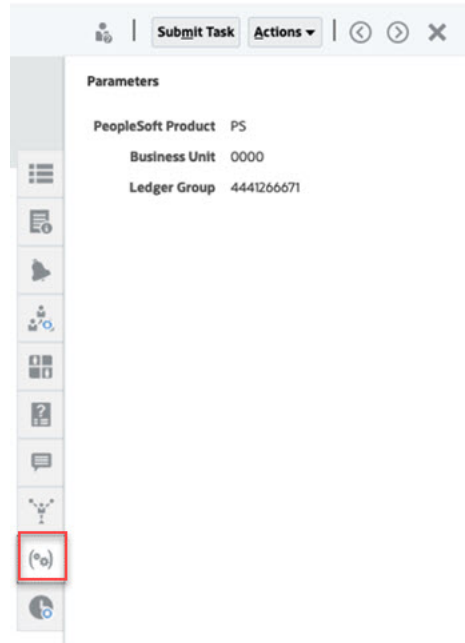
Viewing Task History

The system maintains a history of task activities, which you can view from the History page. Task history displays the components that were updated, the modification type such as added, created, or changed, the old and new values, the user who made the change, and the change date. This information is read-only.

To view task history of a particular task:

1. On the Home page, click **Tasks**, and then click **Tasks**.

2. Double-click a task to open it.

3. Click the **History** tab on the right.

4. From the top right of the page, select a **View** for the history: a **List View** displays a timeline of the history which only lists the basics, , or the **Table View**, to see all values.

5. Select **Timeframe** to view history of **All Activity**, **Today**, or **Last 7 Days**.

6. When finished, click **Close**.
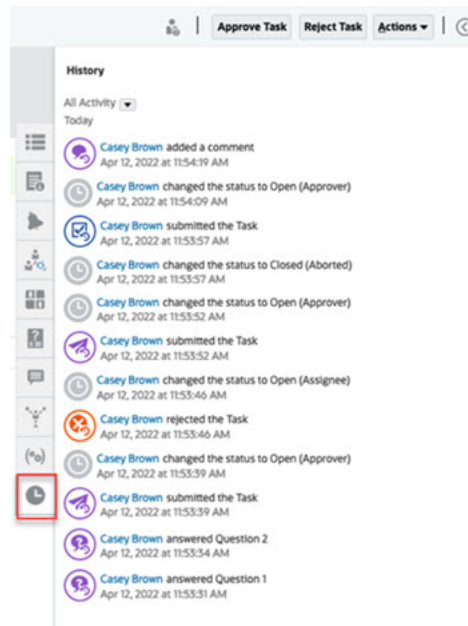
Managing Tasks

Related Topics:

- [Submitting Tasks](#)
- [Approving or Rejecting Tasks](#)
- [Reassigning Tasks](#)
- [Canceling Tasks](#)
- [Setting Tasks to Force Close Status](#)

Submitting Tasks

When you complete the actions required for the task, you submit the task to be moved through the workflow to the next assignee.

To submit tasks:

1. Select the tasks that you need to submit.

   To select multiple tasks, press **Ctrl** and select multiple tasks, or press **Shift** while you click the first and last rows in a range.

2. Click **Submit**, or select **Actions**, then **Submit**.

3. Click **Yes** to confirm the submission. After it is submitted, you can no longer edit the task.

4. Review any errors, and click **OK**.

Approving or Rejecting Tasks

To approve or reject tasks:

1. On the Home page, click **Tasks**, and then click **Tasks**.

2. Double-click a task to open it.

3. Do one of these task actions:

- Right-click and select **Approve** or **Reject**.

- Actions panel: From **Set Status**, select **Approve** or **Reject**.

- Actions menu: Click **Approve** or **Reject**.

Click **Yes** in the confirmation dialog box.

4.   Review any errors, and click **OK**.

Claiming or Releasing Tasks

You can claim and release a single task or multiple tasks at a time in Task Manager. Users who are associated with tasks can claim or release tasks.

The ability to claim a task from another user is required to accommodate cases where a claim has occurred; however, the user with the claim can't complete the role functions (for example, because of an absence).

When a task is claimed, the Assignee changes to the person who claimed.

When a task is released, the Assignee is no longer associated with the task.

> **Note:**
>
> If the Service Administrator has enabled the bulk update feature, you can claim or release multiple tasks at a time.

Claiming or Releasing a Task Using Task Actions Menu

To claim or release a task from the task **Actions** menu:

1.   On the Home page, click **Tasks**, and then click **Schedule Tasks**.

2.   Click the task that you want to claim or release or select the task and click the **Open** icon.

3.   From the **Actions** menu, click **Claim** or **Release**.
     A pop-up message asking for confirmation is displayed.

4.   Click **Yes**.
     A confirmation message is displayed indicating the task was claimed or released successfully.

5.   Click **Close** to close the dialog box.

6.   Review and fix the errors, and then perform the same steps again to claim or release the tasks.

Claiming or Releasing Task from Task List

To claim or release tasks from the Task List:

1.   On the Home page, click **Tasks**, and then click **Schedule Tasks**.

2.   Select the task that you want to claim or release.
     To multiselect, press **Ctrl** for random selection or press **Shift** while you click the first and last row in a range. The selected tasks are highlighted.

3.   From **Actions**, click **Update**, and then click **Claim** or **Release**.
     A pop-up message asking for confirmation is displayed.

4.   Click **Yes**.

The Task Action Results dialog box displays information about the status, number of tasks selected, tasks considered, tasks processed successfully, and tasks that were unsuccessful. The status are:

- Processing
- Completed Successfully
- Completed with Errors

A visual indicator shows the completion percentage. For tasks processed unsuccessfully, the dialog box displays the errors. You can click the **Export to Excel** icon and export the displayed errors to an excel file.

5. Click **Close** to close the dialog box.

6. Review and fix the errors, and then perform the same steps again to claim or release the tasks.

Reassigning Tasks

Task assignees can reassign their tasks to other users. For example, if an assignee has planned to be out of the office for vacation, then the assignee can reassign their tasks to another user.

When tasks are reassigned, email notifications are sent immediately to reassigned users.

> **Note:**
>
> **Request Reassignment** isn't available for Administrators or Task Owners because they can edit the task to assign it to another assignee or approver.

To reassign a task:

1. From the Home page, click **Tasks**, and then click **Worklist**.

2. On the Worklist, select the task for which responsibility is to be reassigned.

3. On the selected Task page, select **Actions**, and then click **Request Reassignment**.

4. From **To User**, click **Select User** to select the user who is assuming responsibility for the task.

5. Under **Reassign**, select the appropriate option:
   - **Selected Tasks** only
   - **Selected and Future Tasks** to permanently transfer responsibility.
   - Enter the **Justification** for the transfer of responsibility, such as vacation, transfer of roles, and so on.

6. Click **OK**.

Reopening Tasks

The Administrators and Power Users can reopen closed and open tasks. If the Administrator provides permission, the other users for example, the Assignees and Approvers can also reopen tasks that are in their workflow. See, Managing Task Manager System Settings in *Administering Financial Consolidation and Close*.

For Administrators and Power Users:

• If the task is closed, you will be given the option of which workflow level to open the task. For example, if you reopen a task where the Assignee is ADMIN ONE and the Approver 1 is ADMIN TWO, you will get the option of returning the workflow to either ADMIN ONE or ADMIN TWO.
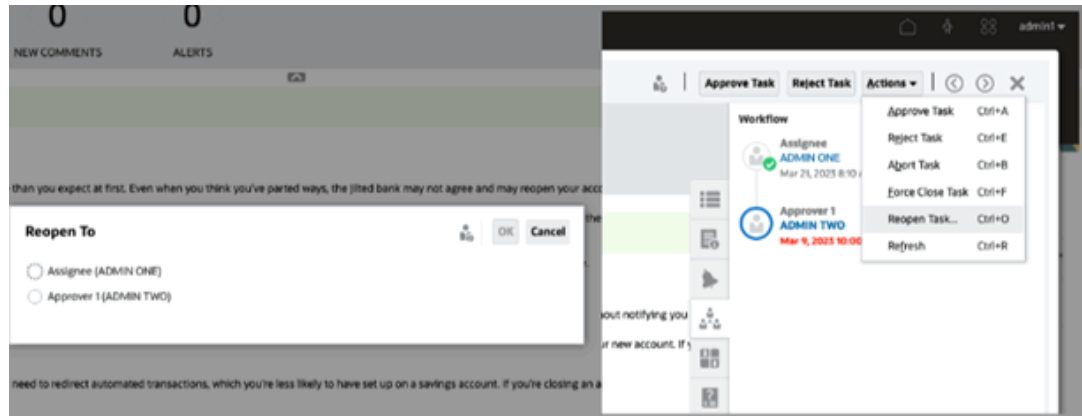
• If the task is open, it will be reverted one level in the workflow. For example, if the task is open to ADMIN TWO and then if you reopen it, it will be reverted to ADMIN ONE.
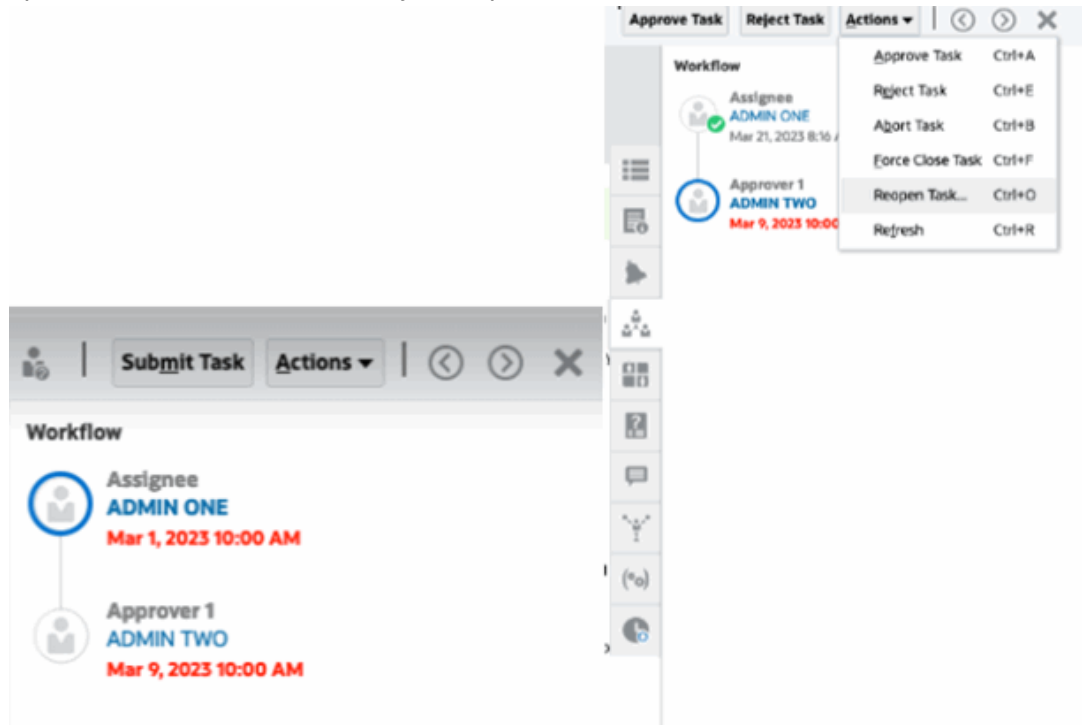
See also, Reopening Tasks and Reopening Manual and Automated Tasks in *Administering Financial Consolidation and Close*.

For Users:

Whether the task is closed or open to a later workflow stage, it will be reopened to the user's workflow. For example, if the task is open and currently with Approver 2 and User Two reopened it, it would revert to Open with Approver 1. If User One reopened it, it would revert to Open with Assignee.
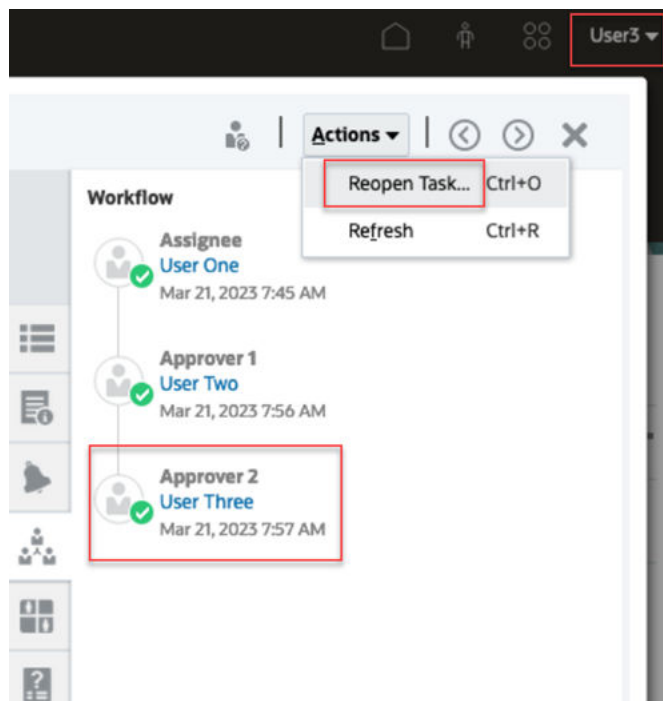
Canceling Tasks

Task owners and the Service Administrator can stop a running task at any time. When you cancel a task, the task status changes to Closed. Pending tasks with the task as a predecessor can't run. If you've a sequence of tasks and you want to cancel the entire sequence, you can cancel the first task in the sequence.

To cancel a running task:

1. From your task list, select a task that you want to stop.

2. From the **Properties** tab, select **Actions**, then **Abort**.

Setting Tasks to Force Close Status

To stop a task but allow other tasks to run, if you're the task owner or Service Administrator, you can force a task with a **Open** or **Error** status to **Closed** status. For example, if you've an automated task with an error, and you've reviewed the error for that task, but want subsequent tasks to run, you can force the **Closed** status.

> 💡 **Tip:**
>
> If you don't want the subsequent tasks to start, remove the predecessor links before force closing the tasks.

To set a task to Force Close status:

1. From your task list, select the task that you want to close.

2. From the **Properties** page, select **Actions**, then click **Force Close Task**.

The status of the task changes to **Closed**.

Working with Tasks in Smart View

Related Topics:

-
-

Creating Connections to the Smart View Extensions

You can use Oracle Smart View for Office to connect to your worklist and update Task Manager tasks within Excel.

You must create private connections to use with the extensions.

> **✎ Note:**
>
> Before you begin, ensure that you have installed Smart View, and the Smart View Extensions for Task Manager. See the "Downloading and Installing Clients" section in *Getting Started with Oracle Enterprise Performance Management Cloud for Administrators*.

To create connections to the extensions:

1. In the Smart View panel, select **Private Connections**, and then, at the bottom of the panel, select **Create new connection**.

2. When prompted, select **Smart View HTTP Provider** to display the **Add Connection** wizard.
   You can create one connection at a time in the wizard.

3. In **Add Connection - URL**, use the following syntax for the private connection, and then click **Next**.

   - For Task Manager:
     `http(s)://serviceURL/HyperionPlanning/cm/svp`

   - When prompted, provide your login credentials: domain name, user name, and password to sign in.

   - In **Add Connection - Application/Cube**, navigate to the application and database to work with, select it, and then click **Next**.

   - In **Add Connection - Name/Description**, enter a name for the connection and an optional description.

   - Click **Finish**.

   - Repeat these steps to create another connection.
     See

Updating Tasks from Smart View

Using Oracle Smart View for Office, you can work directly with Task Manager tasks and schedules.

Your schedules and tasks for the selected period are displayed. You can only see those tasks and schedules for which you're authorized. This is the **Display My Tasks** view of the worklist,

so not all the tasks that you've visibility to see will be shown. Depending on your current role (example, Assignee, Preparer, or Approver), the options such as **Approve** or **Reject** will change to match the associated role. If you've different roles, then you may need to log in as the specific role to perform different operations.

> **Note:**
>
> Before you begin, you must install Smart View and the Smart View Extension for Task Manager, and create a private connection to use with the extension. See the "Downloading and Installing Clients" section in *Getting Started with Oracle Enterprise Performance Management Cloud for Administrators* and "Creating Connections to the Smart View Extensions".

When you click a schedule from the list, the system displays a list of the tasks that you're currently working on. After a task has been submitted or approved, it's no longer displayed on the list.

The available actions depend on your user role:

- **Assignee**: Submit Task
- **Approver**: Approve and Reject Task
- **Assignee or Approver**: Reassign Task

If you submit a task that is incomplete, for example, you must answer questions first, a validation error displays when you submit the task. You can double-click on the task or row to open the task and finish completing it.

For information on working with Smart View, see *Oracle Smart View for Office User's Guide*.

To update tasks from Smart View:

1. Launch Excel, then select the **Smart View** tab, and then select **Panel**.

2. In the Smart View panel, select **Private Connections**.

3. In the **Private Connections** panel, select the **Task Manager** connection from the drop-down menu.

4. When prompted, provide your login credentials: domain name, user name, and password to sign in.

5. Under **Private Connections**, select a schedule.

6. You can open the task in the following ways:

   - Under **Name**, double-click the task that you want to view and open the **Task** dialog.

   - Use the following options from the **Task Manager** ribbon or from the new **Quick Actions** column in a schedule sheet:

     - **Open**: Open the task details in the Task dialog. You can use this open as an alternative to double-clicking a task row in the schedule sheet to launch the **Task** dialog.
       For integrated tasks, use the embedded task links available in the task details within the **Task** dialog to navigate to the relevant tasks.

     - **Open in Browser**: Open the integrated tasks in the web application within a browser. If you've not logged in to the web application in the current session, you will be prompted to establish a connection and log in as a one-time requirement.

Thereafter, you can open the integrated tasks directly in the browser, view the task details, and take necessary actions.

– **Open in Excel**: Open the embedded artifacts such as forms and dashboards in Excel. Forms open in a new worksheet within the same workbook and dashboards open in a new workbook.

7. Select the appropriate option for the selected task:

* **Submit Task**

* **Approve**

* **Reject**

* **Reassign Task**

Working with Alerts

During the course of running a business process, you may encounter roadblocks that affect your progress. For example, you may encounter a hardware or system failure, or software or data issues. You can create an alert to indicate problems in the process, attach it to a task or schedule, and assign a quick workflow to deal with it. You can approve or reject alerts for which you're assigned as the Approver.

You can view alerts from tasks on the Worklist, or from the Alerts List, and drill into alerts to display the alert details. You can edit and delete alerts that you no longer need.

See these topics:

* Creating Alerts

* Updating Alerts

* Alert Actions

* Viewing Alerts from Alert List

* Deleting Alerts

Creating Alerts

You can create an alert from an object in Task Manager such as a task, schedule, or form if you've access to it, or you can create it from the Alert List. You specify an Alert Type and other information, and the alert is created when you submit it from the Actions dialog box.

If needed, you can create alerts on alerts. For example, you can create sub-alerts for a "System Down" issue to work separately on network and power issues.

When you create an alert on an object, only **Alert Types** specific to that object, and generic **Alert Types** are available (for example, **Basic Alert**). When you create an alert directly from the Alert List, only generic Alert Types are available.

When you create an alert, it will initially be in **Open with Owner** status.

> ✎ **Note:**
>
> Alerts can remain in the **Open** status even if they're associated with locked objects (periods, schedules, and so on).

Here's the table that provides the Alers workflow.

Table 6-2   Alerts Workflow

Role	Actions
Owner (user who initiated the alert)	Submit
	Reopen (sends alert back to Owner)
Assignee	Submit
	Request Information (sends alert back to Owner)
Approver1	Approve
	Reject (sends alert back to Assignee)
Approver*N*	Approve
	Reject (sends alert back to Assignee)

To create an alert:

1. Use one of these methods:

   - Navigate to the artifact (task or alert), open the artifact, and then click the **Alerts** tab.

   - For Schedules, edit the Schedule, and then click the **Alerts** tab.

   - For Supplemental Data Forms, edit the form, and then click the **Alerts** tab.

   - Raise a general alert from the Alert List, which is only associated with a year and period.

2. Click **New** (**+**).

3. Enter a unique **Name** for the alert, for example, Data Corrupted. You can enter a maximum of 80 characters.

4. From **Type**, select an Alert Type from the list of administrator-defined Alert Types, for example, Data Issue.

   When you select an Alert Type, your alert will inherit any instructions, workflow users, attributes, questions, and viewers defined in that Alert Type.

   The **Owner** is the name of the user creating the Alert.

   The **Assignee** is the person responsible for resolving the alert. This may be a user, group, or team. The default assignee is inherited from the **Alert Type**.

   The **Approver** is also inherited from the **Alert Type**.

5. From **Year**, select a year. If the alert is created from an object that already has a **Year** associated with it, this value can't be changed.

6. From **Period**, select a period. If the alert is created from an object that already has a **Period** associated with it, this value can't be changed.

7. For **End Date**, specify a due date for the alert. This is usually populated based on the object the alert was created on. You must set an End Date.

8. From the **Priority** list, select a priority for the alert: **High**, **Medium**, or **Low**.

   For **Instructions**, the system displays any instructions that were included in the Alert Type. These are read-only.

   The Basic Alert does not have instructions.

9. For **Description**, enter a description for the alert, for example "Data has been corrupted". You can enter a maximum of 255 characters.

10. **Optional:** To add references to support the alert description:

    a. Click **Attach a file**, select and attach a file, and then click **OK**.

    b. Click **Attach a link**, enter a URL name, then enter the URL; for example: Oracle, http://www.oracle.com, and then click **OK**.

11. To create the alert, click **OK**.

When you click **OK** in the **Create Alert** dialog box, the Alert Actions dialog box will open in the **Open with Owner** status. The Owner can then click **Submit** to change it to **Open with Assignee** status, or **Close** (X) the dialog box.

Updating Alerts

When you open an alert from the Alerts list, you can view the instructions, answer any required questions, and add comments or viewers.

If needed, you can create alerts on alerts. For example, this would allow you to create sub-alerts for a "System Down" issue to work separately on network and power issues.

After you've completed updating the alert information, you can perform actions on the alert, depending on your role and the alert status. See Alert Actions.

To update alert information:

1. On the Home page, click **Tasks**, and then click the **Alerts** tab on the left to open the **Alerts** main page.

2. From the Alert list, select and open an alert.

3. **Optional:** To update the alert properties, select the **Properties** drawer on the right, and edit the properties as needed.

    If you are the Owner, you can edit the **Name**, **Priority**, **Owner**, **End Date**, and **Description**.

    If you are the Approver, you can edit the **Name** and **Priority**.

4. **Optional:** Select the **Instructions** drawer on the right, and if any instructions are attached to the alert, perform the required instructions.

5. **Optional:** Click the **Workflow** drawer on the right to view the current progress of the task as it is worked on by the assigned users.

6. **Optional:** Select the **Associated Objects** drawer on the right to view any objects that are associated with the alert, such as a task, schedule, or an associated alert.

7. **Optional:** Click the **Alerts** drawer on the right to create or select an existing alert.

    • To create a new alert for the alert, click **Create Alert** and enter the alert information. See Creating Alerts.

- To associate an existing alert with the object, click **Existing Alert** and select an alert from the Alert list.

  By default, the alerts from the current period are displayed. You can change the filter to select alerts from any period.

8. **Optional:** Click the **Attributes** tab on the right to view the attributes relevant to your role on the alert. If an attribute list is available, you can select an attribute for the alert.

9. **Optional:** Click the **Questions** tab on the right to view and answer any questions required for the alert.

   If you're the Owner (the user who created the alert), you can also be asked questions. This allows key details to be gathered from the user experiencing the issue.

10. **Optional:** Click the **Comments** tab on the right to enter a new comment, and then click **Post**.

    If there are saved comments, they are displayed in chronological order under the entry area, with the latest comments first. If there are more than three comments, the system displays a **Show All Comments** link.

    To attach a file or link to a URL as a reference:

    - Click **Attach a file**, select and attach a file, and then click **OK**.

    - Click **Attach a link**, enter a URL, and click **OK**.

11. **Optional:** Click the **Viewers** tab on the right to add viewers to the alert.

    - To select viewers from the Member Selector, click **Add** , enter or select the name of the user, group, or team that will have view access to the alert, and then click **OK**.

    - To add a user outside the system who must be notified about the alert, click **Add External User** . Enter a user's **Email Address**, select a **Notification Priority**, and then click **OK**.

    > **Note:**
    >
    > An external user won't have any visibility or access to the alert, they'll only receive notifications about it.
    >
    > Notifications will be sent for the priority level or higher. For example, if set to **High**, the notification will only be sent when the alert is set to **High**. If set to **Low**, then they will be notified for all priority levels (**Low**, **Medium**, and **High**).

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12. **Optional:** Click the **History** tab [icon] to view all actions performed since the alert was created. This is a read-only tab.

13. To select an action for the alert, see Alert Actions.

Creating an Alert on a Schedule

When you're working with schedules, you may encounter an issue that affects your progress, and you can create an alert.

To create an alert on a schedule, you must have Edit capabilities on a schedule as either the Owner or System Administrator.

To create an alert on a schedule:

1. On the Home page, click **Application**, and then click **Task Manager**.

2. Click the **Schedules** tab on the left.

3. Select the schedule and click **Edit**.

   If you don't have edit rights, the **Properties** icon is displayed intead of an **Edit** icon.

4. Click the **Alerts** tab.

5. Click **Create Alert** to create an alert, or click **Existing Alert** to associate an existing alert from the Alert List.

   See Creating Alerts.

Alert Actions

The actions available for an alert depend on its ownership, status, and the security rights assigned to the user. For example, you can request information, submit, approve, claim, or reassign an alert, depending on your role and access.

Here's the table that lists the actions available and the required roles.

Table 6-3   Alert Actions and Available Roles

Action	Description	Role
Request Information	Allows the Assignee to send the alert back to the Owner to request more information	Assignee
Submit Alert	Allows the Owner or Assignee to submit the alert	Owner, Assignee
Approve Alert	Allows the Approver to approve the alert	Approver
Reject Alert	Allows the Approver to reject the alert	Approver
Claim Alert	Allows a team member assigned to the alert to claim it. Only available when the alert Assignee or Approver is assigned to a team instead of an individual. Claiming may be done even if the alert is claimed by another team/group member.	Assignee team member

Table 6-3   (Cont.) Alert Actions and Available Roles

Action	Description	Role
Release Alert	Allows a team member to release a currently claimed alert	Current claimed assignee team member
Reassign	Allows an Administrator to reassign the alert to another user	Administrator
Force Close Alert	Allows an Administrator to change an alert status to Closed, regardless of the current status	Administrator
Refresh	Updates the alert with latest comments, status, and so on	All

To perform an action on an alert:

1. On the Home page, click **Tasks**, and then click the **Alerts** tab on the left to open the **Alerts** main page.

2. From the Alert list, select and open an alert and make sure the required information is completed.

3. From the **Actions** menu, select an available action.

   - **Request Information**
   - **Submit**
   - **Approve**
   - **Claim**
   - **Release**
   - **Reassign**
   - **Request Reassignment**
   - **Force Close**
   - **Refresh**

Viewing Alerts from Alert List

You can view and work with alerts from the Alerts list. The list displays the alert name, status, priority, end date, alert type, and other information.

To access the Alerts list:

1. On the Home page, click **Tasks**.

2. Click **Alerts** from the left navigation.
   The Alerts page displays any existing alerts for the specified period. You can open and work with the alert.

You can filter the list and select the columns that you want to display.

> **Note:**
>
> - Alerts and their status are also displayed at the top of the list on the **Worklist** tab.
>
> - If you've previously accessed the Alerts list, the filters that you had selected, including the **Year** and **Period** filter, are displayed. However, you've the option to remove the **Year** and **Period** filter bar and add any other filters.
>   If you're accessing the Alerts list for the first time, you'll not see the **Year** and **Period** within the filter bar. Instead, the **Status** filter is displayed by default. This enables you to view all alerts that you need to work on, regardless of the period with which the alerts are associated.
>
> - The Alert Actions banner shows a status icon with a description that indicates the current status of the alert.

When you open an alert, the system displays the alert information and a work area. The top bar displays the object name. The Alert name is displayed above the parent object (task, schedule, and so on). The **Actions** menu contains available action options depending on your role and the workflow for the alert. See Alert Actions.

If one of these actions is available, it's displayed as a separate button in the top bar:

- **Submit**
- **Approve**
- **Reject**
- **Claim**
- **Release**
- **Request Information**
- **Reopen**

The Summary board displays a graphic summary of the alert status. The items displayed depend on the workflow.

- **Days Left** - Indicates the days left before the alert is due to be resolved. If a user is currently working on a alert, it will show the days remaining for their part of the workflow. Otherwise, it will show the overall days remaining.

  If there are only hours left, this is displayed as **Hours Left** or **Minutes Left**. If it's beyond the **End Date** value, then it displays **Days Past Due**.

- **Priority** - Displays the current priority of the alerts.

- **New Comments** - Displays the number of comments that you've not yet viewed.

- **Questions** - Displays the number of questions that you are required to answer before submitting or approving the alert.

- **Attributes** - Displays the number of attributes you're required to set before submitting or approving the alert.

- **Alerts** - Displays the number of open alerts associated with this alert.

To view alerts:

1. From a task, click the **Alerts** tab on the right side.

2. Click an alert name to drill down and view additional detail about the alert, or select an alert and click **Open**.

3. **Optional:** To search for an alert, in the **Search** box, enter search criteria.

4. **Optional:** To select columns to display, from **Actions** in the **Alerts** tab, click **Select Columns**, and select the columns to display, or select **Show All**.

5. **Optional**: To export alerts, from the **Actions** menu, click **Export to Excel**.

6. To create an alert, see Creating Alerts.

7. To perform an action on the alert, see Alert Actions.

8. To refresh the alert list, click **Refresh**.

Deleting Alerts

You can delete alerts that you no longer need if you're an Administrator or Alert Owner. You must also have access to the object associated with the alert.

You can delete multiple alerts at the same time.

To delete an alert:

1. On the Home page, click **Tasks**, and then click the **Alerts** tab on the left to open the **Alerts** main page.

2. From the Alerts list, select and open an alert.

3. Select **Actions**, and then click **Delete**, or select **Delete** from the row **Actions** menu.

4. From the confirmation prompt, click **Yes**.

Working with Views and Filters

This chapter describes how to create, manage, and use views and filters.

Related Topics

- Working with Filters
- Working with Views

Working with Filters

Use filters to limit the records displayed in your views and reports.

Related Topics

- About Filters
- Viewing the Existing Saved Filters
- Creating a New Filter
- Using the Filter Bar to Adjust Your View
- Clearing Filter Conditions
- Removing a Filter
- Editing a Filter
- Duplicating a Filter

- Saving a Filter
- Applying a Saved Filter
- Deleting a Filter
- Displaying Columns for Filters
- Reordering Columns for Filters

About Filters

Filters control the records that you see in list views and reports.

You can provide values for the attributes that you want to filter on and the operator to use for filtering. Typical operators include the following: equal to, not equal to, starts with, ends with, contains, greater than, less than, and so on. The available operators depends on the attribute's data type. For example, operators for filtering text values are different than the operators for filtering numeric values. Filters are combined together using and logic, which means only those records that meet all filter criteria are displayed.

You can also create more complex filters using and as well as or logic and grouping logic to determine the order in which filters are applied.

You can save a filter for future use. However, for setting up your views, saved lists can be used. See Working With List Views.

Service Administrators and power users can publish filters so that they are accessible to other users and these are then marked as Public. Service Administrators and power users can use saved filters to test rules.

Where Are Filters Used in Task Manager

There are many locations within Task Manager where filters can be used.

The filters functionality remains consistent throughout these different areas:

- Schedule Tasks
- Templates
- Schedules
- Task Types
- Alert Types
- Views
- Attributes

Viewing the Existing Saved Filters

Filter definitions that were saved are available in the Filters tab of Configuration.

To view saved filters:

1. From **Home**, click **Application**, and then **Task Manager**.

2. Click **Filters** to see existing filters.
   Public filters are marked with a green check mark.

Creating a New Filter

You create a new filter to control the display of rows as per your requirement.

To create a new filter:

1. From **Home**, click **Application**, then **Task Manager**, and then **Filters**. You can also go to any of the following pages to create a filter:

   • **Tasks > Schedule Tasks**. Click **...** on the right side and then **Manage Filters**.

   • **Tasks > Supplemental Data Tasks**. Click **...** on the right side and then **Manage Filters**.

   • **Tasks > Alerts**. Click **...** on the right side and then **Manage Filters**.

2. Click New (+) to add a new filter. The New Filter dialog appears.

3. In **Name**, enter a unique name for the filter.

4. In **Description**, enter a description (optional) for the filter.

5. In **Type**, select the type of filter being created.

6. In the Filter Definition section, click **Create Condition** to create a condition that will be used to filter data. You can specify multiple conditions and condition groups.
   For each condition, specify the following:

   • (Condition Groups only) Conjunction: Select And or Or. These state how this condition or group relate to prior sibling conditions or groups. This field is enabled only if the selected node is not the first child of its parent node.

   • Attribute: An attribute is a field or value that a condition will be comparing to a value for inclusion in the result set of a filter. However, for the case of a filter, an attribute denotes more than the list of user-defined attributes.

   • Operator: States what kind of evaluation to perform against the attribute. For example, Equals, Between, Does not Equal, Greater than, Is blank, Is not blank, Less than, Not between.

   • Value: Specifies what values to compare the attribute against. The type of attribute determines what input field is available.

Using the Filter Bar to Adjust Your View

The filter bar works across many different areas to filter data displayed in a list. You can add multiple filters to a list.

Here's an example of the filter bar on the Filter configuration. Note that the default of All is used. This means that all objects are displayed unless you choose to make a selection of filter attributes.

Name	Description	Public	Type	
No Condition	No Condition	All	All	Add a Filter

To add a filter to your list:

1. Click **+ Add a Filter** to display a list of attributes that you can use to filter data.
   The list of attributes is different, depending on the list page on which you are adding the filter.

2. Select the filter attribute you'd like to add.
   The selected attribute appears on the filter bar.

Using a Date Range

Some filter attributes have a date range. For example, if you want to add another filter attribute to the filter bar, such as **Created On**, you can use the date range feature. Narrow your view by using a date value and then use the **Operator** field to set the conditions for dates values that meet this criteria.

Clearing Filter Conditions

When you clear a filter, the conditions applied by this filter on the displayed data are removed.

After adding the filter to the Filter bar, you can do one the following to clear the filter conditions:

- Hover on each filter, click the ••• icon, and click **Clear** to clear and reset the condition for the specific filter.

- Click the ••• icon on the right side of the Filter bar and select **Clear All Filters**. The conditions for all the filters in the Filter bar are cleared and reset.

Removing a Filter

You can remove a filter from the Filter bar.

Removing a filter also clears the conditions applied by the filter on the listed data.

To remove a filter from the filter bar:

1. Click the icon ••• adjacent to the filter.

2. Click **Remove** to remove the filter from the Filter bar.

On a few pages, you can't remove the default filters.

Editing a Filter

Edit a filter to modify its definition.

To edit a filter:

1. Open the Filters page.

   From the Home page, click **Application** > **Task Manager** > **Filters**.

   You can also edit filters when you click **…** > **Manage Filters** on a page.

2. Select the filter you want to edit and click the ✎ icon.
   The Edit Filter dialog is displayed.

3. Update the required information.

4. Click **OK**.
   The filter details are updated.

Duplicating a Filter

You duplicate a filter to create a copy of an existing filter.

To duplicate a filter:

1. On the Filters page, select the filter you want to duplicate and click the 🗗 icon.
   A copy of the filter is displayed on the page.

2. Click the copied filter.
   The Edit Filter window is displayed.

3. Update the required information.

4. Click **OK**.
   The filter details for the copied filter are updated.

Saving a Filter

Saving a filter definition enables you to easily reuse these filter settings when required (instead of manually setting up filters when required).

By default, filters are saved as private filters. To enable other users to use the same saved filters, you can publish the filters.

To save a filter:

1. Use the **Add a Filter** to create a filter for the required attributes.

2. From the Actions menu, select **Save Filter**.
   The Save Filter dialog appears.

3. In **Name**, enter a unique name for the filter.

4. In **Description**, enter an optional description for the filter.
   Notice that the Filter Definition section displays the selected filter conditions.

5. Click **OK**.

Applying a Saved Filter

You can apply saved filters to restrict the displayed data. All the saved filters are displayed when you click the **…** icon on the top-right side of a page. Click any of these filters to apply it for the data. The data will be displayed based on the defined filter conditions.

Deleting a Filter

Delete a filter to remove its definition from the system.

To delete a filter:

1. On the Filters page, select the filter you want to delete and click the ✖ icon.
   A message is displayed asking for confirmation.

2. Click **Yes**.
   The filter is deleted.

Displaying Columns for Filters

To display the columns for the filters:

1. On the Filters page, click **View** and then **Columns**.

2. Select the columns you want to display or click **Show All** to display all the columns.

You can click **Manage Columns** and hide or show the columns that are displayed in **View > Columns**.
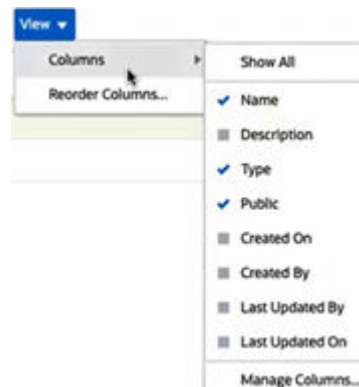
Reordering Columns for Filters

To reorder the columns:

1. On the Filters page, click **View** and then click **Reorder Columns**.

2. Select the column name that you want to reorder and use the following icons to move it to the required position:

   - ⤒ : Move selected items to top of the list

   - ⌄ : Move selected items up one in the list

   - ⌄ : Move selected items down one in the list

- : Move selected items to bottom of the list

3. Click **OK**.
   The columns are displayed based on the specified order.

Working with Views

Views provide multiple ways to visualize and analyze your data.

Related Topics:

- About Views
- Working With List Views
- Working with Pivot Views
- Working with Chart Views
- Working With Gantt Chart Views
- Working With Calendar Views
- Saving Views
- Editing Saved Views
- Setting a Default View

About Views

Oracle Enterprise Performance Management Cloud products provide you with great flexibility in the ways in which you can visually view your data.

Types of Views

- List view: Provides a table display of information in columns and rows for the objects which meet the filter conditions on the page.

- Gantt chart: Displays a timeline for a schedule that graphically represents the duration of tasks and the dependencies between them. You can use the Gantt chart to see the status of predecessor tasks to other tasks.

- Calendar: Displays schedule tasks in traditional calendar format by Month, Week, or Day. After you select the Calendar View, use the calendar icons to select Month, Week, or Day. In the Calendar View, you can also see the Day Label in the Day header.

- Pivot view: Allows you to create summaries of numeric attribute data by attribute value.

- Chart view: Displays data in the form of charts.

Use the View selector ( ) to move between views.

Choosing the Compact Display of Views

When you're viewing items in a List, Gantt, or Pivot view, you've the ability to view the data in a compact format. The **Compact** option works as a toggle switch and displays more rows of information. Click **Compact** from the **View Selector** to display the records in a compact format.

If you save a view, your choice of Compact will also be saved.

Objects for Which Views are Available

Views are available for the following objects in Task Manager:

- Schedule Tasks: Contains the list of scheduled tasks for Task Manager

- Alerts: Contains the list of alerts and provides drill-down to the alert details

About Filtering Data in Views

You can use filters to restrict the data displayed in the views. Filters can be created at run time (after the data is displayed), or when designing the chart or pivot view.

You can filter data in the following ways:

- Filter bar in a view

  Using filters from the Filter bar enables users to dynamically decide the criteria that must be applied to the view data. The specified filter condition is applied at run time, after the view is generated and the display is updated to reflect the applied condition. See Using the Filter Bar to Adjust Your View.

  For example, add a filter to the Filter bar in the Tasks list with the Assignee column selected. You can use this filter to dynamically filter the chart data by selecting one or more assignees.

- **Filter** in the **Layout** tab of the Edit Pivot or Edit Chart dialogs
  This filter is added by the view designer. The specified conditions are applied on the data before the data is included in the pivot view or chart view. You can create a filter for each data set listed in the **Legend (Series)** section. See Setting the Chart Layout.

  For example, if you create a filter condition for a data set with Status set to Open, only open tasks are included when charting that data set.

Working With List Views

Use list views to display records in a simple tabular form.

Related Topics

- About List Views

- Customizing the List View

- Task Manager Example: Customizing the List View for Schedule Tasks

About List Views

List views present records for on screen viewing and provide drill-down capabilities to the record details. They display objects in a vertical list, in the form of rows and columns.

To see more rows displayed in the list view, use **Compact** from the **View Selector** at the right hand side.

List views provide the following reporting features:

- Columns can be added to or removed from the view and re-ordered.

- Filters can be applied to limit the records included in the list.

- List views can be printed or exported to Excel for ad-hoc reporting.

Customizing the List View

The list view displays with the default columns selected. You can easily change the default columns to customize your view.

To customize a list view:

1. Display the list view for the required object.

2. In the **Actions** drop-down, select **Select Columns**.

   The Select Columns dialog appears. The columns that are currently displayed are listed in the **Selected** section.

3. In the **Available** section, select the attributes that must be included in the list view and use the arrow keys to move them to the **Selected** section.

4. Click **OK**.

Task Manager Example: Customizing the List View for Schedule Tasks

Assume that you want to see more information such as when was the task created.

Use the following steps:

1. From **Home**, click **Tasks** and then click **Schedule Tasks**.

2. From the **Actions** drop-down, click **Select Columns**.

   The Select Columns dialog appears. Use this to add additional columns to view information about the tasks.

3. In **Available**, scroll down the list, select **Created On**, and use the arrow keys to move it to **Selected** on the right side.

4. Click **OK**.

   The Schedule Tasks page displays the **Created On** column for the tasks.

Working with Pivot Views

Use pivot views to summarize your data.

Related Topics

- About Pivot Views

- Customizing a Pivot View

- Example: Viewing Organizational Units Based on Task Status

About Pivot Views

A pivot view enables you to create summaries of the attribute data.

There is a default layout for each object that supports pivot views. However, you can customize the pivot view based on your requirement.

Click each summary value displayed in the pivot view to drill down and view the records that comprise the total.

Customizing a Pivot View

You can customize a pivot view to summarize the data based on your business requirement. Data can be grouped by a maximum of two attributes.

To customize a pivot view:

1. Display the pivot view for the required object.

2. Click the **Edit** icon at the top-right.

   The Edit Pivot dialog appears. It contains three tabs: **Properties**, **Layout**, and **Columns**.

3. In the **Properties** tab, enter the basic view properties. See Setting Pivot View Properties.

4. In the **Layout** tab, specify the details of how data must be grouped. See Setting Pivot View Layout.

5. In the **Columns** tab, enter the data labels and the sorting order for the data. See Specifying Pivot View Columns.

6. Click **OK**.

> **Note:**
>
> If you drill down into a record, update one or more details, save it, and return to the pivot view, these changes are not visible. You must refresh the pivot view to see the latest updates.

Setting Pivot View Properties

Use the **Properties** tab of the Edit Pivot dialog to set the basic properties of a pivot view.

To set the pivot view properties:

1. In **Background**, select one of the following:

   - **No Fill**: No background color is used

   - **Solid**: Select the color to be used as the background color. You can optionally select a color in **Gradient**.

2. In **Header Color** and **Header Size**, select a color and font size for the pivot view header.

3. In **Data Color** and **Data Size**, select a color and font size for the data displayed in the pivot view.

4. Select **Missing Values as Zero** to display a zero when data values are missing.
   This includes missing data values and values that are missing because of an applied filter.

5. In **Period**, select one of the following:

- **Selection**: Use the selection from the Period filter as-is.

- **Latest in Selection**: Use the latest Period chronologically in the filter.

- **Prior from Selection**: Create a new filter of the prior X periods based on the latest period in the filter.

  The Period selection allows you to fine tune the list of Periods for the particular pivot view. This can be done so that pivot views sharing the same global period filter can display different amounts of data, or to make it easier to show a distribution of period data based on a single local period selection.

Setting Pivot View Layout

The **Layout** tab specifies how data in the pivot view must be summarized. Filters can also be applied on the data that is considered for summarizing.

Specify the following layout details:

1. In the **X Axis** section, specify details about the primary grouping to use in the view.

    - In **Type**, select one of the following: None, Attribute, Date, User, Yes/No, or True/False.

      If you set the **Type** to Attribute, in **Attribute 1**, select the attribute that must be used to group data. For example, Organizational Unit.

      Optionally, you can create another subgroup, within the **Attribute 1** group, by selecting another attribute in **Attribute 2**.

    - In **Sort**, select the attribute and the order on which data must be sorted.

    - Select **Swap Rows and Columns** to swap the display of rows and columns in the grid.

2. In the **Legend (Series)** section, click the **Add** icon to create one row for each attribute for which you want to summarize data. This summary is created within the specified **Type**. There must be at least one row in this section.

    For each row, specify the following details:

    - In **Value**, select the attribute whose data must be summarized. For example, Approvers (Count).

    - In **Aggregation**, select the aggregation operation to be performed on the summarized data. It will default to the aggregation method specified on the attribute that you selected.

    > **Note:**
    >
    > If you select a non-numeric attribute in **Value**, the only **Aggregation** available is **Count**.

    - In **Categories**, optionally select the attribute by which the data is summarized, within the **Value** group.

    - In **Group By**, select an attribute from the list. This is applicable only when **Type** is set to a value other than Attribute.

    - Click **Filter** to apply a filter on the data that is included in the pivot view. This filter is first applied on the data and then the data is summarized using the specified criteria.

      By default, the first clause in a filter condition is displayed as the label for this filter.

3. Click **OK**.

Considerations When Using Aggregation

For Task Manager example, see Example: Viewing Organizational Units Based on Task Status

Specifying Pivot View Columns

Use the **Columns** tab to customize the labels and order of data displayed in the pivot view.
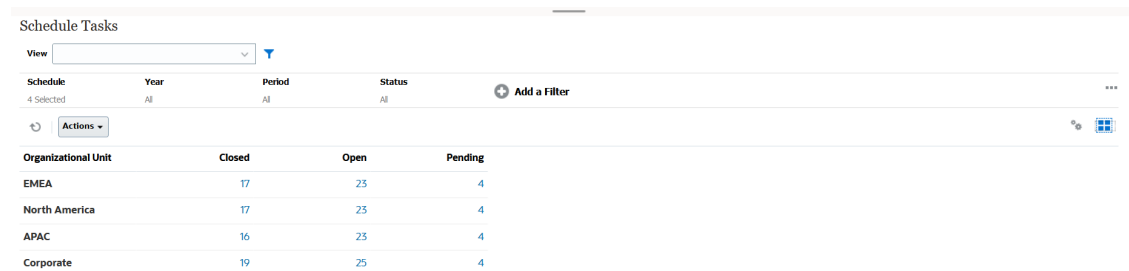
Each row in this tab will be displayed as a column in the pivot view. The number of rows is determined by what is specified in **X Axis** and **Categories** in the **Layout** tab.

To customize the display of the pivot view:

- In **Label**, enter the label that must be displayed for this column.

- Select **Sort** to sort the pivot data by this column. Click the icon next to this option to sort in ascending or descending order.

- Use the arrows on the right to change the order in which the columns are displayed. This list of columns are displayed from left to right in the pivot view.

Example: Viewing Organizational Units Based on Task Status

This example describes how to create a pivot view that groups organizational units based on the status of the tasks. The following image displays the Pivot view.

Organizational Unit	Closed	Open	Pending
EMEA	17	23	4
North America	17	23	4
APAC	16	23	4
Corporate	19	25	4

Use the following steps to create the above Pivot view:

1. In the Home page, click **Tasks** to display the Schedule Tasks page.

2. Click the icon and select **Pivot View**.

3. Click the **Edit** icon to configure the Pivot view as per your requirement.

4. On the **Properties** tab:

   - **Background**: No Fill

   - **Header Size**: 13

   - **Data Size**: 14

   - **Period**: Selection

5. On the **Layout** tab:

   - In **X-Axis**:

     – In **Type**, select **Attribute**.

     – In **Attribute1**, select **Organizational Unit**.

     – In **Sort**, select **Organizational Unit** from the first drop-down list and then select **Descending** from the second drop-down list.

- In **Legend (Series)**:

  – In **Value**, select **Task**.

  – In **Categories**, select **Status**.

6. On the **Columns** tab, select the displayed labels.

7. Click **OK**.

Working with Chart Views

Chart views enable you to visualize your data.

Related Topics

- Overview of Chart Views

- Creating Chart Views

- Example: Creating a Chart to Display Task Status by Month

- Example: Creating a Chart to Display Plan versus Actual End Date

- Example: Creating a Chart to Display Task Execution by Organization Unit

Overview of Chart Views

Related Topics

- About Chart Views

- About Chart View Properties

- Types of Chart Views

About Chart Views

A chart provides a visual representation of data.

Charts are generated dynamically based on your business process data. Click an area within a chart, for example, an area within a pie chart, to drill-down and view details about the information summarized by that area. The chart and pivot view layouts are linked, allowing you to quickly switch between the chart or pivot view.

When you configure settings for a chart view, the system remembers these settings. If you close the chart view, perform other actions in your business process, and then return to the chart view, the chart is displayed using the previous settings.

Multiple types of chart views are available to provide a graphical representation of your tasks. See Types of Chart Views.

About Chart View Properties

Chart properties include basic details such as the type of chart, chart orientation, and background. The properties that you can set for a chart depend on the type of chart.

Chart Property	Applicable Chart Types	Description
Type	All	Type of chart See Types of Chart Views.

Chart Property	Applicable Chart Types	Description
Background	Area, Bar, Column, Combination, Doughnut, Line, Pie, Tile	Background color used in chart This color applies to the entire chart area, from border to border. You can choose not to use a background color, in which case a white background is used for the chart. If you specify a background color, an optional gradient also can be specified.
Label Position	Area, Bar, Column, Combination, Line	Location of the data labels in relation to the elements The options available depend on the type of chart. For example, bar charts have the following label options: No Label, Center, Inside Edge, or Outside Edge.
Bar Label Position	Combination	Location of the data labels in the bar chart
Grid Lines	Area, Bar, Column, Combination, Line	Grid lines used to divide the chart area
Orientation	Area, Bar, Column	Orientation of the chart - Vertical or Horizontal
Missing Values as Zero	Area, Combination, Line, Tile	Displays a zero (instead of a blank) when the data for a particular element is missing When you select this option, all missing values are displayed as zero. This includes missing data values and values that are missing because of an applied filter.

Chart Property	Applicable Chart Types	Description
Dual-Y Axis	Area, Bar, Column, Combination, Line	Appears on the opposite side of the chart from the primary Y-axis
		The scale of the secondary Y-axis reflects the values for the associated data series. While the secondary Y-axis can be used with any line and bar chart type, it is more commonly used with the combination chart type, which helps to distinguish the data series that are plotted on the secondary Y-axis. For example, select **Bar** for the primary Y-axis and **Line** for the secondary Y-axis.
		When the data values in a chart vary widely from data series to data series, or when you have mixed types of data (for example, currency and percentages), you can plot one or more data series on a secondary (vertical) Y axis.
		You can also plot the secondary Y-axis as a split dual chart, where the secondary Y-axis appears with its data series below the original chart. In this case you can use any bar or line chart type.
Line Weight	Combination, Line	Width of the line in the chart The default is 5 pixels.
Bar Label Position	Combination	Position of the label for the data set displayed as a bar chart
Display as Percentage	Doughnut, Pie	Values for each data set displayed in terms of percentages (instead of as a numerical value)
3D chart	Pie, Tile	3-dimensional chart format

Types of Chart Views

You can create the following types of chart views:

- Area

  Displays a shaded area to represent each data set

- Bar

  Displays a graphical summary of multiple data values for comparison purposes

  Bar charts can be plotted vertically or horizontally

- Column

Displays stacked bars that represent different data sets on top of each other

The height of the resulting bar shows the combined result of the data sets.

* Combination

Provides a visualization that lets you merge into one chart any combination of bar, line, and area charts.

Use this type when you have two different sets of data that are plotted on the y-axis. You can add a secondary Y-axis on the opposite side from the primary Y-axis. Adding a secondary Y-axis lets you display the scale for one measure that doesn't scale appropriately with the other measures on the chart; for example, showing a percentage measure and a currency measure on the same chart.

* Doughnut

Displays a circular graph which is divided into segments to compare data sets to one another

The blank center displays the sum of all data sets.

* Line

Enables users to visualize a trend in data over intervals of time

* Pie

Displays a circular graph which is divided into slices to compare data sets with one another

* Tile

Enables users to select specific values from a data set, to display in separate tiles

It emphasis a small number of data points or an individual data point.

The default chart view is a Bar chart. You can customize your chart display and change the default chart view.

Creating Chart Views

Create charts to portray your application's data graphically.

To create a chart view:

1. Display the chart view for the required object.

2. From the **View Selector** at the top-right of the page, select **Chart View**.

   If this is the first time you're accessing the chart view, the default chart view layout is displayed.

3. Click **Edit** at the top-right to display the Edit Chart dialog. It contains three tabs: **Properties**, **Layout**, and **Legend**.

4. In the **Properties** tab, specify the required chart properties, as described in About Chart View Properties.

5. Enter the information required to create the chart, as described in the following topics:

   * Setting the Chart Layout

   * Setting the Chart Axis

   * Setting the Chart Legend

6. Click **OK** to save the chart definition and then display the chart.

Click any area within the chart view to drill-down and display all the records that are aggregated by the selected area. The records are displayed in the Details dialog. You can click any link within this dialog to access the details of that individual record.

> ✎ **Note:**
>
> If you drill down into an individual record, update one or more details, save it, and return to the chart view, these changes are not visible. You must refresh the chart view to see the latest updates.

Setting the Chart Layout

Use the **Layout** tab to specify the data sets that must be plotted on the x-axis and y-axis of the chart.

To set the chart layout:

1. Open the **Layout** tab of the Edit Chart dialog.

2. In the **X Axis** section, specify the data that must be plotted on the x-axis of the chart.

    *   In **Type**, select the type of data. Options include None, Attribute, Date, User, Yes/No, and True/False.

    *   If you set the **Type** to **Attribute**, you must specify at least one attribute that is plotted on the x-axis. You can specify a maximum of two attributes.

        In **Attribute 1**, select the first attribute to plot on the x-axis. Optionally, in **Attribute 2**, select the second attribute to plotted on the X axis. The various combinations of Attribute 1 and Attribute 2 values are plotted.

    *   In **Sort**, select **Ascending** or **Descending** to sort your X axis data.

3. In the **Legend (Series)** section, specify one or more data sets that must be plotted along the Y axis of the chart view.

    For example, if you define three data sets, then three values are plotted on the y-axis.

    Within each data set, you can perform aggregation operations or group data. Optionally, you can apply a filter to restrict the data that is selected when computing the aggregation on the data set.

    For each data set in this section, specify the following:

    *   In **Value**, select the value that must be plotted. For example, Amount or Status.

    *   In **Aggregation**, select the aggregation that must be performed on the selected value. See "Considerations When Using Aggregation" at the end of this topic.

    *   (Optional) In **Categories**, select the attribute that must be used to categorize data within the data set. Use Categories to break your graph into more smaller details.

    *   (Optional) In **Group By**, select the attribute by which Date type data is grouped.

        If **Group By** is set to a date, a new column **Date Aggregation** is displayed.

    *   (Optional) In **Filter**, click the Filter icon to add a filter condition. This condition further refines the data shown for the data set within the chart view. It is applied before the data is included in the chart view. For example, if your **Value** is set to Tasks, you can create a filter to only plot tasks with a status of Open.

        By default, the first clause in a filter condition is displayed as the label for this filter.

4. Click **OK** to save the chart view settings.

Examples

For Task Manager, see:

- Example: Creating a Chart to Display Task Status by Month
- Example: Creating a Chart to Display Plan versus Actual End Date
- Example: Creating a Chart to Display Task Execution by Organization Unit

Setting the Chart Axis

Chart Axis properties affect the visual display of the chart's axis labels. You can create a title and label for the X axis, and the primary and secondary Y axis of the chart. You can also edit the text and number format of the Y axis, and define a custom range for both Y axes.

> **Note:**
>
> This tab doesn't display for chart views with **Type** set to Doughnut, Pie, or Tile.

To define the chart axis:

1. Open the **Axis** tab of the Edit Chart dialog.

2. Select **X Axis** and specify the following (only for chart views with **Type** set to Date in the **Layout** tab):

   - **Interval:** Select **Auto**, **Daily**, **Monthly**, or **Yearly**.

   - **Maximum:** Select **Auto** or **Fixed**. For **Fixed**, select a date.

   - **Minimum:** Select **Auto** or **Fixed**. For **Fixed**, select a date.

3. Click **Y Axis** and specify **Auto** or **Fixed** for the following: **Minimum**, **Maximum**, **Major Unit**, and **Minor Unit.**

4. If **Dual Y Axis** is selected for the chart in the **Properties** tab, click **Dual-Y Axis** and specify the **Minimum**, **Maximum**, **Major Unit**, and **Minor Unit**.

5. Click **OK** to save the chart view settings.

Setting the Chart Legend

Legend properties affect the visual display of the chart's legend.

You can change the position of the legend, as well as display a title for the legend, change the background and border colors, and edit the font and format of chart labels.

For a Combination chart, the **Legend** tab contains one new column named **Type**. You can select the type for each configured legend (series). For example, **Type** = **Bar** for one legend and **Type** = **Line** for the other.

To define the chart legend:

1. Open the **Legend** tab of the Edit Chart dialog.

2. In **Legend Position**, select the position of the data labels in relation to the elements in a chart.

   The available options are **No Legend**, **Left**, **Right**, **Top**, or **Bottom**.

3. In **Palette**, select the color palette used when displaying the chart view.

4. In the **Series** table, one row is displayed for each legend specified in the **Layout** tab.

   For each data set:

   - In the **Label**, enter the label that must be displayed for this data series in the chart.

   - Select **Dual-Y** for the data series that must be displayed on the secondary Y axis.

5. Click **OK** to save the chart view settings.

Example: Creating a Chart to Display Task Status by Month

This example creates a chart which summarizes the completion status of all tasks by period. This can help identify if there are certain tasks which are not completed period over period.

The generated chart is displayed below. Click any area within the chart to drill down and view of the individual records that comprise that aggregated area.

To create this chart:

1. From the Home page, click **Tasks**. Click **Schedule Tasks** to display the Task List.

2. From the **View Selector** at the top-right of the page, select **Chart View**.

   The Chart view appears, with a default chart displayed.

3. Click **Edit** at the top-right to display the Edit Chart dialog.

4. In the Properties tab, specify the following:

   - In Type, select **Column**.

   - Deselect **Grid Lines**.

   - In Period, select **Selection**.

5. In the **Layout** tab, specify the following:
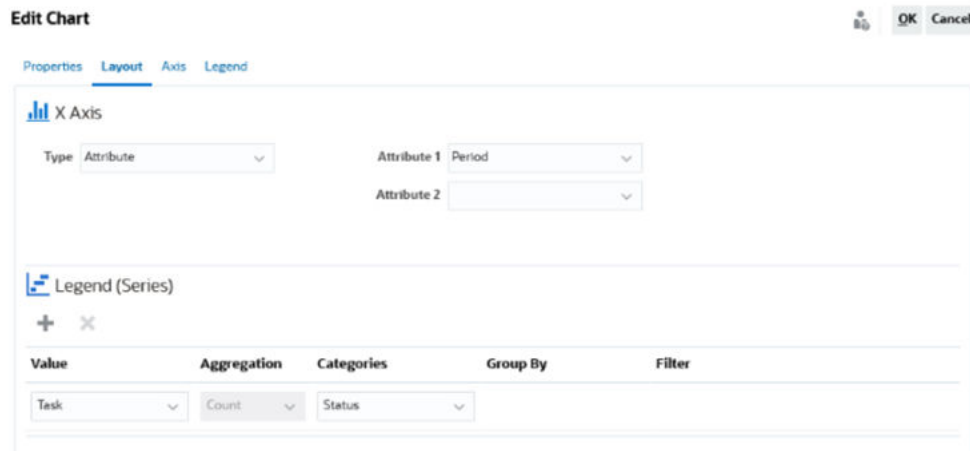
- In the **X-Axis** section:
  - In **Type**, select **Attribute**.
  - In **Attribute1**, select **Period**.
- In the **Legend (Series)** section:
  - In **Value**, select **Task**.
  - In **Categories**, select **Status**.

6. In the **Axis** tab, leave the default settings as is.

7. In the **Legend** tab, specify the following:
   - In **Legend Position**, select **Right**.
   - In **Palette**, select **Redwood**.

8. Click **OK**.

Example: Creating a Chart to Display Plan versus Actual End Date

This example visualizes Tasks planned vs actual completion over time - allowing you to see if your schedules are running ahead or behind schedule. The chart shows all of the tasks end dates that fall on or after a certain date. This will show a large number of tasks within the beginning of the schedule and gradually go down until the final task in the schedule.

The generated chart is displayed below. Click any area within the chart to drill down and view of the individual records that comprise that aggregated area.
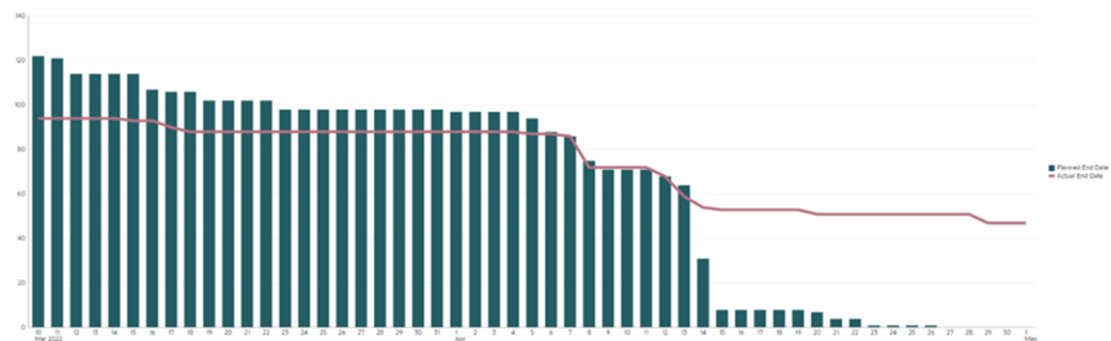
To create this chart:

1. From the Home page, click **Tasks**, and then click **Schedule Tasks** to display the Task List.

2. From the **View Selector** at the top-right of the page, select **Chart View**.
The Chart view appears with a default chart displayed.

3. Click the **Edit** icon at the top-right to display the Edit Chart dialog.

4. In the **Properties** tab, specify the following:

- In **Type**, select **Combination**.

- In **Background**, select **No Fill.**

- In **Label Position**, select **No Label**.

- In **Bar Label Position**, select **No Label**.

- Select **Line Weight** as **5**.

- Select **Grid Lines**.

- Deselect **Dual Y Axis**.

- In **Period**, select **Selection**.

5. In the **Layout** tab, specify the following:

- In the **X-Axis** section, for **Type**, select **Date**.

- In the **Legend (Series)** section, enter 2 values:
  For the first entry:

  – In **Value**, select **Task**.

  – In **Categories**, select **None**.

     – In **Group By**, select **End Date (Assigned)**

     – In **Date Aggregation**, select **On or After**.

    For the second entry:

     – In **Value**, select **Task**.

     – In **Categories**, select **None**.

     – In **Group By**, select **End Date (Actual, Local)**

     – In **Date Aggregation**, select **On or After**.

6. In the **Axis** tab, leave the default settings as is.

7. In the **Legend** tab, specify the following:

   • In **Legend Position**, select **Right**.

   • In **Palette**, select **Redwood**.

8. Click **OK**.

Example: Creating a Chart to Display Task Execution by Organization Unit

This example creates a chart which shows task completion by organization unit allows you to monitor how each organization is doing completing their tasks.

The generated chart is displayed as shown. Click any area within the chart to drill down and view of the individual records that comprise that aggregated area.

To create this chart:

1. From the Home page, click **Tasks.** Click **Schedule Tasks** to display the task list.

2. From the **View Selector** at the top-right of the page, select **Chart View**.

   The Chart view appears, with a default chart displayed.

3. Click **Edit** at the top-right to display the Edit Chart dialog.

4. In the **Properties** tab, specify the following:

   • In **Type**, select **Column**.

   • Deselect **Grid Lines**.

   • In **Period**, select **Selection**.

5. In the **Layout** tab, specify the following:

- In the **X-Axis** section:
  - In **Type**, select **Attribute**.
  - In **Attribute1**, select **Organizational Unit**.
- In the **Legend (Series)** section:
  - In **Value**, select **Task**.
  - In **Categories**, select **Status**.

6. In the **Axis** tab, leave the default settings as is.

7. In the **Legend** tab, specify the following:
   - In **Legend Position**, select **Right**.
   - In **Palette**, select **Redwood**.

8. Click **OK**.

Working With Gantt Chart Views

Gantt charts displays a timeline for a schedule that graphically represents the duration of tasks and the dependencies between them. You can view the predecessor relationships between tasks. Bars represent duration, and arrows represent dependencies. You can also see the parent-child task relationships in the hierarchy.

You might choose to use the Gantt Chart view when you create a template to see the predecessor relationships between the tasks, or to verify the precedence order after adding tasks to a schedule.

Gantt Chart view is available for **Scheduled Tasks**.

To view the data in a Gantt Chart:

1. On the Home page, click **Tasks**, and then click **Schedule Tasks**.

2. Click the **View Selector** icon and choose **Gantt Chart**.
   The schedule tasks data is displayed in the Gantt Chart view as shown.
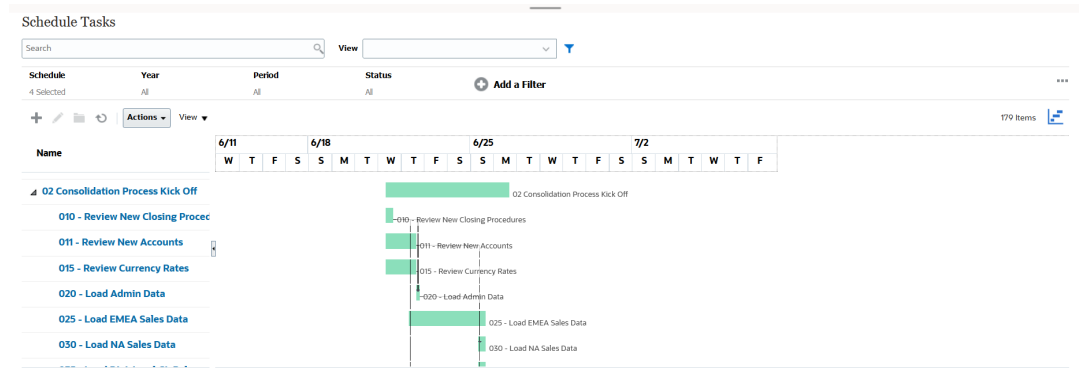
Working With Calendar Views

Calendar views display all the scheduled tasks in a traditional calendar format based on month, week, or day.

The Month view displays the days in standard calendar format.

The Week view displays the tasks of the specified week. The top section displays tasks that span multiple days. The second section displays tasks that are contained within one day. The tasks are displayed vertically, spanning the hours of the day.

The Day view is focused on one 24-hour day.

To view the scheduled tasks in Calendar View:

1. On the **Home** page, click **Tasks**, and then click **Schedule Tasks**.

2. Click the **View Selector** icon and choose **Calendar View**.
   The schedule tasks data is displayed in the Calendar view. Use the calendar icons to select Month, Week, or Day. In the Calendar View, you can also see the Day Label in the Day header.

   The following image shows the scheduled tasks in a Calendar View for a month.
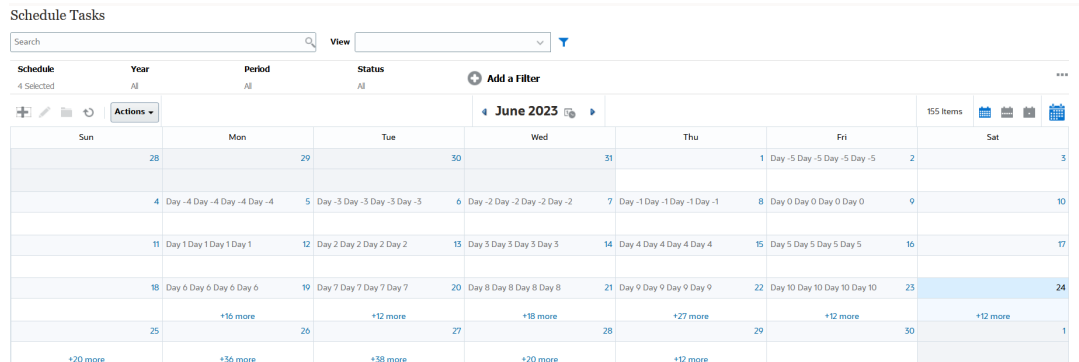
Saving Views

Saving a view enables you to save your view definition and settings. When you need to display data in the format set by this view, you can use the saved view, instead of again setting the required view properties.

The scope of a saved view is limited to the object on which it is based. For example, if you create a saved view with Tasks, you can't use it with journals. A saved view on a particular supplemental data set can't be used with a different data set. So, you can only use it with certain forms or within a collection.

To save a view:

1. Adjust the view to see the data you would like by adjusting filters, columns or sorting on your list. See Using the Filter Bar to Adjust Your View.

2. From **Actions**, click **Save View**.

3. In the Save View dialog, enter a Name (can enter a maximum of 80 characters) and an optional description (can enter a maximum of 255 characters).

4. Click **OK**.

You can see all the saved lists by clicking the **View** drop-down selector.

Editing Saved Views

Edit a saved list view, pivot view, or chart view to modify its name and definition.

To edit a view:

1. From the Home page, click **Application**, **Task Manager**, and then **Views**.

   A list of available views is displayed.

2. Select a particular view and click the **Edit** icon. You can also click the **…** icon for a view and select **Edit**.

3. Update the required information and click **OK**.

Setting a Default View

A Service Administrator or Power User can set a published, saved, view as the default view.

The first time a user opens a view, the default view is displayed. The system then remembers the view settings that were used. So, when you open a view subsequently, it is displayed with the settings that were used most recently.

To set a default view:

1. From the Home page, click **Application**, then **Task Manager**.

2. Click the **Views** tab to display the Views page.

3. Select the view that you want to set as default and then click the **Set Default** icon. Or, click the **Actions** menu for the view that you want to set as default and select **Set Default**.

> ✎ **Note:**
>
> You can use the **Set Default** action for a published list view. The Administrator or Power User sets the view as the default so that the saved list view will not only be available to all users of that view type, but it will also be selected by default when a user opens that view type.

Working with Dashboards

Related Topics

• Dashboard Overview

- Task Overview Dashboard

- Compliance Dashboards

- Financial Dashboard

- Working With Operational Dashboards

Dashboard Overview

You can monitor Task Manager information using the following dashboards:

- **Task Manager Overview**

- **Compliance**

The Dashboards feature is enabled if you've access to at least one of these dashboards.

Watch the following video for an introduction to Dashboards.

Dashboards Overview

Task Overview Dashboard

The Task Manager Overview dashboard displays status for Task Manager tasks.

Task Manager Overview

To view the Task Manager Overview status:

1. On the Home page, from **Dashboards**, click **Task Overview**.
   On the Home page, click **Tasks**, then click the **Overview** tab on the left.

2. From the POV, select a **Year** and **Period**.

3. From the **Tasks** drop-down list, select a task, or select **All** to view all tasks.

   The system displays the number of **Open Tasks**, **Late**, and **On Time** tasks.

4. Click on a status to drill down into the list of tasks with that status.

   From the list of tasks, if you've access rights to a task, you can click the task name to directly open and work with the task.

5. Filter the tasks by selecting **View By**, then select an option:

   - **Priority**

   - **Schedule**

   - **Task Type**

   - **Organizational Unit**

6. **Optional:** Sort the list of tasks using one of these methods:

   - **Count (Ascending)**

   - **Count (Descending)**

   - **Alphabetic (Ascending)**

   - **Alphabetic (Descending)**

   - **Attribute Order (Ascending)**

- **Attribute Order (Descending)**

Compliance Dashboards

Compliance Dashboard provides metrics on how well the company achieved their compliance objectives, distinguishing those tasks that were completed on time from those that were late, and providing a count of those that were approved or rejected. You can view user performance metrics based on user and organizational unit.

Task Manager Compliance Dashboard

To view the Task Manager Compliance dashboard:

1. On the Home page, click **Tasks**, and then click the **Compliance** tab on the left.

2. From the Point of View, select a **Year** and **Period**.

3. From the **Tasks** drop-down list, select a task, or select **All** to view all tasks.

   The pie charts display the following status for tasks: number of Completed Tasks, Percentage of tasks Prepared On Time, Percentage of tasks Approved On Time, number of Rejected Tasks, and number of Alerts.

4. Click on one of the status charts to view the list of tasks with that status.

   From the list of tasks, if you've access rights to a task, you can click the task name to directly open and work with the task.

5. Filter the tasks by selecting **View By**, then select an option:

   - **User**: You can click on a user name to view User Details.

   - **Organizational Unit**

6. From **Performance**, select task performance metrics:

   - **Preparation**

   - **Approval**

7. **Optional:** To change the order of tasks listed, from **Order By**, select:

   - **User**

   - **On Time**

   - **Late**

   - **Rejections**

Financial Dashboard

The Financial dashboard provides a graphical depiction of the results for the company. For example, you can view a Balance Sheet dashboard, Cash Flow dashboard, or Income dashboard. From any dashboard, you can view further details.

Financial Consolidation and Close provides a predefined dashboard named **FCCS_Income Statement Dashboard** with the following data:

- Key Income Accounts, which displays data from the FCCS_Income Dashboard Tile Chart form

- Quarterly Sales by Entity, which displays data from the FCCS_Quarterly Sales by Entity form

- Monthly Sales by Entity, which displays data from the FCCS_Monthly Sales by Entity form

- Quarterly Net Income by Entity, which displays data from the FCCS_Quarterly Net Income by Entity form

- Monthly Net Income by Entity, which displays data from the FCCS_Monthly Net Income by Entity form

Administrators can create dashboards by selecting data forms, external artifacts, and specifying chart types. See "Designing Dashboards" in *Administering Financial Consolidation and Close*.

To view a Financial dashboard:

1. On the Home page, from **Dashboards**, click **Financial Dashboards**.

2. To search for an existing dashboard, enter text in the search box, and click **Search**.

Working With Operational Dashboards

Related Topics

- Overview of Operational Dashboards
- Viewing and Opening Operational Dashboards

Overview of Operational Dashboards

Dashboards provide enhanced reporting capabilities. They enable users to chart, evaluate, and (in some cases) even change key business data.

About Operational Dashboards

Operational dashboards provide greater visibility into your business process.

Each dashboard can have a maximum of four views. This includes list views, pivot views, or chart views. You can open a maximum of 10 dashboards at a time. Service Administrators, or any user who is granted the Operational Dashboards - Manage role, can create dashboards. The dashboard creator can also control access to the dashboard by granting permissions to one or more users, groups, or teams. Users who have been granted access to a dashboard can run the dashboard and view its data. The access only allows a user to view the dashboard. It doesn't extend their access to the underlying data. Therefore, a user can only view records based on their own access within the service.

Features of Operational Dashboards

Dashboards provide the following features:

- Visualize data interactively with a wide variety of chart types

- Obtain both high-level and detailed insights into the performance of your business processes

- Create filters at the dashboard level and at the individual view level
  Filters created at the dashboard level are applied to all the views within the dashboard. After this, filters defined at the view level (if any) are applied.

- Control access to viewing dashboards

Viewing and Opening Operational Dashboards

Viewing Existing Dashboards

To view the dashboards, from **Home**, click **Tasks**, then **Operational Dashboards** .

The Operational Dashboards page appears with the list of existing dashboards.

Opening a Dashboard

To open a dashboard:

1. Access the Operational Dashboards page. This page displays the list of existing operational dashboards

2. (Optional) Use the **Search** box to search for a particular dashboard.

3. Click the name of the dashboard that must be opened.

   The dashboard opens within a new dynamic tab next to the Operational Dashboard tab.

You can perform the following actions on the dashboard:

* Click any area or total, in any view, to drill down into the individual records that comprise that area or total.

* Edit the dashboard settings using the ✎ icon.

* Refresh all the views in the dashboard using the ↻ icon (at the dashboard level).

On each view in the dashboard, you can:

* Refresh a view in the dashboard using the ↻ icon (at the dashboard level).

* Expand or collapse a view in the dashboard using the ⤡ icon.

The following image shows the options available when you open a dashboard.
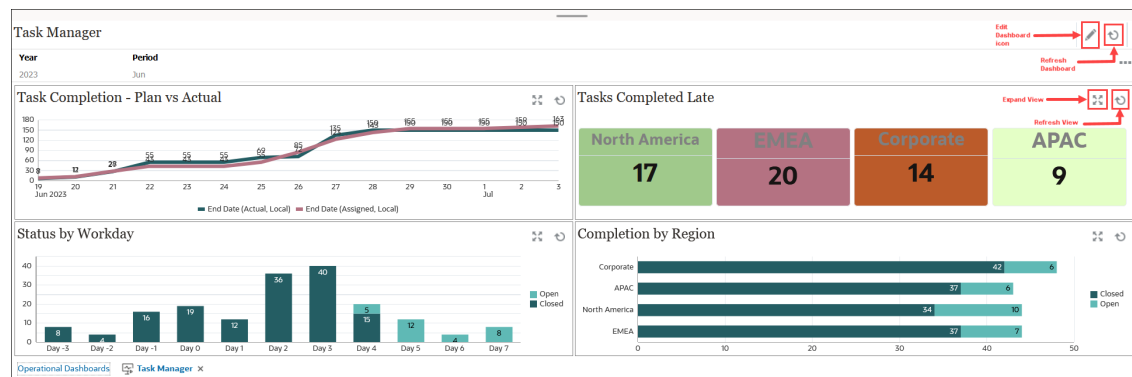
7
Using Dashboards to Work with Data

Related Topics

Understanding Dashboards

Dashboards give you an overview to key information and let you enter, change, and save data.

You can work with multiple forms or charts, enter data or change the data in one, and see the immediate effects in other forms, charts, and tiles in the dashboard. Change a driver in the grid and see its impact immediately in the chart.

When you save data, it's saved in all the objects in a dashboard. Depending on the form's design, you can also drill down into more detail. You can select which members to work with and change chart types, for example. Hovering your mouse over chart elements highlights the element and displays a data label. Your administrator creates dashboards, but you have a lot of flexibility when using them. For example, for many chart types, you can customize the colors that represent the data.

> **Note:**
>
> You can no longer mark a dashboard page as default.

Dashboard 1.0 Example
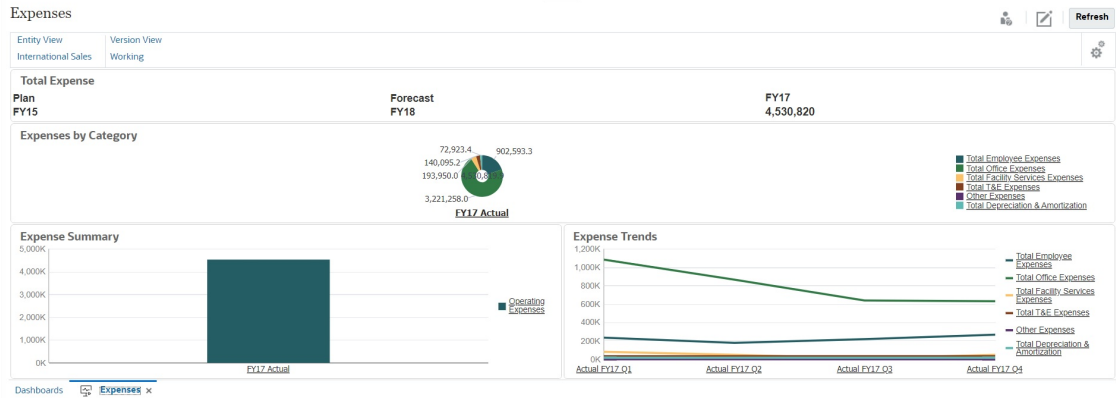
Dashboard 2.0 Example
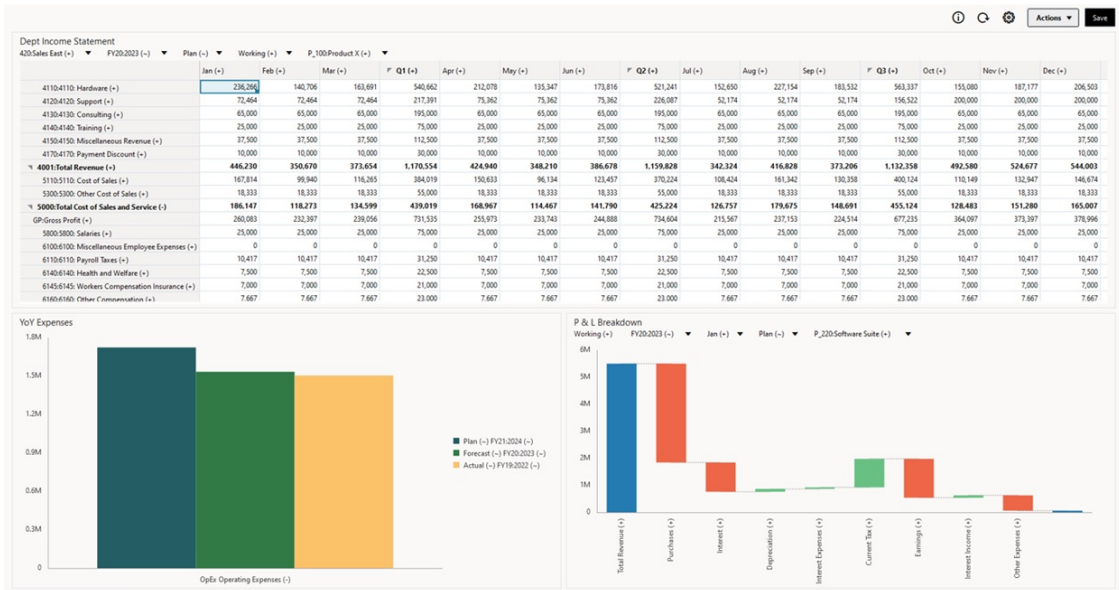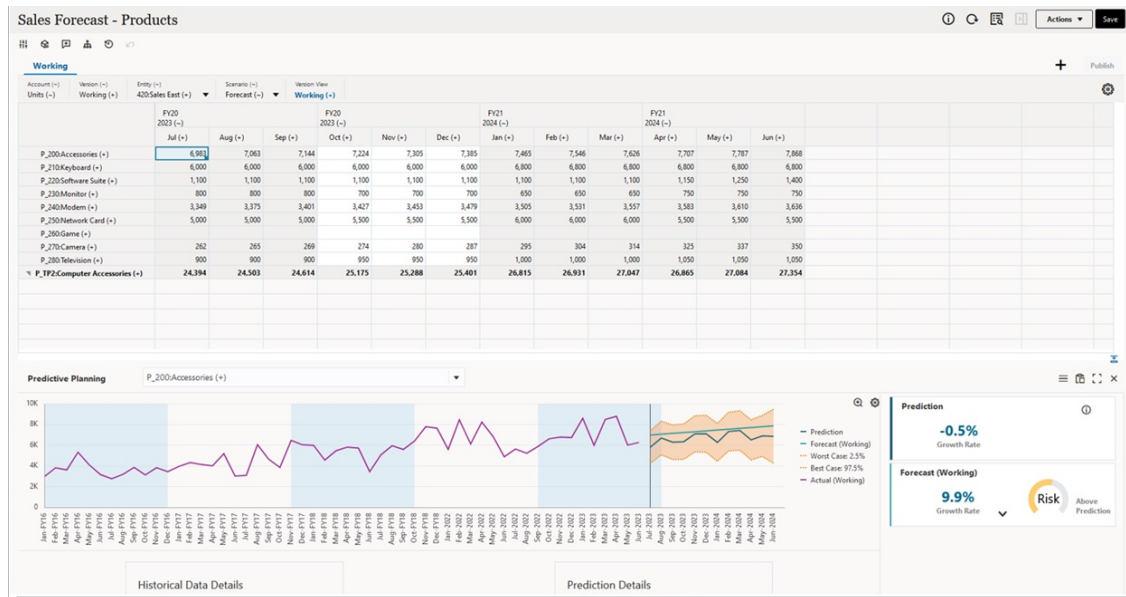
About Dashboard Versions

Dashboards are currently available in two versions: Dashboard 1.0 and Dashboard 2.0. To help you differentiate between the dashboard versions on the **Dashboards** listing page, we've provided an icon in front of each dashboard:

-

  : Dashboard 1.0

-

  : Dashboard 2.0

Both dashboard versions currently coexist in the same business process at the same time. Depending on which version you are viewing, the dashboards will look a little different and the user interface is also slightly different.

For information about creating dashboards, see Creating and Managing Dashboards in *Administering Planning*.

Dashboard 2.0 Runtime Features

Dashboard 2.0 Runtime supports:

- More chart types than Dashboard 1.0; for example, Waterfall, Pyramid, and Geomap and sub-chart types for Radar, Combination, and Gauge charts are all Dashboard 2.0 features

- Creating tables in dashboards with visual inline views of data, called Spark Charts

- Quick Analysis, which lets you add components to dashboards without having a prebuilt form

  You create an ad hoc query by typing member names in the Search bar or using the Member Selector, and then you control the layout of the query in the Layout tab of the Properties panel.

- Working directly with data in form grids if the underlying form is a Forms 2.0 form

- If working with a Forms 2.0 form grid:
  - Global write-back option: global **Save** button with **Run on Save** rules
  - Individual form write-back option: local **Save** with **Run on Save** rules
  - In table charts, highlighting parent members to distinguish from leaf-level members
- Updated global and local POV bars that use the Oracle JET member selector
- An updated Maximize mode in charts and grids that are now consistent with one another
- Enhanced master forms and details that enable you to apply context from any grid
- Flexible layouts for all dashboards
- Valid intersections support for global and local POV bars
- The ability to **Edit** and **Edit without Data** from a custom menu outside of the Dashboards listing page
- Information icon for runtime dashboards and forms
- Opening and editing forms from within a runtime dashboard
- The ability to visualize different chart types in a runtime dashboard component
- Drill-through in single and multiple Pie and Doughnut charts
- Rationalized Actions, POV Settings, and Component menus
- The ability to switch over to Oracle Smart View for Office for all data operations; for example, Open, Edit, Create, Refresh, Data Submit, Page/POV Change
- A conversion utility to convert from Dashboard 1.0 to Dashboard 2.0; both batch conversions (at the folder level) and individual dashboard conversions are supported
- The ability to filter Dashboard 1.0 and Dashboard 2.0 dashboards on the listing page
- The ability to edit dashboards not only from the Dashboards listing and runtime pages, but also from custom navigation menus wherein dashboards are embedded.

Considerations for Dashboard 2.0

- 3D visualization is not supported in Dashboard 2.0. This affects the following Dashboard 2.0 chart types:
  - Area
  - Bar
  - Bubble
  - Column
  - Combination
  - Doughnut
  - Gauge
  - Line
  - Radar
  - Scatter

  Dashboard 1.0 still supports 3D visualizations for these chart types.
- In a future update, Dashboard 2.0 will support Smart Push.

Viewing Dashboards

- Viewing the Dashboards Page
- Features of the Dashboards Page
- Dashboards Page Actions Column

Viewing the Dashboards Page

To view the **Dashboards** page:

1. On the Home page, click **Dashboards**.

2. To open a dashboard, click the dashboard's name.

This opens the dashboard in the *runtime* environment.

> **Note:**
>
> If you've selected a Dashboard 2.0 dashboard and you see an `Error during Dashboard 2.0 component initialization` message, the dashboard has Forms 2.0 forms associated with it. You must ensure that Redwood Experience and Forms 2.0 are enabled before you can view the dashboard.
>
> To enable Redwood Experience, click **Tools**, then **Appearance**, select **Enable Redwood Experience**, and then click **Save**.
>
> To enable Forms 2.0, click **Application**, then **Settings**, and then under **Other Options**, find **Forms Versions**, select **Forms 2.0**, and then click **Save**.

Features of the Dashboards Page

On the **Dashboards** page:

- Folders are supported. The **Dashboards** page uses the same folder hierarchy as infolets and data entry forms and all artifacts and folders reside under a root folder called **Library**.

  > **Note:**
  >
  > Only administrators can add files (for example, dashboards, infolets, forms, reports, and so on) to the **Library** root folder.

- You can toggle between viewing dashboards by a flat view or a tree view:

- Dashboards are available in two versions. To help you differentiate between the dashboard versions on the **Dashboards** listing page, we've provided an icon in front of each dashboard:

  –

    : Dashboard (1.0)

-

  : Dashboard 2.0

- The **Dashboards** page can be filtered by type. Click , and then select from the following filter options:
  - **All Types** (default)
  - **Dashboard 1.0**
  - **Dashboard 2.0**

- To search for a specific dashboard, click

  to search by keywords or to narrow the search to specific library folders.

  See Searching for Forms, Dashboards, and Infolets.

Dashboards Page Actions Column

On the right side of the **Dashboards** page there is an **Actions** column. Clicking on the ••• icon next to the dashboard or folder, displays the following actions:

- Folder Actions:
  - **Assign Permission**: Assigns access permissions to the folder. Folder permissions apply to all items within that folder, even to items that may not be visible in the list.
  - **Create Dashboard**: Creates a Dashboard 1.0 dashboard in this folder.
  - **Create Dashboard 2.0**: Creates a Dashboard 2.0 dashboard in this folder.
  - **Create Folder**: Creates a new folder.
  - **Delete**: Deletes a folder. The folder must be empty to delete it.
  - **Rename**: Renames a folder. The folder cannot be renamed if it contains other folders.
  - **Move to**: Moves the folder to another location in the folder hierarchy.
  - **Convert All Dashboards to 2.0**: Finds any Dashboard 1.0 dashboards within the folder hierarchy, and converts them to Dashboard 2.0 dashboards.

- Individual Dashboard Actions:
  - **Edit**: Opens the dashboard in the Dashboard Designer with the underlying form data. The dashboard opens in a dynamic tab.
  - **Edit without Data** (Dashboard 2.0 option only): Opens the dashboard in the Dashboard Designer without the underlying form data so you can more easily perform such actions as realigning the dashboard components and tiles. The dashboard opens in a dynamic tab.
  - **Rename**: Renames a dashboard.
  - **Copy As**: Copies a dashboard with a new name. The dashboard is copied to the listing directly under the original dashboard.
  - **Delete**: Deletes a dashboard.
  - **Move to**: Moves a dashboard to another folder.
  - **Assign Permission**: Assigns access permissions to the dashboard.

- If you select a new value from the Page drop-down in dashboards, a Go button (right arrow) is displayed in the POV bar.
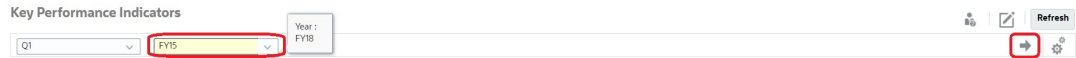
   Click the Go button to show your selection.

- You can enter or change data in a form's cell only if the intersection in the underlying form is writable.

- In a Smart Form (with the form design option **Autosave** enabled), when you enter data and tab out of the cell, the other objects refresh, displaying fresh data.

- By default, missing or suppressed data is plotted as zeros in graphs. You can clear the **Plot Missing Values as Zero** setting to ignore missing or suppressed data in certain chart types so it's no longer plotted as zeros. The chart types to which this setting applies are Area, Bubble, Combination, Line, Radar, and Scatter.

- For Dashboards that use a **Flexible** layout, you can drag an object's border to resize it. You can also click an object's handle to expand it, and then click the handle again to restore the object to its original size.

Working with Dashboard 2.0 Dashboards

Helpful information about working with Dashboard 2.0 dashboards in the runtime environment.

As a reminder, Dashboard 2.0 dashboards on the **Dashboards** page are identified by this icon:

Opening a dashboard from the **Dashboards** page, opens the dashboard in the *runtime* environment.

To open a Dashboard 2.0 dashboard, see Viewing Dashboards.

Videos

Your Goal	Watch This Video
Learn about the new features and functionality in runtime Dashboards 2.0 in Cloud EPM.	Overview: New Features in Dashboards 2.0 in Cloud EPM (Nov 2023)

Related links:

- Working with the Dashboard 2.0 Global Toolbar

- Working with Dashboard 2.0 Components

- Drilling Through on Charts and Legends

- Working with POVs in Dashboard 2.0

- Opening the Member Selector in Dashboards 2.0

- Working with Dashboard 2.0 Dashboards in Navigation Flows

- Working with Master Forms and Details in Dashboard 2.0 Components

- Support for Valid Intersections in Dashboard 2.0 Dashboards

Working with the Dashboard 2.0 Global Toolbar

The icons and menus at the top of each dashboard enable you to perform the following actions on the entire Dashboard 2.0 dashboard:
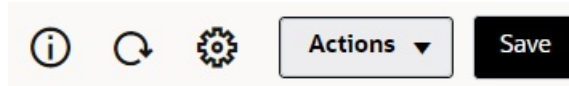
Table 7-1   Dashboard Header Toolbar

Object	Description
(i)	**Information**: Displays the name of the dashboard, the path to the location of the dashboard within the Library hierarchy, and any descriptive information. For example: • **Name**: Operating Expenses - Actual vs Plan • **Path**: /Library • **Description** (Optional): Enter a description of the dashboard.
↻	Refreshes the data for the entire dashboard.
⚙	Displays the POV Settings menu with the following menu options: • **POV : Hide Dimension Labels**: Hides dimension labels in the global POV. • **POV : Auto-Apply**: Enables or disables the ability to automatically apply changes to the entire dashboard. If you change a page in the global POV bar and **POV : Auto-Apply** is enabled, the page changes for all components in the dashboard that are based on forms. • **POV : Clear All Page Selections**
Actions menu	Displays the following dashboard actions (you must have the correct permissions to edit dashboards): • **Edit**: Opens the dashboard in the Dashboard Designer with the underlying form data. The dashboard opens in a dynamic tab next to the current tab. • **Edit without Data**: Opens the dashboard in the Dashboard Designer without the underlying form data so you can more easily perform layout changes such as realigning the dashboard components and tiles or updating the form properties. The dashboard opens in a dynamic tab next to the current tab.
Save	Clicking **Save** writes back all dashboard grid changes and runs any rules associated with the dashboard, including runtime prompts. Note: • You can attach multiple rules with or without runtime prompts with global Save. • Runtime prompts open as a "drawer" from the right side for better usability. Clicking **Save** saves the data you enter or change for all dashboard components, but it does not save changes to the dashboard definition.
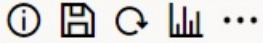
To edit dashboards, see Designing Dashboards in *Administering Planning*.

Working with Dashboard 2.0 Components

Dashboards are made up of components. Each component contains a dashboard object such as a form, a cube, or another visualization (charts, tiles, and so on).

Dashboard Component Toolbar

Hover over a component on the dashboard to display the component toolbar

ⓘ 🖫 ↻ 📊 ⋯ . The hover toolbar enables you to perform actions on the component only.

Table 7-2   Dashboard Component Hover Toolbar

Object	Description
ⓘ	**Information**: Displays the underlying form name, the path of the form, and the cube for the component.
🖫	**Save**: Saves changed data and runs rules associated with the component.
↻	**Refresh**: Refreshes the data associated with the dashboard component.
📊	**Chart Type**: Changes the visualization for the component.
⋯	Perform the following **Actions** on the component: • **Maximize**: Enlarges the dashboard component. Once maximized, click **Restore** to minimize the dashboard component to its original size. • **Open Form**: Opens the runtime form associated with the component in a dynamic tab next to the current tab. • **Edit Form**: If you have the correct permissions, opens the form associated with the component in the forms editor. The forms editor opens in a dynamic tab next to the current tab.

Working with Component Objects in the Runtime Environment

- Changes you make to the dashboard components in the runtime environment aren't saved for the next session. Changes are also not saved if you click the Show/Hide bar to hide the icon ribbon at the top of the page; the page refreshes and any changes you've made will not be saved.

- By default, missing or suppressed data is plotted as zeros in graphs. You can change the **Plot Missing Values as Zero** setting to **No** to ignore missing or suppressed data in certain chart types so it's no longer plotted as zeros. The chart types to which this setting applies are Area, Bubble, Combination, Line, Radar, and Scatter. To reset the **Plot Missing Values as Zero** setting in the properties panel, click the tab for the type of chart (Area, Bubble, Combination, Line, Radar, or Scatter), then click **Yes** to toggle the setting to **No**.

- Components default to displaying the form grid and the grids displayed are writable if the associated form is a Forms 2.0 form. To replace a grid with a chart, hover over the grid to display the hover icons in the upper-right corner of the component. Click 📊 , and a menu of charts is displayed from which you can choose. Charts selected during runtime are not persisted when the runtime dashboard is closed.

- If a URL added to a dashboard doesn't work in the runtime environment, right-click the URL and open the link in a new browser tab.

- While in a dashboard, you can right-click inside a grid to view the grid's context menu:

  – **Edit** options: **Cut**, **Copy**, **Paste**, **Clear**

  – **Adjust** options:

    * **Adjust Data**: Increase or decrease the selected cell data by a positive or negative value, or a percentage value.

      See Adjusting and Spreading Data.

    * **Grid Spread**: Specify an amount or percentage by which to increase or decrease values across multiple dimensions, based on the existing values in the target cells. You can select **Proportionally**, **Evenly**, or **Fill** spread pattern. To use Spread, your administrator must enable Grid Spread as a form property.

      See Spreading Values Using Grid Spread.

  – **Comments**: Explain data or provide background, and attach external files. You can add comments and attachments to a cell or to a range of cells across multiple dimensions.

    See About Cell Comments and Working with Attachments.

  – **Change History**: Displays the history of the changes made to the cell data.

  – **Lock/Unlock Cells**: Temporarily lock cells while you calculate and fill in other values. A lock icon displays on locked cells. To unlock the cells, click **Lock/Unlock Cells** again.

    See Locking Cells.

  – **Analyze on Cell**: Opens ad hoc in a dynamic tab.

    See Get Started Performing Ad Hoc.

  – **Apply Context**: Filters the data in the target forms or charts that is relevant to the data in a master form.

    See Creating Dashboards Containing Master Forms and Details in *Administering Planning*.

- Line item details are supported only if the component is maximized. To maximize a component, hover over the component to display the hover icons in the upper-right corner of the component. Click ![icon], and then select **Maximize** to enlarge the dashboard component. After you're done working with the component, click **Restore** to minimize the dashboard component to its original size.

- When you click **Refresh Data** either on a Tile or by clicking the global **Refresh Data** option, the Tile data will display after a "blink." The "blink" indicates that the refreshed data is populated.

- When viewing a Table, parent members are highlighted to distinguish them from leaf-level members.

Working with Forms 2.0 Grids in Dashboard 2.0

In Dashboard 2.0, you can work directly with data in forms grids if the underlying form is a Forms 2.0 form.

Newly added components in Dashboard 2.0 default to displaying the form grid, and the grids are writable if the associated form is a Forms 2.0 form.

In grids you can update cell values, run rules, and save changes facilitating write-back from the dashboard.

Example Dashboard 2.0 Dashboard with a Grid

Saving Updates to Dashboard 2.0 Grids

After updating a grid within Dashboard 2.0, clicking the global **Save** button writes back all dashboard grid changes and runs any rules associated with the dashboard, including runtime prompts.

Clicking within an individual grid component in a dashboard writes back the changes for that grid and runs the rules associated only with the individual grid.

Rules

The Dashboard Designer includes an **Associations** tab in the Properties panel for associating rules to a dashboard.

For more information, see Properties Panel in *Administering Planning*.

When you save a dashboard or a grid component in a dashboard, any rules associated with the grids will launch when the dashboard grid is saved, including runtime prompts. Runtime prompts open as a "drawer" from the right side.

Grids in Master Details Dashboards

Dashboard 2.0 supports designating grids as the master component when designing dashboards with master details.

To filter the data in the target forms or charts that is relevant to the data in a grid, right-click the relevant data row in the master grid and select **Apply Context**.
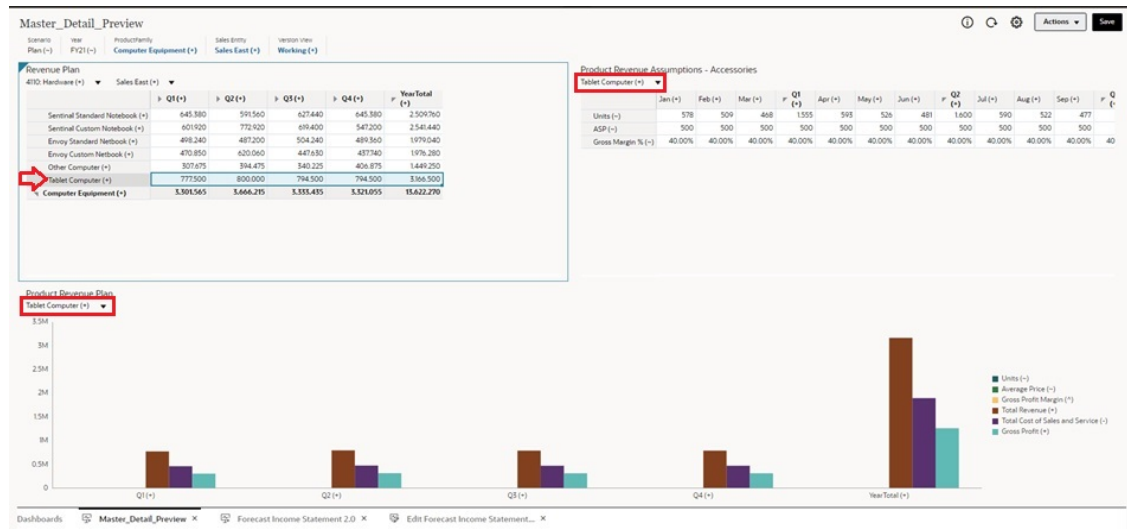
Context Menu in Dashboard Grids

While in a dashboard, you can right-click inside a grid to view the grid's context menu:

- **Edit** options: **Cut**, **Copy**, **Paste**, **Clear**

- **Adjust** options:

  – **Adjust Data**: Increase or decrease the selected cell data by a positive or negative value, or a percentage value.

    See Adjusting and Spreading Data.

  – **Grid Spread**: Specify an amount or percentage by which to increase or decrease values across multiple dimensions, based on the existing values in the target cells. You can select **Proportionally**, **Evenly**, or **Fill** spread pattern. To use Spread, your administrator must enable Grid Spread as a form property.

    See Spreading Values Using Grid Spread.

- **Comments**: Explain data or provide background, and attach external files. You can add comments and attachments to a cell or to a range of cells across multiple dimensions.

  See About Cell Comments and Working with Attachments.

- **Change History**: Displays the history of the changes made to the cell data.

- **Lock/Unlock Cells**: Temporarily lock cells while you calculate and fill in other values. A lock icon displays on locked cells. To unlock the cells, click **Lock/Unlock Cells** again.

  See Locking Cells.

- **Analyze on Cell**: Opens ad hoc in a dynamic tab.

  See Get Started Performing Ad Hoc.

- **Apply Context**: Filters the data in the target forms or charts that is relevant to the data in a master form.

  See Creating Dashboards Containing Master Forms and Details in *Administering Planning*.

Considerations for Working with Grids in Dashboard 2.0

- A Dashboard 2.0 dashboard will not open if the dashboard contains a grid and the **Forms Version** application setting is set to **Forms 1.0**.

- The Grid visualization option will not be available if the **Forms Version** application setting is set to **Forms 1.0** and Dashboard 2.0 artifacts are created.

Drilling Through on Charts and Legends

Drill-through can be performed on parent members to view the values of child members.

You can drill into more detailed information about the data within charts and their legends. To view drill-through details in a chart such as a Pie chart, click a color in the pie. Drill-through works for components with single Doughnut and Pie charts, as well as components with multiple Doughnut and Pie charts.

Drill-through is also available from the chart's legends. Click a legend label, and the chart changes to display drill-through details for that legend item.

> **Note:**
>
> Drill-through in multiple Pie and Doughnut charts from legends is not supported.

To return to the original chart after viewing drill-through details, click the parent link that displays in the upper right corner of the window.

> **Note:**
>
> Table, Tile, and Gauge charts do not support drilling. If you drill into a chart type such as a Pie chart, then switch to a Table, Tile, or Gauge chart, you'll no longer see the parent link to return to the original chart. If this occurs, switch back to the Pie chart to view the parent link again.

Working with POVs in Dashboard 2.0

POV Settings

When your Dashboard 2.0 dashboard contains a global or local POV, changes to the POV are automatically applied. If you don't want to automatically apply changes, you can deselect auto-apply for the POV bar in the dashboard **POV Settings** menu. Click ⚙, and then click **POV : Auto-Apply** to deselect it.
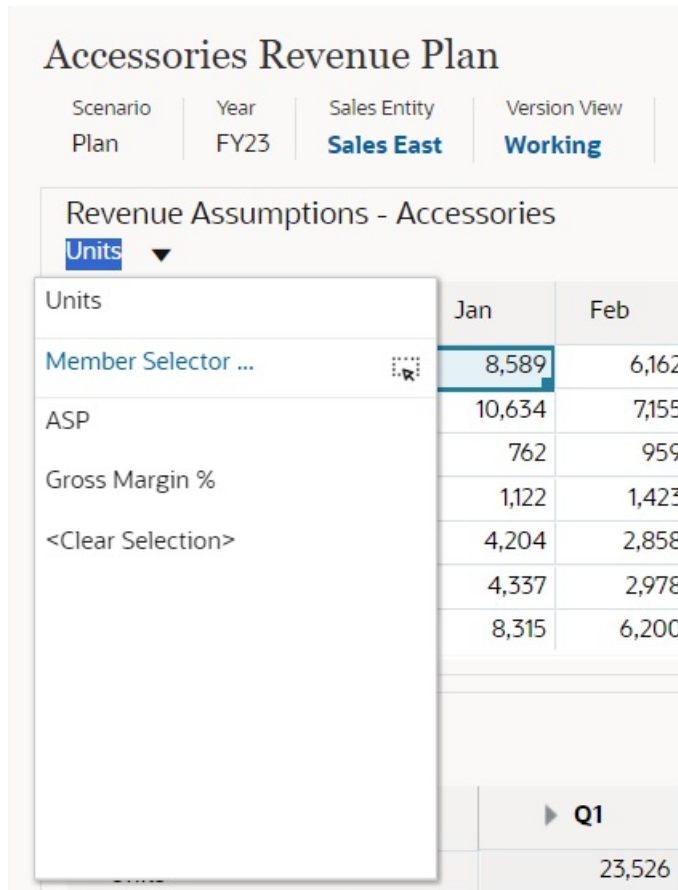
Searching for POV Members

When working in Dashboard 2.0 dashboards, you can more easily search for new POV members in the dashboard's global or local POVs. To search, click a POV link, type the name of another member, and the search function will automatically filter to that member name. The search interface also displays a list of the most recently used members from which you can choose.

ORACLE

> **Note:**
>
> Valid intersections are supported for global and local POV bars. This means that Dashboard 2.0 complies with valid intersection rules by excluding invalid intersections from global and local POV bars.

Figure 7-1   POV Member Search Interface

You also can search using the member selector. Click a POV link, then click the member selector icon ![icon] to launch the member selector. Members in the member selector are displayed as a hierarchy or you can type a member name in the **Search** box. If a member is located using the **Search** box, you'll see a result displayed under the Search box.

Figure 7-2   Select Members Search
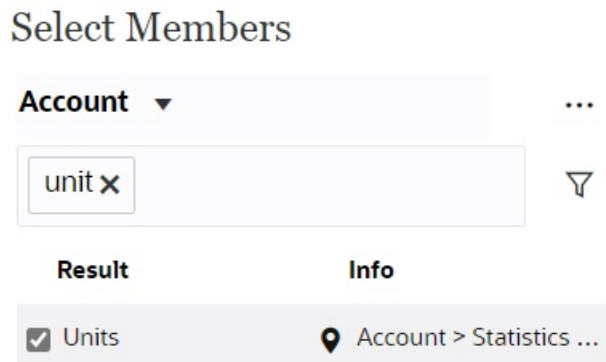
You can view where the member is located within the hierarchy by hovering over the result's **Info** column and clicking .

Figure 7-3   Select Members Search Result in Hierarchy
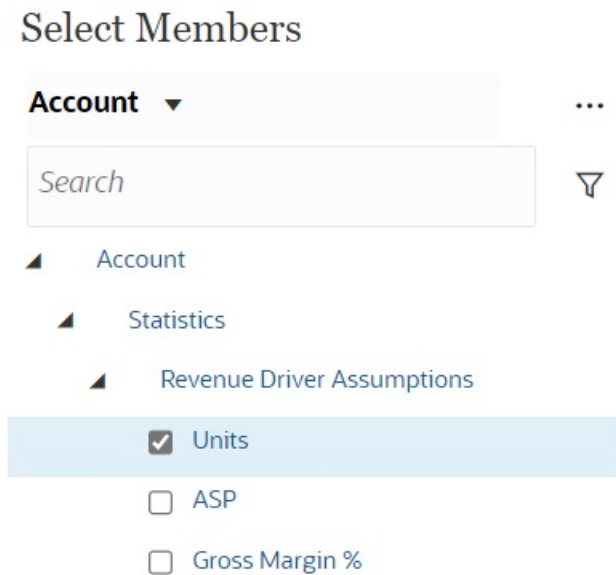
Opening the Member Selector in Dashboards 2.0

To select members in Dashboards 2.0, use the member selector.

To open the member selector from a Dashboards 2.0 dashboard:

Click a member on the Global POV bar:
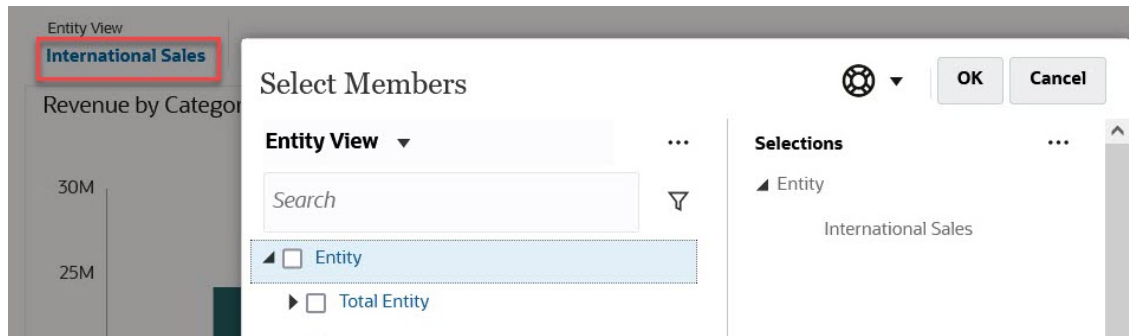
You can also click the Page drop-down list in a Global or local POV, and then select **Member Selector**:
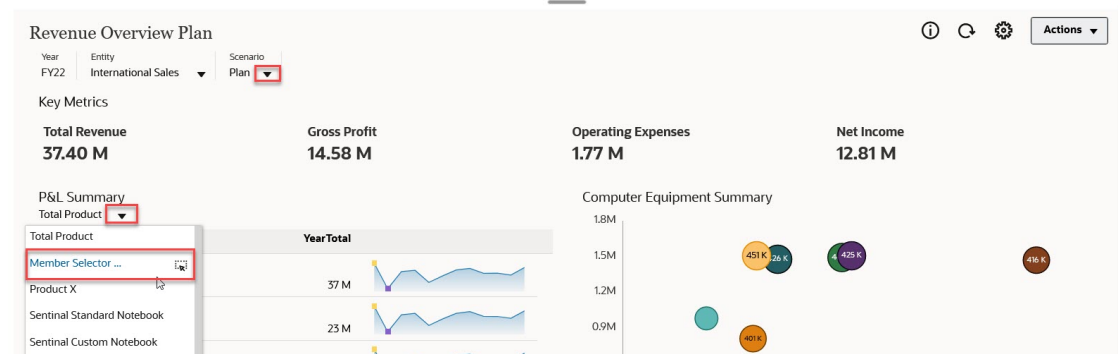
In a business rules run-time prompt, when the prompt is for members, click the **Member Selector** icon:

For more information about using the member selector, see Using the Member Selector.

Working with Dashboard 2.0 Dashboards in Navigation Flows

If Dashboard 2.0 and Forms 2.0 are enabled in your business process, navigation flows support the features included in Dashboard 2.0 and Forms 2.0, including the ability to edit a form from within the runtime dashboard, and editing it with or without data. Dashboard 2.0 component actions such as **Maximize** and **Open Form** also work directly within the navigation flow.

Working with Master Forms and Details in Dashboard 2.0 Components

Your administrator can design dashboards that have one master form and multiple detail or target components (forms or charts). With this dashboard configuration, the selection of members in the master form automatically filters to the members in the target components, and the target components show only the details that are relevant to the members highlighted in the master form.

To filter the data in the target forms or charts that is relevant to the data in a master form, right-click the relevant data row in the master form and select **Apply Context**.
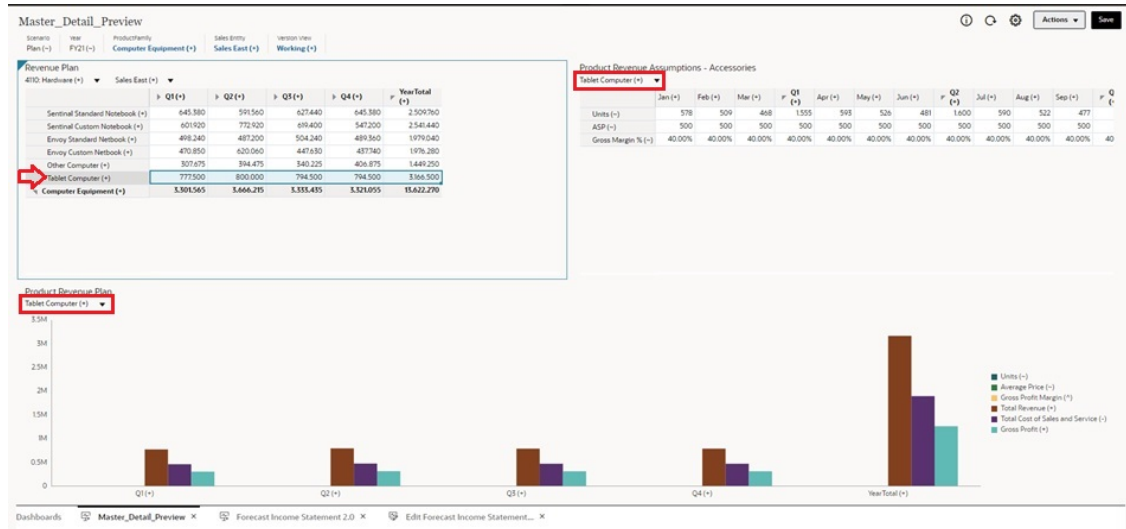
To learn more, see Creating Dashboards Containing Master Forms and Details in *Administering Planning*.

Support for Valid Intersections in Dashboard 2.0 Dashboards

Your administrator can create rules which allow data entry within certain cell intersections in forms. These intersections are called valid intersections.

Dashboard 2.0 complies with valid intersection rules by excluding invalid intersections from dashboards during runtime. If members have been defined by your administrator to be excluded, the runtime dashboard and the member selector will not display those members.

To learn more, see Understanding Valid Intersections in *Administering Planning*.

About Quick Analysis

Quick Analysis lets you add components to dashboards without having a prebuilt form. You create an ad hoc query by typing member names in the Search bar or using the Member

Selector, and then you control the layout of the query in the Layout tab ⊞ of the Properties panel.

Example Dashboard 2.0 Quick Analysis Chart in Design Mode
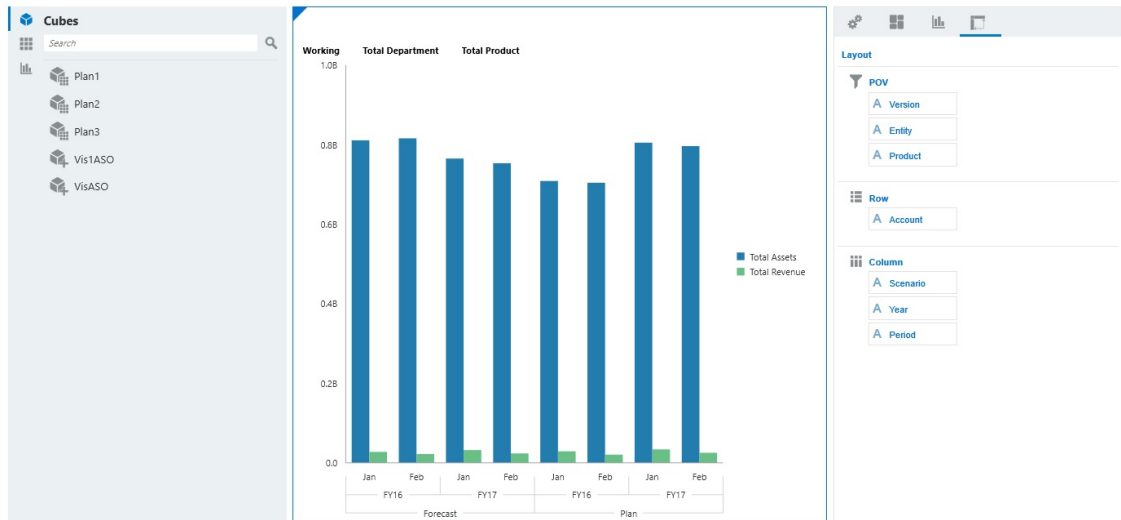
To create a quick analysis in your dashboard:

1. Select a cube for the query. You can do this in one of two ways:

   • Click in the workspace Search box to display a list of cubes, then select a cube.

   • Drag and drop a cube from the object palette to the dashboard workspace.

   > **Note:**
   >
   > With either method, the system starts with a default query; a single intersection in the cube driven from your Most Recently Used, or MRU. The default query varies based on what you've recently been looking at in the cube.
   >
   > If the MRU intersection in the cube is invalid, you'll get an error. If you see an error, open another form and change the page to a valid intersection so that the MRU gets updated with a valid intersection.

2. Refine the query by specifying members for the query:

   • In the Search box, type member names to display an auto-complete list from the cube.

   • Launch the member selector to select members, and then click **OK**.

   > **Note:**
   >
   > When using the Search box to find members for quick analysis and more than 25,000 members are present in a cube, the Search box only searches the first 3000 members in the dimension for the cube. If the cube contains less than 25,000 members, then the Search box will search through all members. To search a cube with more than 25,000 members, launch the member selector to make your quick analysis selections.

3. Select a chart type for the query.

   Click to select a chart type; for example, Bar .

4. In the Properties panel, click the Layout tab ▦ .

5. Drag and drop the dimensions in the Layout tab of the Properties panel to other sections of the Layout tab to change the POV, Row, and Column layout of the dashboard component.

Videos

Your Goal	Watch This Video
Discover how to add quick analysis components to dashboards without having a prebuilt form. You learn how to create an ad hoc query in the Dashboard Designer and format the results by changing the dimension layout and applying visualizations.	▶ Creating Quick Analyses in Dashboards 2.0

8
Viewing Key Information with Infolets

Infolets provide quick insights into data that guide your decisions and actions.

Infolets present a visually engaging overview of high-level, aggregated information and can help you quickly analyze data and understand key business questions such as:

- Where is it most important to direct my attention?
- What critical information has recently changed?
- How many orders are in jeopardy, listed by status?

Getting an instant overview into key information enables you to react quickly to changing conditions.

Your administrator can design an infolet to display a chart, a data point in a form, or an entire form. The administrator may design an infolet to progressively display more detail when you flip or expand it. (Only administrators can design infolets.)

To draw your attention to important data, your administrator can set an infolet page that displays directly on your Home page. A sample infolet page:
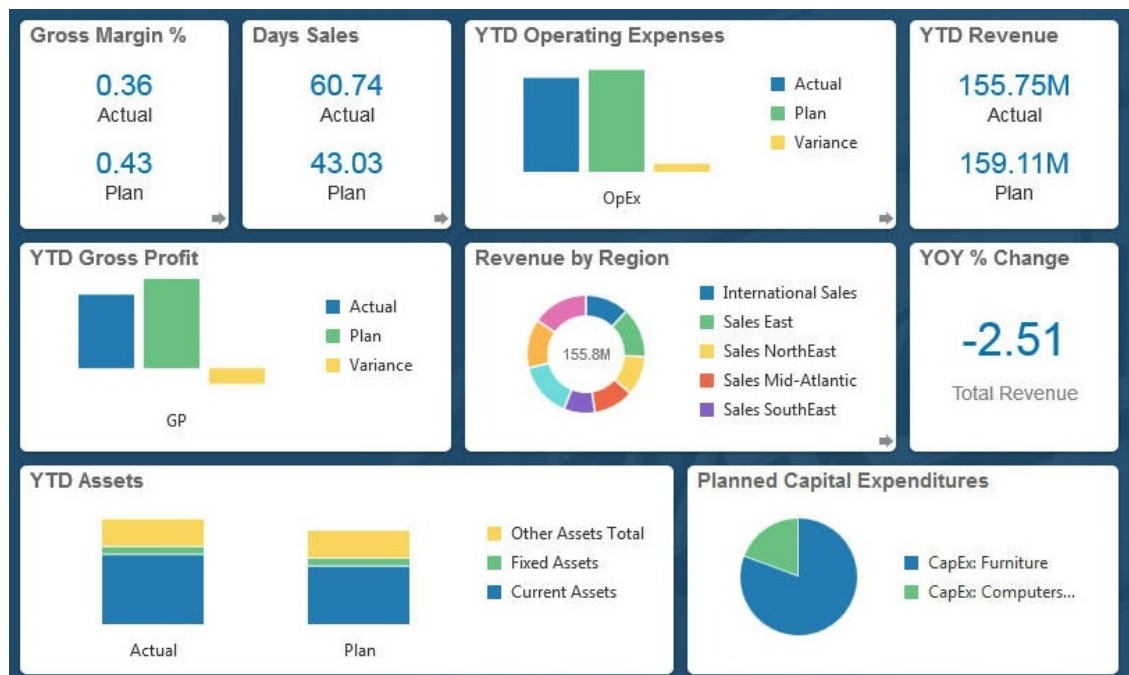
Other ways you can access infolets:

- Infolet dots

   See About the Infolet Dots. If the infolet content takes more space than can be displayed on a page, use the scroll bar on the right.

> ✎ **Note:**
>
> Using the Navigation Flow designer, your administrator can define up to seven infolet dots on the Home page. If your administrator can create connections to other EPM Cloud business processes, infolets can link to infolet pages in other EPM Cloud business processes.

• The **Infolets** icon on the Home page opens the **Infolets** listing page

To search for a specific infolet on the listing page, click 🔍. See Searching for Forms, Dashboards, and Infolets.

You can copy and share the direct URL for an infolet by clicking the ••• icon next to the infolet, and then selecting **Copy URL**.

About Infolet Views

Your administrator can design up to three views in an infolet.

The front page typically identifies key information. For example:

If an infolet has a back view, hover over the bottom right corner to see the flip arrow, and then click it. Back views typically present more analytical information, such as a graph. For example:

To flip to the front view again, hover over and then click the bottom left arrow. An infolet may have an expanded view to present even more detailed information. If so, hover over and then click the double arrow in the bottom right corner to see an expanded view. For example:
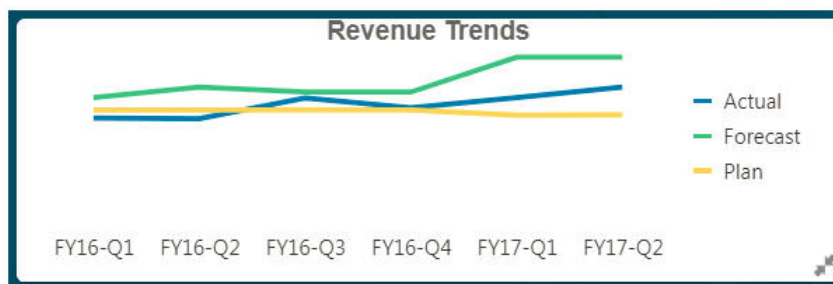
To return to the front or back view from an expanded view, click the double arrows in the bottom right corner.

> **Note:**
>
> Infolet views honor the access permissions that are assigned to the underlying forms and dimensions. So, your infolet views may differ from other users' views to the same infolet.

About the Infolet Dots

You open infolets that your administrator gives you access to by clicking the dots towards the top of the Home page.

For example:

- The first dot links to the Home page.
- The second dot links to your default, or favorite, infolets page. See Setting Your Default Infolet.
- The third through up to ninth dots link to other infolets that your administrator created.

Setting Your Default Infolet

You can set an infolet that you access most often as the default. Clicking the second dot on your Home page displays your default infolet.

To set your default infolet:

1. On the Home page, click **Infolets** .
2. From the **Actions** menu for the infolet you want to be the default, click **Default**.
   To undo the **Default** setting, click **Unmark**.

Only an infolet page can be marked as default. You can no longer mark a dashboard page as default.

9

Using Ad Hoc for Data Entry and Analysis

Using ad hoc grids, you can quickly drill into data slices that are important to you.

Examples of how ad hoc grids can help you focus your attention:

- Change drivers for a set of products that you work with due to changes in actuals.
- Quickly review profit margins in your regions.
- Change the set of accounts in an ad hoc grid that someone else set up.
- Drill into a variance number to understand the source of the variance.
- Use an ad hoc grid in Oracle Smart View for Office that you set up in your business process. To learn more, see *Oracle Smart View for Office User's Guide*.

Videos

Your Goal	Watch This Video
Learn how to perform EPM grid operations such as entering line item details, comments, attachments, sorting and filtering grid members, adjusting grid data, and using shortcut keys. You can use EPM grids, or ad hoc grids, to personalize focused data slices that you frequently use for analysis.	▶ Performing New EPM Grid Operations
Learn how to perform ad hoc operations such as selecting members, moving dimensions, and saving grid data and definition. You can use ad hoc grids to personalize focused data slices that you frequently use for analysis.	▶ Designing Ad hoc Grids in EPM Cloud Platform
Learn how to create ad hoc grids using forms, cubes, and dashboards.	▶ Creating Ad Hoc Grids in EPM Cloud Platform

Get Started Performing Ad Hoc

In ad hoc grids, you can enter data and then analyze and change data in many ways by slicing and dicing the data from various angles.

Table 9-1   Actions You Can Take with Ad Hoc Grids

Your Goal	Learn More
Get started with ad hoc	See Creating an Ad Hoc Grid.
Design the grid for ad hoc	See Designing Ad Hoc Grids.
Look at the data from various angles (slice and dice)	Use **Pivot** to refine your analysis by moving dimensions to the POV, column, or row. See Pivoting Dimensions.
Quickly move around an ad hoc grid and enter data using shortcut keys	See Ad Hoc Grid Keyboard Shortcuts and Quick Data Entry Commands.

Table 9-1   (Cont.) Actions You Can Take with Ad Hoc Grids

Your Goal	Learn More
Further focus the data	• Use **Keep Selected** and **Remove Selected** to customize your grid. • Use **Zoom In** to view the next level of detail in a dimension or **Zoom Out** to a summary level.
Work with different data	Select different members using the versatile **Member Selector**. For example, you can select members based on their attributes, children, level, or branch. See Opening the Member Selector in Ad Hoc Grids.
View source details associated with the underlying data	Drill through to Data Integration. See Using Drilling Through to Source in *Administering Data Integration for Oracle Enterprise Performance Management Cloud*.
Change a value by a specific amount	Use **Adjust**. See Adjusting Values.
Build logic into a data value	Use **Line Item Details**. See About Using Line Item Details.
Explain assumptions behind data	Add a comment or attach an external file. See Adding Comments and Attachments.
Control the display and behavior of ad hoc grids	Click , then tab to manage the display and behavior of ad hoc grids. See Setting Properties for Ad Hoc Grids.
Perform free form ad hoc	Type member names into a blank grid and retrieve values. See Using Free-Form Ad Hoc.
Run business rules after performing ad hoc data changes	Click **Rules** to search for and launch business rules. See Applying Rules to Ad Hoc Grids.
Switch to Oracle Smart View for Office	Click **Actions**, and then **Open in Smart View**. See Opening Forms and Ad Hoc Grids from Web Applications in *Smart View for Office User's Guide 23.100*.

Creating an Ad Hoc Grid

You can create an ad hoc grid to slice and dice data in several ways.

> **Note:**
>
> To be able to create an ad hoc grid, your administrator must give you the role Ad Hoc - Create. If you don't have this role, you can work only with existing ad hoc grids.

You can create ad hoc grids from stand-alone forms or from forms within dashboards. If Redwood Experience is enabled, ad hoc opened from a dashboard or a form opens in a dynamic tab.

To create an ad hoc grid from scratch:

1. On the Home page, click **Data**.

2. On the **Data Entry** page, click **Create**, then **Ad Hoc Grid**, and then in **Select Cube**, select a cube for the grid.

   By default, Account and Entity are on the row, and Years and Period are on the column. The other dimensions are on the POV (Point of View) above the grid. Select the members you want to work with in the ad hoc grid. See Opening the Member Selector in Ad Hoc Grids.

   > **Note:**
   >
   > If its cube is aggregate storage and has no Year dimension, then only the Period dimension is on the column.

3. Alternatively, you can perform ad hoc analysis on existing forms with these options:

   - To create an ad hoc grid from a stand-alone form, open the form, click **Actions**, and then **Analyze**. Ad hoc functionality is now available, and your initial grid is based on the form's layout.

   - For forms in Dashboard 1.0 dashboards, maximize the dashboard form so that it fills the workspace, click **Actions**, and then **Analyze**, or if Redwood Experience is enabled, you can right-click the cell you want to analyze, and then select **Analyze on Cell**.

   - For forms in Dashboard 2.0 dashboards, right-click the cell you want to analyze, and then select **Analyze on Cell**.

4. Save the ad hoc grid by selecting **Save Grid Definition**. See Submitting Ad Hoc Data and Saving the Grid Definition.

   You can now use ad hoc functionality to focus and analyze data. See Get Started Performing Ad Hoc.

   > **Tip:**
   >
   > To see high-level information about the grid, click **Property Panel**
   >
   > ⊶▐
   >
   > . On the **General** tab, you can set how to display member names and select an alias table. See Setting Properties for Ad Hoc Grids.

Submitting Ad Hoc Data and Saving the Grid Definition

You can update data in the cube by submitting changed data from ad hoc grids.

> **Note:**
>
> Formatting isn't supported in Web ad hoc and formatting within saved ad hoc grids from Oracle Smart View for Office native mode may not be persisted if opened in Web ad hoc.

Submit data options include:

- **Submit Data Only**: Submits the data for the cells you've explicitly modified (made dirty) but not the grid design.

- **Submit Data Without Refresh**: Submits all data cells that you have explicitly modified (made dirty) and those that were not modified. All data cells are marked dirty and submitted. After the submit operation is completed, the entire grid will be refreshed.

- **Submit Data Range**: Submits only the cell data from selected cells. If there are dirty cells on the grid outside the range of the selected cells, the modified values aren't submitted and those cells will revert back to the value that was last stored.

To save the ad hoc grid, click **Save Grid Definition**.

Performing Calculations Without Having to Submit Your Changes (Calc on the Fly)

Use calc on the fly to change data values and see calculated changes instantly without submitting the updated values.

When working with Forms 2.0, or during ad hoc analysis, you can perform calc on the fly without having to submit changes to the database and refresh. This capability saves you time and enables you to do multiple changes to the grid at once.

For Forms 2.0, this option is available if your administrator enabled this feature for the form. When this feature is enabled, in a 2.0 version of a form, when you hover over a cell with a member formula attached, you see the member formula associated with the cell and you can perform calc on the fly.

For ad hoc analysis, your administrator might have enabled this feature for you. Or, you can set a display preference for calc on the fly by selecting **Yes** for **Enable User Formulas in Ad Hoc** on the **Display** tab in **User Preferences**. When this setting is enabled, in an ad hoc grid, when you hover over a cell with a member formula attached, you see the member formula associated with the cell and you can perform calc on the fly.

To perform calc on the fly:

1. Open a 2.0 version of a form or an ad hoc grid, and hover over cells to see members with formulas attached, for both member formulas and consolidation operators.
   In this example, you can see the formula for **Sales** for **Jan**.

	Trips	Trips	Trips	Trips
	Jan	Feb	Mar	Q1
International Sales	20	20	20	60
Sales East	30	30	30	90
Sales NorthEast	25	25	25	75
Sales Mid-Atlantic	20	20	20	60
Sales SouthEast	15	15	15	45
Sales South	12	12	12	36
Sales Central	10	10	10	30
Sales West	12	12	12	36
Sales	144	144	144	432

Row Sales Column BaseData Trips Jan member(403):
410 +420 +421 +422 +423 +430 +440 +450 +66
grid math:
= EssSum(essMissing(1/0) , B4, B5, B6, B7, B8, B9, B10, B11)

There must be enter-able cells (level zero members) in the form or ad hoc grid in order for formulas to appear.

2. Perform calculations as needed, and then move the cursor from the cell:

- Modify values that contribute to a calculated cell. The calculated cell value is updated.

- Modify a calculated value. The cells that are on the form or ad hoc grid that contribute to the calculated cell are updated.
  For formula spreading to work correctly, all source cells for the calculated value must be visible on the form or ad hoc grid.

A color change indicates a modified cell. Cells refresh immediately to display the newly calculated values, without submitting the changes to the database.

In this example of modifying values that contribute to a calculated cell, modify the value of **Sales West** for **Jan**:

	Trips	Trips	Trips	Trips
	Jan	Feb	Mar	Q1
International Sales	20	20	20	60
Sales East	30	30	30	90
Sales NorthEast	25	25	25	75
Sales Mid-Atlantic	20	20	20	60
Sales SouthEast	15	15	15	45
Sales South	12	12	12	36
Sales Central	10	10	10	30
Sales West	15	12	12	36
Sales	144	144	144	432

When you press Tab, calc on the fly calculates updated values for **Sales** for **Jan**, **Q1** for **Sales West**, and **Q1** for **Sales**. Note the color change for the newly calculated values.

	Trips	Trips	Trips	Trips
	Jan	Feb	Mar	Q1
International Sales	20	20	20	60
Sales East	30	30	30	90
Sales NorthEast	25	25	25	75
Sales Mid-Atlantic	20	20	20	60
Sales SouthEast	15	15	15	45
Sales South	12	12	12	36
Sales Central	10	10	10	30
Sales West	15	12	12	39
Sales	147	144	144	435

In this example of modifying a calculated value, modify the calculated value **Sales** for **Feb**:

	Trips	Trips	Trips	Trips
	Jan	Feb	Mar	Q1
International Sales	20	20	20	60
Sales East	30	30	30	90
Sales NorthEast	25	25	25	75
Sales Mid-Atlantic	20	20	20	60
Sales SouthEast	15	15	15	45
Sales South	12	12	12	36
Sales Central	10	10	10	30
Sales West	12	12	12	36
Sales	144	288	144	432

When you press Tab, the values that contribute to the calculated cell are updated. Note the color change for the newly calculated values.

	Trips	Trips	Trips	Trips
	Jan	Feb	Mar	Q1
International Sales	20	40	20	80
Sales East	30	60	30	120
Sales NorthEast	25	50	25	100
Sales Mid-Atlantic	20	40	20	80
Sales SouthEast	15	30	15	60
Sales South	12	24	12	48
Sales Central	10	20	10	40
Sales West	12	24	12	48
Sales	144	288	144	576

3. When you've completed all of your modifications and are satisfied with the calculations, you can submit the modified values to the server, or you can discard your changes without submitting them.

You can also perform calc on the fly in Oracle Smart View for Office in 2.0 versions of forms or in ad hoc grids. See Performing Calculations Without Having to Submit Your Changes in *Working with Oracle Smart View for Office*.

Review the supported formula functions and operators. See Supported Functions and Operators for Calc on the Fly in *Working with Oracle Smart View for Office*.

Not all formula functions support calc on the fly. See Unsupported Functions and Formulas for Calc on the Fly in *Working with Oracle Smart View for Office*.

For additional considerations when performing calc on the fly, see Guidelines and Considerations in *Working with Oracle Smart View for Office*.

Tutorials

Tutorials provide instructions with sequenced videos and documentation to help you learn a topic.

Your Goal	Learn How
In this tutorial, you learn how to perform calc on the fly during ad hoc analysis using member formulas. You can work with calc on the fly either in the web or with Smart View.	Performing Calc on the Fly in Cloud EPM

Accessing an Ad Hoc Grid

Open an ad hoc grid to personalize your view of and analyze data in a form.

You can access ad hoc from a stand-alone form or from a form within a dashboard. If Redwood Experience is enabled, ad hoc opened from a dashboard or a form opens in a dynamic tab.

To access a saved ad hoc grid:

1. On the Home page, click **Data**.

Ad hoc grids on the **Data Entry** listing page display the ad hoc grid icon .

2. Click the name of the ad hoc grid.

To perform ad hoc on a stand-alone form, open the form, click **Actions**, and then click **Analyze**.

To perform ad hoc on a form within a dashboard:

- For forms in Dashboard 1.0 dashboards, maximize the dashboard form so that it fills the workspace, click **Actions**, and then click **Analyze**, or if Redwood Experience is enabled, you can right-click the cell you want to analyze, and then select **Analyze on Cell** to open ad hoc in a dynamic tab.

- For forms in Dashboard 2.0 dashboards, right-click the cell you want to analyze, and then select **Analyze on Cell** to open ad hoc in a dynamic tab.

Designing Ad Hoc Grids

Customize your ad hoc grids so that you can quickly access the relevant data.

Easy-to-use features enable you to design and refine your focused data slices.

Table 9-2   Customize You Ad Hoc Grid with These Features

Your Goal	See this Topic
Refining the data to work with	Opening the Member Selector in Ad Hoc Grids
Moving dimensions from one axis to another	Pivoting Dimensions
Setting options such as how member hierarchy levels are indented	Setting Properties for Ad Hoc Grids
Defining logic to calculate cell data	About Using Line Item Details

Opening the Member Selector in Ad Hoc Grids

As you analyze data, you may want to manipulate the data you're working with. Selecting members for the POV, rows, and columns enables you to quickly set up and change the data you're analyzing. To select members in ad hoc grids, use the member selector.

The member selector enables you to set the user variables, substitution variables, and attributes in the ad hoc grid definition. To open the member selector from an ad hoc grid:

Right-click a member, and then select **Select Members**.
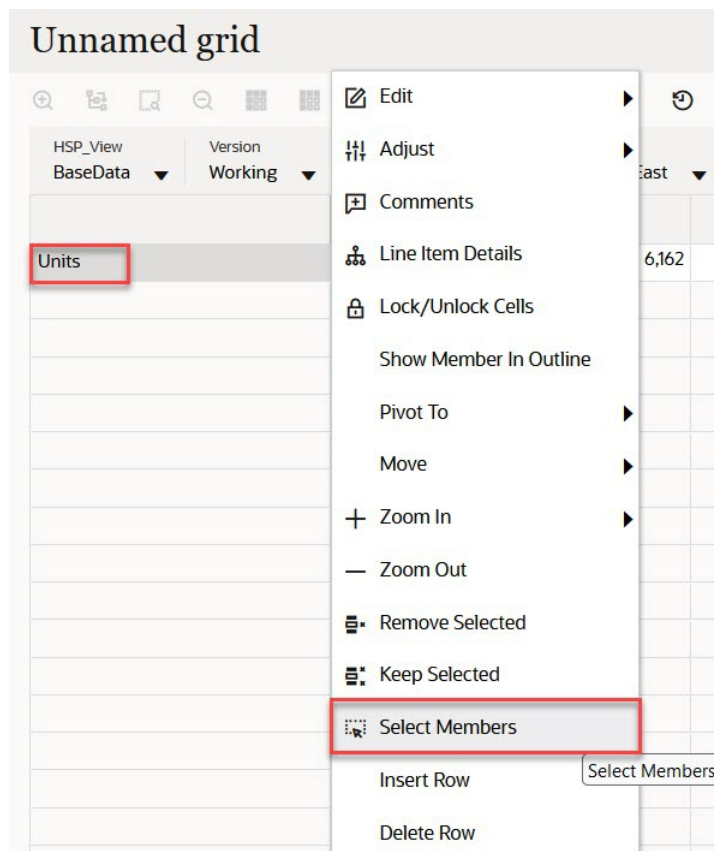
If attributes are available, click **Insert Attributes** icon on the toolbar.
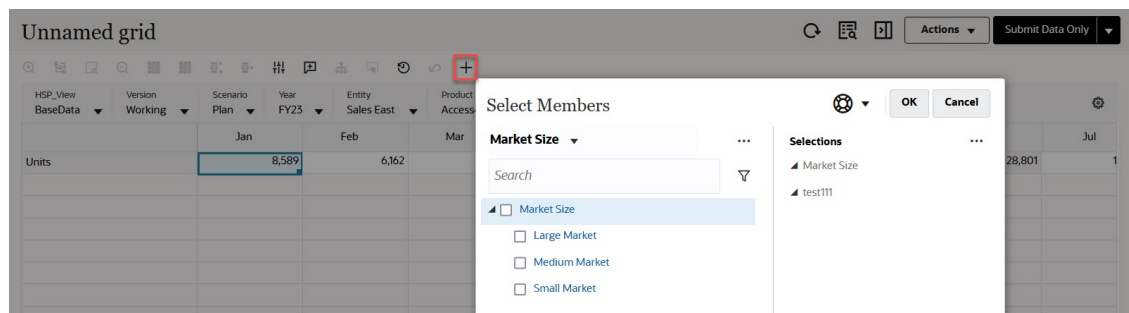
You can also click ⚙ (POV Settings) and then select **Member Selector**.

For more information about using the member selector, see Using the Member Selector.

Selecting Period-to-Date Members

If the administrator set up Dynamic Time Series members for the Period dimension, you can select members that show period-to-date data. For example, to show data for year-to-date expenses, you could select a Dynamic Time Series member that includes data for January through August.

To select a Dynamic Time Series member:

1. Right-click the Period dimension on the ad hoc grid, and select **Member Selector**.

2. Click

f_x

next to a member to display available time series members; for example, Q-T-D.

3. Select a time series member from the list. In this example, with **March** selected, if you select **Yr to Date**, then **Yr to Date("Mar")** is added to the **Selections** pane.

Select Members

⬡ ▾   OK   Cancel

Period ▾   ⋯   **Selections**   ⋯

Search   ▽   ◢ Period

◢ ☐ Period   Yr to Date("Mar")

   ☐ x---------x

   ◢ ☐ YearTotal

     ◢ ☐ Q1

       ☐ Jan

       ☐ Feb

       ☑ Mar

     ▶ ☐ Q2

     ▶ ☐ Q3

     ▶ ☐ Q4

   ☐ YTD

   ☐ Test

   ☐ QTD

   ☐ No Period
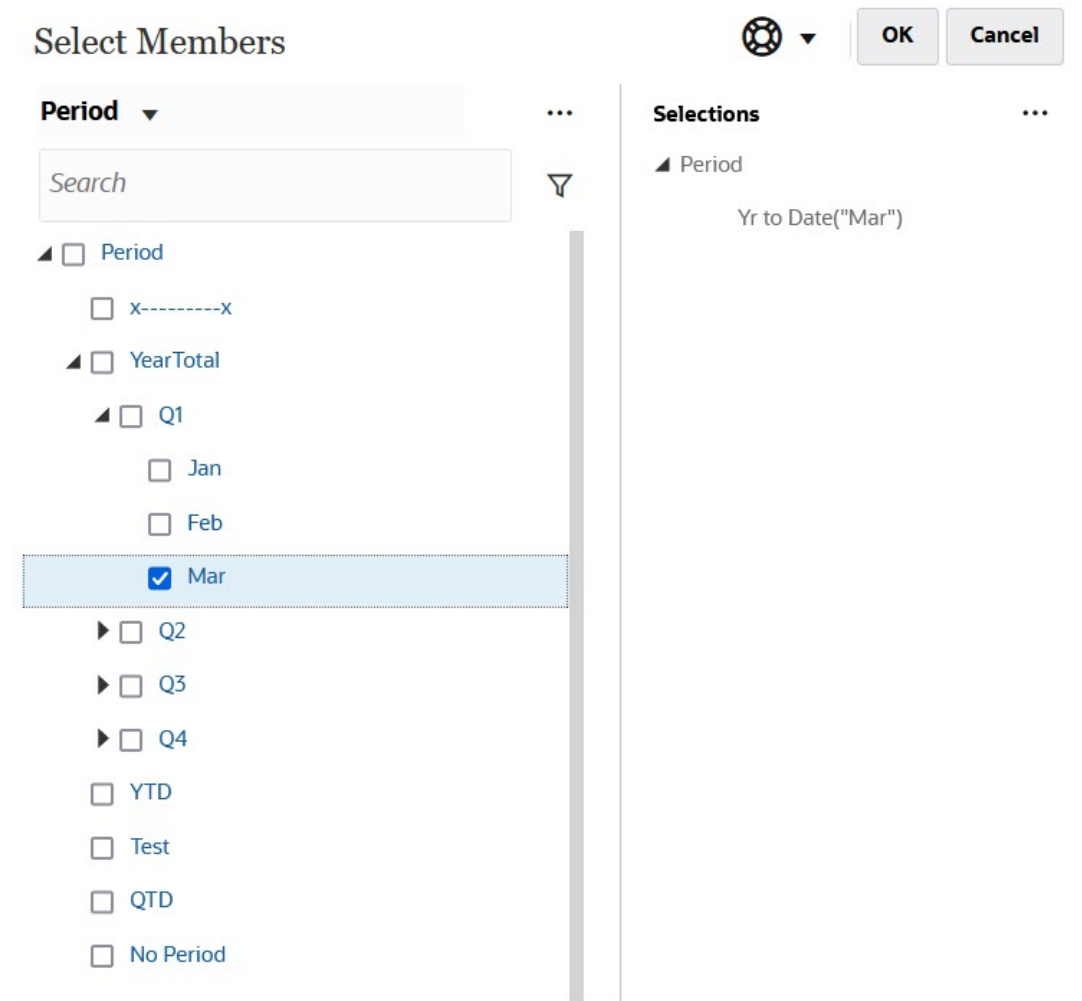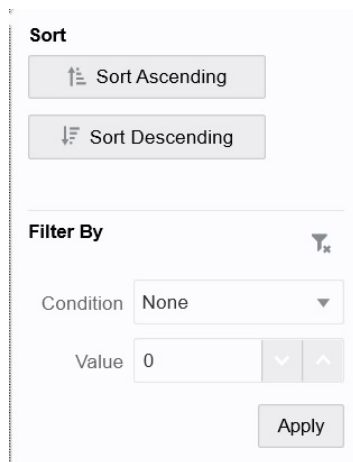
4. Click **OK**.

For more information about the member selector, see Using the Member Selector.

Filtering Column Members

Robust filter options enable you to control the display of column members in the ad hoc grid. Hover over the column name, click the funnel to the right of the column name, and then select an action.

Sort options enable you to sort by ascending or descending order and ignore the member hierarchy. **Filter By** options enable you to filter by **Condition** (such as Greater Than or Less Than) or by a **Value**. To remove sort and filter options, click

.

Pivoting Dimensions

Pivoting a dimension changes the orientation of data on the grid so you can view data from another angle, or slice and dice information.

You pivot a dimension by dragging it from one axis to another.

For example, you can:

• Drag a dimension from a row to a column or from a column to a row.

• Drag a dimension between the POV and a row or column.

• Reorder members by dragging them on the same axis.

• Drag dimensions to and from the **Layout** tab on the **Property Panel**:
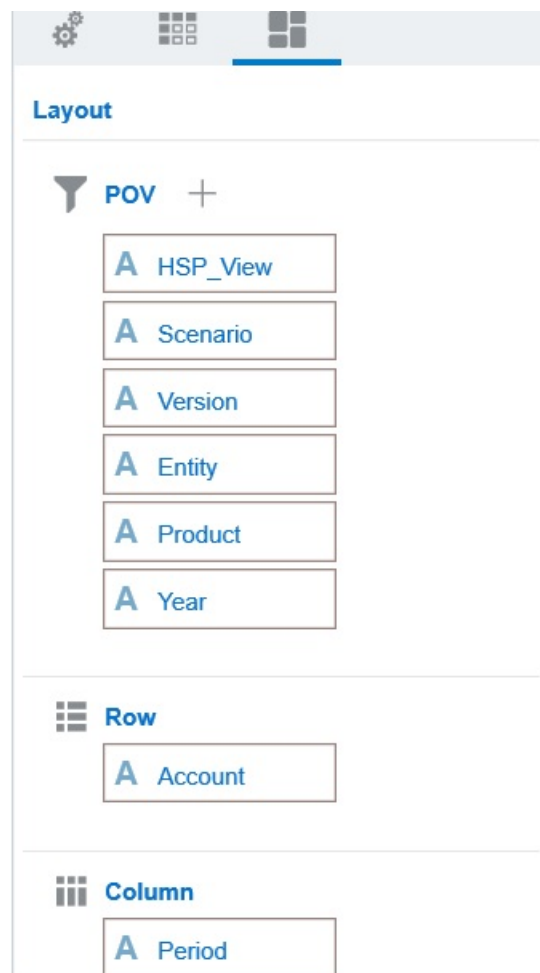
A single dimension must exist on the row and column axis. You can't pivot the last remaining dimension in a row or column.

About Shared Members

A shared member shares storage space with another member of the same name, preventing duplicate calculation of members that occur multiple times in a Planning cube. Shared members are available for Entity, Account, and user-defined custom dimensions.

Sharing members allow alternate rollup structures within an application. A base member must exist before an administrator can create a shared member. Administrators can create multiple shared members for the base member. A base member must display before its shared members in position from top to bottom.

You can drill on shared members in an ad hoc grid, but an administrator must first enable a system setting called **Allow drill down on shared members in ad hoc**.

See What Application and System Settings Can I Specify? in *Administering Planning*.

Shared members are displayed similarly to base members in the dimension hierarchy for member selection in Oracle Smart View for Office.

Zooming in on Shared Members

In 16.12 and earlier, Planning did not support shared members. When a member was placed on an ad hoc grid, it was always considered a base member, even if it was supposed to be a shared member.

Shared members in Planning 17.01+ are supported in ad hoc grids and the system recognizes whether a member is a base member or a shared member. If your administrator enables the application setting, **Allow drill down on shared members in ad hoc**, then zooming in on shared members is supported in Planning (17.04+). In this case, zooming in on shared members is effectively the same as zooming in on the corresponding base members. You can zoom in on shared members one level at time.

If your administrator enables the application setting, **Drill to All Levels in Base** (21.09+), and you're working with a Standard mode application, you can zoom in beyond just the shared members into all levels or only the bottoms levels within the base hierarchy using the Zoom In options, **All Levels** and **Bottom Level**.

Example Shared Member Zoom In

This example describes the results you will see when your application is set to Standard mode and **Allow drill down on shared members in ad hoc** is set to **Yes** and **Drill to All Levels in Base** is enabled.

Figure 1 shows three hierarchies under the Entity dimension. In the `entity_10` hierarchy, all members descend from `entity_10`. In the `entity_12` hierarchy, all members descend from `entity_12`. In the `entity_14` hierarchy, there are descendent members of `entity_14` as well as the shared members, `entity_10` and `entity_12`. The shared members include their descendents.

Figure 9-1   Entity Dimension Showing Its Hierarchies

Figure 2 shows the difference between zooming in on `entity_14`:

- Using the Zoom In to All Levels command

- Using the Zoom In to Bottom Levels command

In both cases, in Oracle Smart View for Office, **Member Options**, **Ancestor Position** is set to **Top**.

Figure 9-2   Results of Zooming in on entity_14, with Ancestor Position=Top

Zoom In "entity_14" to **All Levels**

```
entity_14
        entity_14.1
                entity_14.1.1
                entity_14.1.2
        entity_10 (shared member)
        entity_10.1
        entity_10.2
        entity_10.3
        entity_10.4
        entity_12 (shared member)
        entity_12.1
                entity_12.1.1
                entity_12.1.2
                entity_12.1.3
        entity_12.2
        entity_12.3
```

Zoom In "entity_14" to **Bottom Levels**

```
entity_14
                entity_14.1.1
                entity_14.1.2
        entity_10 (shared member)
        entity_10.1
        entity_10.2
        entity_10.3
        entity_10.4
        entity_12 (shared member)
                entity_12.1.1
                entity_12.1.2
                entity_12.1.3
        entity_12.2
        entity_12.3
```

> **Note:**
>
> In a Native mode application, you can achieve the results shown in the Zoom In to All Levels example, if **Allow drill down on shared members in ad hoc** set to **Yes**, and **Drill to All Levels in Base** disabled; however, you will need to zoom in one level at a time on the shared members till you reach the bottom level of each hierarchy. You will not be able to zoom in directly to the botton level of the shared members.

Setting Properties for Ad Hoc Grids

You can control the display and behavior of ad hoc grids by setting your preferences using the **Property Panel**.

Setting General Ad Hoc Properties

To set general ad hoc options:

1. In an ad hoc grid, click the **Property Panel** icon

   , and then click **General**.

2. Under **Grid**, set these options:

- **Name**
- **Description**
- **Cube**
- For **Display Member Label**, choose from the following options:
  - **Distinct Member Name Only**
  - **Member Name Or Alias**
- **Alias Table**

Setting Ad Hoc User Options

To set ad hoc user options:

1. In an ad hoc grid, click the **Property Panel** icon

   , and then click **Adhoc Options**.

2. Under **Grid**, set how members are displayed:
   - **Member Inclusion**:
     - **Include Selection**: Select **Yes** to display both the selected member and the members retrieved as a result of the operation. For example, zooming in on the selected member Qtr1 displays data for Qtr1, Jan, Feb, and Mar.
     - **Within Selected Group**: Select **Yes** to perform an operation such as Zoom only on the selected group of members, leaving unselected cells as is. This setting is meaningful only when there are two or more dimensions down the grid as rows or across the grid as columns. This option pertains to **Zoom**, **Keep Only**, and **Remove Only**.
   - **Zoom in**: Select the level at which to zoom in:
     - **Next Level**: Get data for the children of the selected members.
     - **All Levels**: Get data for all descendants of the selected members.
     - **Bottom Level** : Get data for the lowest level of members in a dimension.
   - **Ancestor Position**: Set how to display ancestors in the hierarchy:
     - **Top**: Display member hierarchies from highest to lowest level.
     - **Bottom**: Display member hierarchies from lowest to highest level.
   - **Indentation**: Set how member hierarchy levels are indented:
     - **None**: Do not indent members.
     - **Subitems**: Indent descendants. Ancestors are left-justified in the column.
     - **Totals**: Indent ancestors. Descendants are left-justified in the column.
   - **Navigate without refreshing data**: Selecting **No** improves performance as you navigate around the grid, for example pivoting and zooming. Just click **Refresh** when you want to update the data. (If you select **Yes** for this option, data is refreshed as you work in ad hoc.)

3. Under **Suppression**, to simplify your view of the data, select options to suppress elements of the grid. For example, you can hide rows or columns with zero values.
   - **Zero Values**:

- **None**: Select to display rows and columns that contain only zeros.

  - **Row**: Select to hide rows containing only zeros.

  - **Column**: Select to hide columns containing only zeros.

  - **Row and Column**: Select to hide rows and columns containing only zeros.

- **Repeated Members**: Select **Yes** to hide rows that contain repeated member names, regardless of the grid orientation.

- **Missing Data**: Select to hide rows or columns with zeros or that have no data:

  - **None**: Display rows and columns with zeros or that have no data.

  - **Row**: Hide rows with zeros or that have no data.

  - **Column**: Hide columns with zeros or that have no data.

  - **Row & Column**: Hide rows and columns with zeros or that have no data.

- **Missing Blocks on Rows**: Select **Yes** to hide blocks of cells in rows that have no data.

- **No Access**: Select to hide rows or columns that you don't have access to:

  - **None**: Display rows and columns that you don't have access to.

  - **Row**: Hide rows that you don't have access to.

  - **Column**: Hide columns that you don't have access to.

  - **Row & Column**: Hide rows and columns that you don't have access to.

> **✎ Note:**
>
> When trying to open an ad hoc grid, if you see the "Ad hoc grid cannot be opened as there are no valid rows of data" error, clear the **Suppression** options.

4. Under **Precision Values**, set the minimum and maximum number of decimal positions to display in a cell for the **Currency** values, **Non-currency** values, and **Percentage** values. For example, if the cell value is 100, and you select the **Minimum** precision "2", the value displays as "100.00". If you select a Maximum precision of "3 " and the cell value is 100.12345, the value displays as "100.123". Select **Use Currency member precision** to apply the precision setting of the **Currency** member.

5. Under **Replacement**, set labels to display for cells that are missing data, cells that you don't have access permission to view, or cells that have invalid data:

   - **No Data**: Enter the text that you want displayed for cells that have #Missing or #NoData as their value.

   - **No Access**: Enter the text that you want displayed for cells that you don't have access to.

   - **Submit Zeros**: Select **Yes** if you specified #NumericZero as the text for the **No Data** or **No Access** replacement option and you want to submit zeros to the application.

6. Click **Refresh**.

Setting Layout Options

You can use the **Layout** tab to remove attributes that are used within the ad hoc grid. This is the only place where attributes can be removed from the grid.

To set layout options for ad hoc grids:

1. In an ad hoc grid, click the **Property Panel** icon

   ![Property Panel icon]

   , and then **Layout**.

2. See Pivoting Dimensions.

Ad Hoc Grid Keyboard Shortcuts and Quick Data Entry Commands

Keyboard Shortcuts

You can quickly move around an ad hoc grid with these shortcut keys:

Key or Key Combination	Result
Tab	Moves to the next cell in the row. When focus is on the last cell of a row, Tab moves to the first cell of the next row.
Shift+Tab	Moves to the previous cell in the row. When focus is on the first cell of a row, Shift+Tab moves to the last cell of the previous row.
Up Arrow, Down Arrow	Moves up or down within the same column to the previous or next row.
Right Arrow, Left Arrow	Moves to the next cell or previous cell in the row.
Ctrl+Home	Moves to the first cell in the grid.
Shift+End	Moves to the last cell of the first row of the grid.
Ctrl+End	Moves to the last cell in the grid.
Ctrl+Right Arrow	Moves to the last cell in the current row.
Ctrl+Left Arrow	Moves to the first cell in the current row.
Shift+Space	Selects the row.
Ctrl+Space	Selects the column.
Ctrl+Up Arrow	Moves to the top row of the column.
Ctrl+Down Arrow	Moves to the bottom row of the column.
Ctrl+Shift+Up Arrow	Selects the cells in the column starting from the current cell to the top row of the column.
Ctrl+Shift+Down Arrow	Selects the cells in the column starting from the current cell to the bottom row of the column.
Shift+Left Arrow	Selects a cell to the left of the current cell in the row each time Left Arrow is pressed until it reaches the start of the row.
Shift+Right Arrow	Selects a cell to the right of the current cell in the row each time Right Arrow is pressed until it reaches the end of the row.
Shift+Up Arrow	Selects a cell above the current cell in the column each time Up Arrow is pressed until it reaches the top of the column.
Shift+Down Arrow	Selects a cell below the current cell in the column each time Down Arrow is pressed until it reaches the bottom of the column.
Shift+Click	Selects multiple cells by holding the Shift key and then using the mouse to select cells from different columns or rows in the grid.

Commands for Quickly Entering Data

You can use these shortcuts to quickly enter data in ad hoc grids. Enter the keys or symbols, and then press Enter or Tab.

Keys or Symbol	Result	Example
K	Enters the value in thousands.	Enter `5K` for 5,000.
M	Enters the value in millions.	Enter `5M` for 5,000,000.
Add or +	Adds a number to the cell value.	If the cell value is 100, entering `Add10` after 100 results in 110.
/	Divides the cell value by a number.	If the cell value is 100, entering `/2` after 100 results in 50.
Sub or ~	Subtracts a number from the cell value.	If the cell value is 100, entering `Sub10` after 100 results in 90.
Percent or per	Multiplies the cell value by the percentage you enter.	If the cell value is 100, entering `per10` after 100 results in 10% of the current cell value, or 10.
Increase or inc	Increases the cell value by the percentage you enter.	If the cell value is 200, entering `inc10` after 200 increases the cell value by 10% of 200 (20), to 220.
Decrease or dec	Decreases the cell value by the percentage you enter.	If the cell value is 200, entering `dec10` after 200 decreases the cell value by 10% of 200 (20), to 180.
Power or pow	Changes the cell value to the number, added as an exponent.	If the cell value is 100, entering `pow2` after 100 multiplies the cell value by an exponent of 2, to 10,000.
gr	Grows a cell by a percentage.	If the cell value is 200, entering `gr50` after 200 increases the cell value by 100, to 300.

Applying Rules to Ad Hoc Grids

After you submit new or changed data, you can run business rules that will calculate the data.

To apply a rule:

1. Open an ad hoc grid.

2. Click **Rules** ▦ .

3. If presented with a runtime prompt, enter or select the required information, and then click **Launch**.

   If the rule runs successfully, a message displays and data is updated.

Adding Comments and Attachments

To explain data or provide background, you can add comments and attachments to a cell.

Valid attachment file types are:

- Image types permitted: `.jpg, .gif, .png, .7z`

- Non-image file types permitted: `.csv, .xls, .xlsx, .txt, .zip, .jlf, .doc, .docx, .ppt, .pptx, .rtf, .pdf, .gdoc, .gsheet, .gslides, .msg`

To add a comment or attachment:

1. Click in a cell, then select

   .

2. Enter your comment. To attach a file, click

   and browse to the file.

3. Click **Post**.
   A blue triangle in the upper right of the cell indicates it has a comment or attachment. To read a comment or view an attachment, perform Step 1.

> **✎ Note:**
>
> Forms 2.0 does not support adding comments or attachments to formula cells.

Adjusting Values

You can quickly adjust cell values in an ad hoc grid.

To adjust a cell's value:

1. Click in the cell.

2. Click **Adjust**

   .

3. In **Adjust By**, enter a positive, negative, or percentage value, and then click **OK**.

About Using Line Item Details

To build logic into how a cell value is calculated, you can use the application's built-in calculator, called Line Item Details.

> **✎ Note:**
>
> Line Item Details is replacing Supporting Detail and they are functionally the same. Detail can be added at the cell level or across multiple cells in the same row.

Line Item Details enables you to develop a cell value and save your assumptions behind the value. For example, you can add Line Item Details for Pens: ballpoint, fountain, marker, and so on. The Pen member can then display the total for all pen types. Or say you want to plan for a travel expense for an upcoming quarter using your own logic. This example shows how you can use line item details to plan travel expenses. The details are displayed below the grid:

	Jan
acc2	2850
▼ Air Fare ⊕	2,400.00
Customer Visits ⊕	2.00
Average Rate ⊗	1,200.00
▼ Hotel ⊕	450.00
Number of Nights ⊕	3.00
Rate per Night ⊗	150.00

To create line item details, click a row header, then click

🔧

. Click the Down Arrow in the top middle of the Line Item Details grid to collapse it.

About Line Item Details:

- You can include text, numbers, and operators that define how data is calculated.

- Hover over a cell to see if it has Line Item Details.

- Line Item Details don't add members to the ad hoc grid or change its organization.

- You must have write permission to cells that you create Line Item Details for.

- To protect the Line Item Details, the aggregate values in cells having Line Item Details are read-only.

- You can add Line Item Details only to base time periods (level-0 members). You can't add Line Item Details to Summary Time Periods, such as Quarters.

- You can't add Supporting Details or Line Item Details for formula row cells.

- Number and precision formatting is not reflected in the **Line Item Details** window.

- The sequence of operators follows the same logic as is used to process multiple operators in a complex calculation. See Order of Line Item Details.

Adding Line Item Details

Use Line Item Details to set how detail items aggregate to cell values.

For an introduction to Line Item Details, see About Using Line Item Details.

To work with Line Item Details:

1. Click a row header, and then click

   🔧

   .

2. A new grid displays below the ad hoc grid. In this grid, add rows that reflect the structure you want.

   For example, click

   ➕

   , and then click **Add Child** to add a row directly below the selected row. See Working with the Structure of Line Item Details.

3. In the text box, you can enter a description of up to 1,500 characters.

4. Click the default plus sign by each row, and then select the operator to set the mathematical relationships among the rows. Select from these operators:

⊝ Approx

⊕ Add

⊝ Subtract

⊗ Multiply

⊕ Divide

5. When you've created the Line Item Details structure, enter the data to set or calculate.

    Enter numbers using the same scaling that was set up for the form. You can copy and paste data into Line Item Details.

6. Click **Apply**.

    The values are dynamically calculated and aggregated before the data is saved.

> **Note:**
>
> Adding Supporting Details or Line Item Details for formula row cells is not allowed.

For more information, see Working with the Structure of Line Item Details.

Working with the Structure of Line Item Details

Learn how to work with the elements in Line Item Details.

To create or change the structure of Line Item Details:

1. Select the row for which you want to add Line Item Details and click

    ⛀

    .

2. Click

    ➕

    and then click **Add Child**. Click **Untitled** and provide a name.

3. Add rows that reflect the structure you want. For example, click **Add Sibling** or **Duplicate**. Use these options from the toolbar before the **Line Item Details** grid:

    Table 9-3   Options for Line Item Details

Option	Result
↻	Refreshes the Line Item Details grid. Click **Yes** to discard unsaved data, otherwise click **No**.

Table 9-3   (Cont.) Options for Line Item Details

Option	Result
+	Adds a child or sibling one level below the selected cell. You can add unlimited children, but consider the potential performance impact.
⬅	Moves the selected row to the next-higher level.
➡	Moves the selected row to the next-lower level.
∧	Moves the selected row before its sibling predecessor.
∨	Moves the selected row after its sibling successor.
✖	Enables you to select a delete action: • **Delete Row** removes the selected row. • **Delete All Rows** removes all rows.

4. Click **Apply**.

Order of Line Item Details

The order of Line Item Details affects the resulting value that is saved.

Understanding the calculation order helps you correctly enter Line Item Details. Line Item Details leverage the calculation order of + (addition), - (subtraction), * (multiplication), and / (division). A simple Unit times Rates example demonstrates how to correctly enter Line Item Details.

See Incorrectly Entering Line Item Details and Correctly Entering Line Item Details.

Incorrectly Entering Line Item Details

This example shows the order of rows in Line Item Details that generate incorrect data.

In the following table, Rate is set to the unary operator +. Hence, the calculation order first adds the Rate and then multiplies by the Unit, resulting in incorrect data for Feb and Mar.

	Jan	Feb	Mar
Rate +	250	250	250
Unit *	10		
Total:	2500	250	250

Correctly Entering Line Item Details

This example shows the order of Line Item Details generating correct values.

In the following table, the calculation order is Units multiplied by Rates, resulting in correct values.

When you add Line Item Details, verify the order of the rows to ensure that correct values are calculated and saved.

	Jan	Feb	Mar
Unit+	10		
Rate *	250	250	250
Total:	2500		

Totaling When Line Item Details Cells are Blank

If a cell in Line Item Details is blank, it's ignored when values are aggregated (instead of assuming that a blank cell means zero).

For example, you might define Line Item Details to calculate the daily rate of hiring an instructor ($250) times the number of days per month for which you plan to hire an instructor (4 in January, but none in February). The Instructor total for Feb is 250, even though you don't intend to hire an instructor in Feb.

	Jan	Feb
Instructor	1000	250
Rate +	250	250
Days	4	

To correctly total values that are aggregated by the * multiplier when some cells are blank, you can leave the Rate cell blank, or enter a zero in the Days cell, instead of leaving it blank. This causes the rate (250) to be multiplied by 0 (zero), resulting in a value of zero for Feb.

	Jan	Feb
Instructor	1000	0
Rate +	250	250
Days	4	0

Printing Ad Hoc Grids

If you require printing, you can print ad hoc grids using the browser's print feature or the Excel Print feature in Oracle Smart View for Office.

To work with an ad hoc form in Smart View, open a form, click **Actions**, and then select **Open in Smart View**.

See Opening Forms and Ad Hoc Grids from Web Applications in *Smart View for Office User's Guide 23.100*.

Using Free-Form Ad Hoc

If you are familiar with the dimensions and members of your database, you can use free-form ad hoc by typing dimension and member names directly into cells of an ad hoc grid.

You can still use the POV, member selection, and other ad hoc operations in free-form grids.

Free-Form Ad Hoc Guidelines

Consider these guidelines when working in free-form ad hoc.

- A grid must have at least one row dimension and one column dimension.

- Each row dimension can contain members of only one dimension. Each column dimension can contain members of only one dimension.

- Members of one dimension can be entered only in *one* of the following regions:

    – In the same row

    – In the same column

- Precede member names that contain spaces between words with a single quotation mark.

- Aliases from the current alias table are permitted in free-form grids, but aliases from other alias tables are treated as comments.

10

Using the Member Selector

Related Topics

- About Selecting Members
- Selecting a Dimension
- Defining Member Display Options
- Searching for Members
- Filtering Which Members Are Displayed
- Making Member Selections

About Selecting Members

You select members in the **Select Members** dialog box. The options in the dialog box may differ slightly depending on the feature for which you are selecting members.

You can select members to use with the following features:

- **Forms 2.0:** Use member selection to define the rows, columns, and the point of view to use in a form, and to select members for business rules run-time prompts.

- **Dashboards 2.0:** Use member selection to define the Global or Local POV, and to select members for business rules run-time prompts.

- **Ad hoc grids:** Use member selection to define the POV, rows, and columns, and to set the user variables, substitution variables, and attributes in an ad hoc grid.

> ✏️ **Note:**
>
> The Member Selector is available only with Redwood Experience enabled.

> ✏️ **Note:**
>
> Forms 1.0 and Dashboards 1.0 use a different member selector. See Using the Member Selector in *Administering Planning*.

Selecting a Dimension

The dimension for which you are selecting a member is displayed at the top of the **Select Members** dialog box.
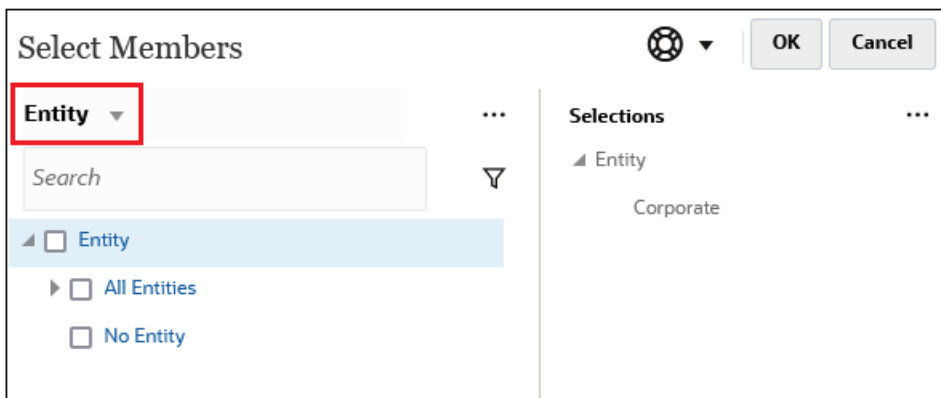
In certain situations you may be able to select a member for more than one dimension. To do this, click the drop-down to select the desired dimension. For example, if you are selecting members for both the Entity and Account dimensions, both Entity and Account are displayed in the drop-down.
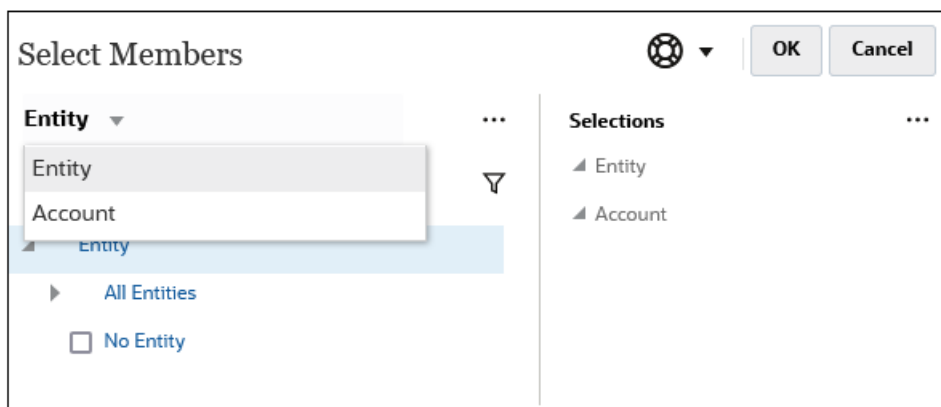
Defining Member Display Options

Click [...] (Available Items icon) to select whether to display members by alias or by member name, and whether to display the number of descendants for each member.
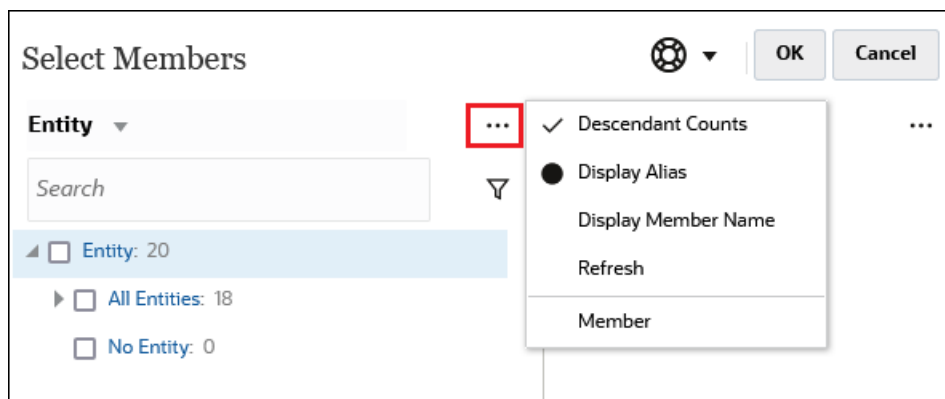
In some places, additional options are available:
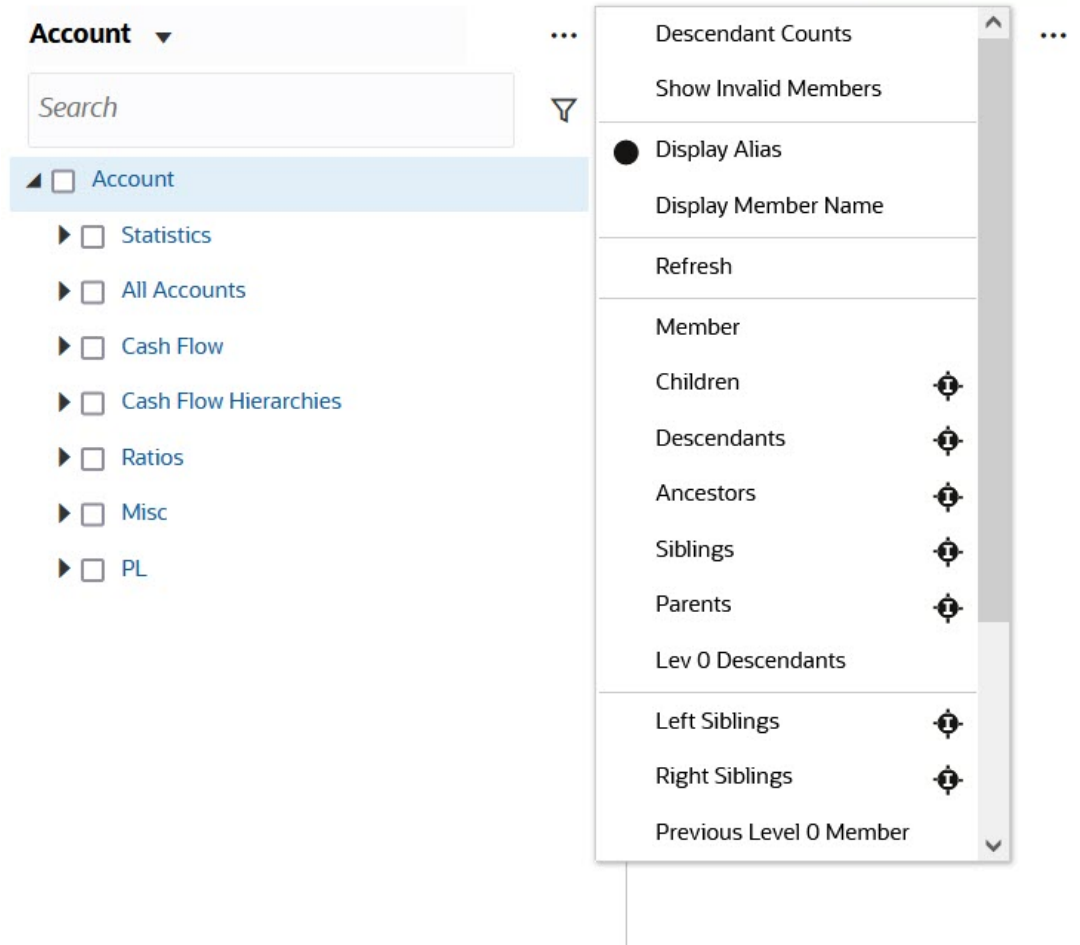
You have the option to **Show Invalid Members**.

For more information about invalid members, see Working with Valid Intersections in Application Forms in *Administering Planning*.

You can also show and select members using member relationships. When you click a member relationship option in the **Available Items** menu, the member or members are moved to the **Selections** pane. For more information about member relationships, see Member Relationships.

To toggle the display between the hierarchy view and the results of any search or filters, select **Members** or **Search Results** at the bottom left of the screen.

Select Members Dialog Box with the Hierarchy View Displayed
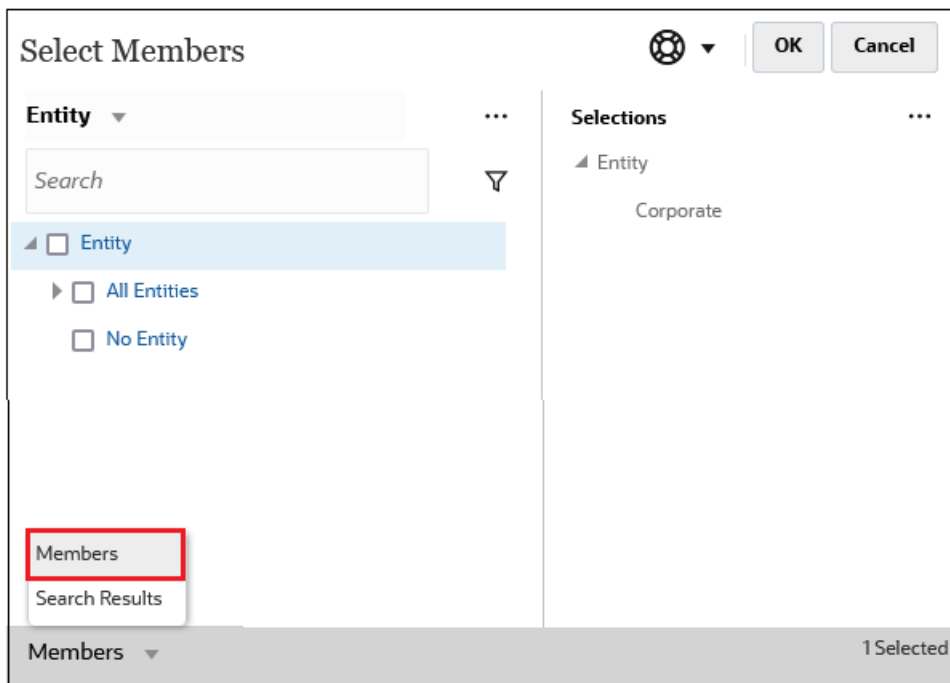
Select Members Dialog Box with Search Results Displayed
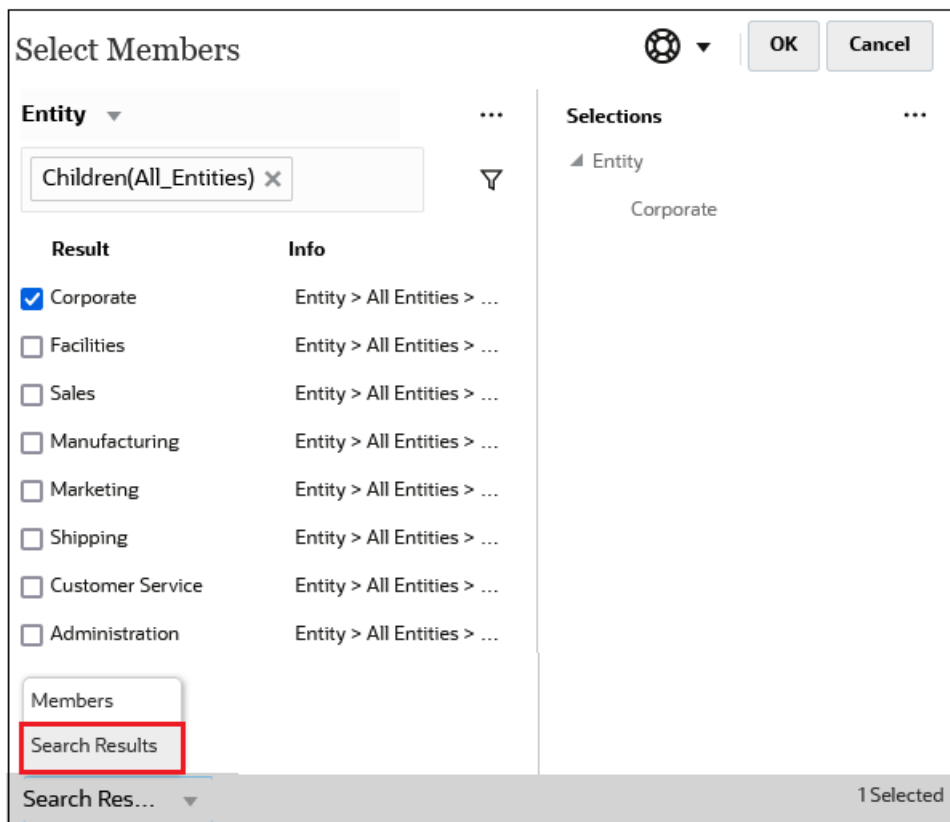
In some places, you also have the option to toggle the display to show:

- User Variables
- Substitution Variables

- Attributes

> **Tip:**
>
> You can drag the splitter bar between the **Select Members** pane and the **Selections** pane to adjust how the dialog box displays.

Searching for Members

You can search for members in the **Search** field. When searching for a member, you can search for a word, multiple words, or wildcard characters.
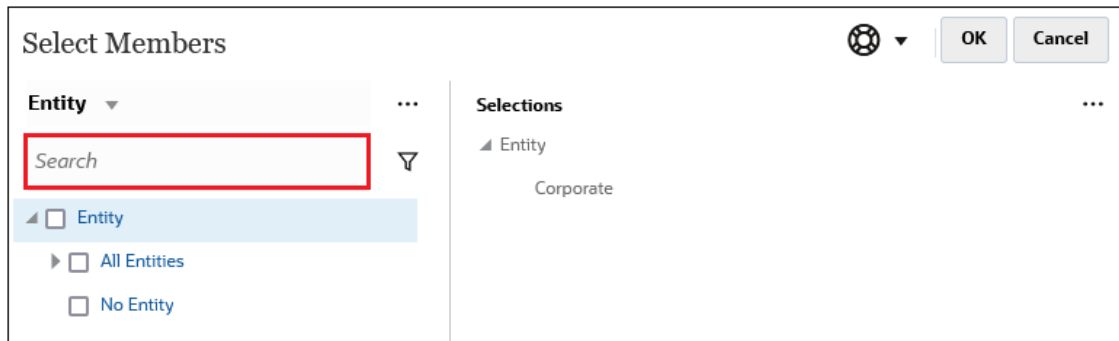
Table 10-1   Valid Wildcard Characters

Wildcard	Description
?	Match any single character
*	Match zero or multiple characters. For example, enter "sale*" to find "Sales" and "Sale" because * includes zero or more characters after the word "sale."
	The default search uses the * wildcard. For example, entering "cash" searches for "*cash*" and returns "Restricted Cash", "Cash Equivalents", "Cash", and "Noncash Expenses" because the word "cash" appears within each matched item.
#	Match any single number (0-9)
[list]	Match any single character within a specified list of characters. You can list specific characters to use as wildcard. For example, enter [plan] to use all the letters within the brackets as a single wildcard character. You can use the "-" character to specify a range, such as [A-Z] or [!0-9]. To use the "-" character as part of the list, enter it at the beginning of the list. For example, [-@&] uses the characters within the brackets as wildcard characters.
[!list]	Match any single character not found within a specified list of characters. The "-" character can also be used to indicate a range, such as [!A-Z] or [!0-9].

To remove search criteria, click the X next to the search filter.
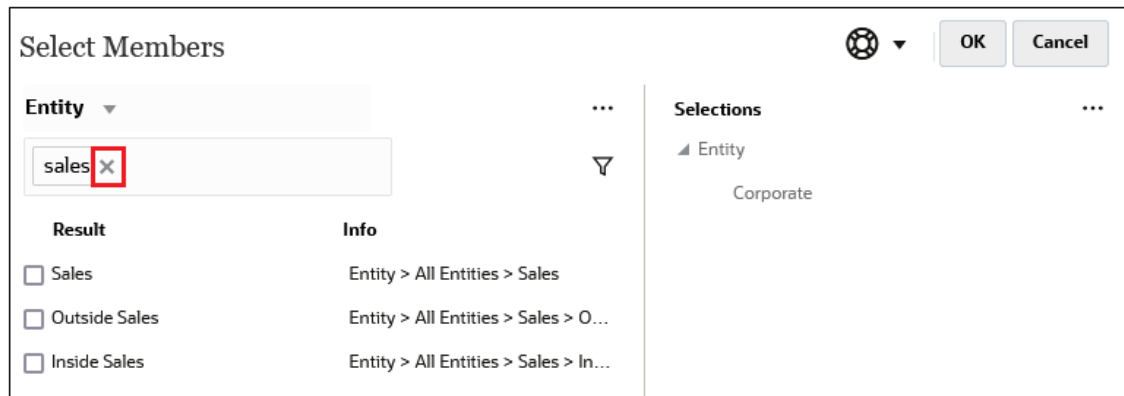
After you perform a search, you can use the Locate Member icon to find a specific member in the hierarchy. This is very useful if you have a large number of members and you need to work with a particular member in its hierarchy position.

To display the Locate Member icon, highlight a member in the search results. To locate the member in the hierarchy, click (Locate Member icon) to the left of the highlighted member in the **Info** column.

For example, assume you search for **bb100** in the **Customer** dimension, and then click on the **BB100-02** line.
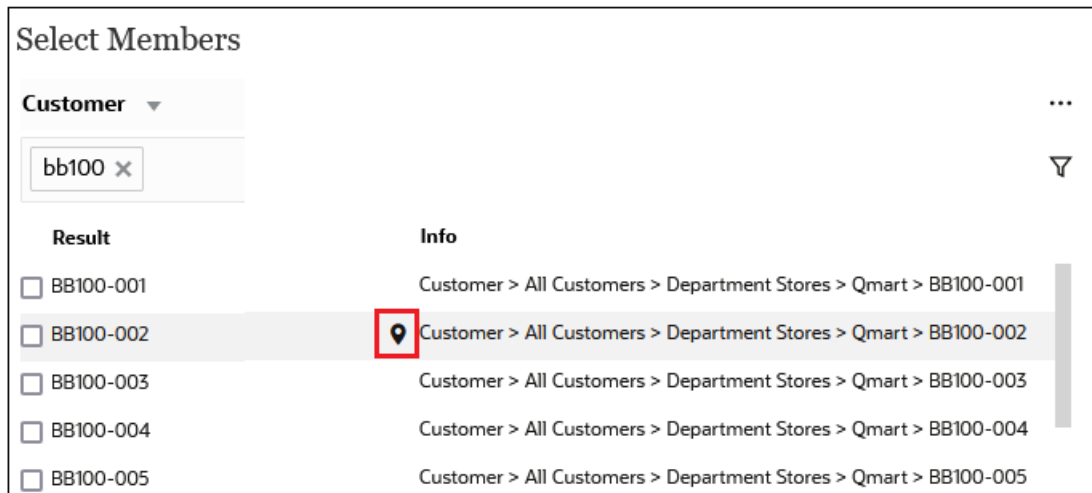
After you click , you are returned to the hierarchy view with **BB100-02** highlighted. At this point, you could select the checkbox next to BB100-02 to move it to the **Selections** pane if desired.
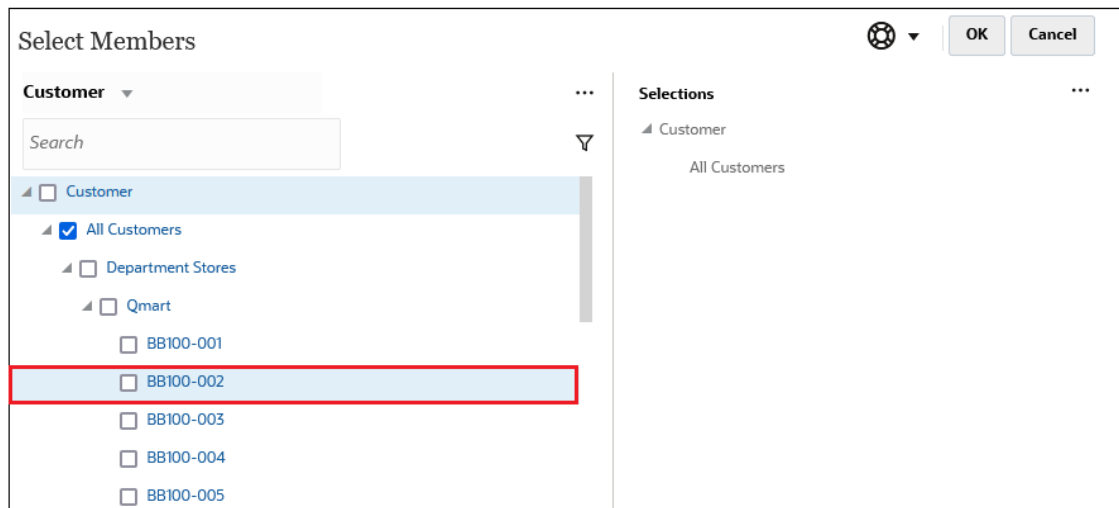
Filtering Which Members Are Displayed

To further filter the members that are displayed, click the Filter icon ▽ , and select an option.
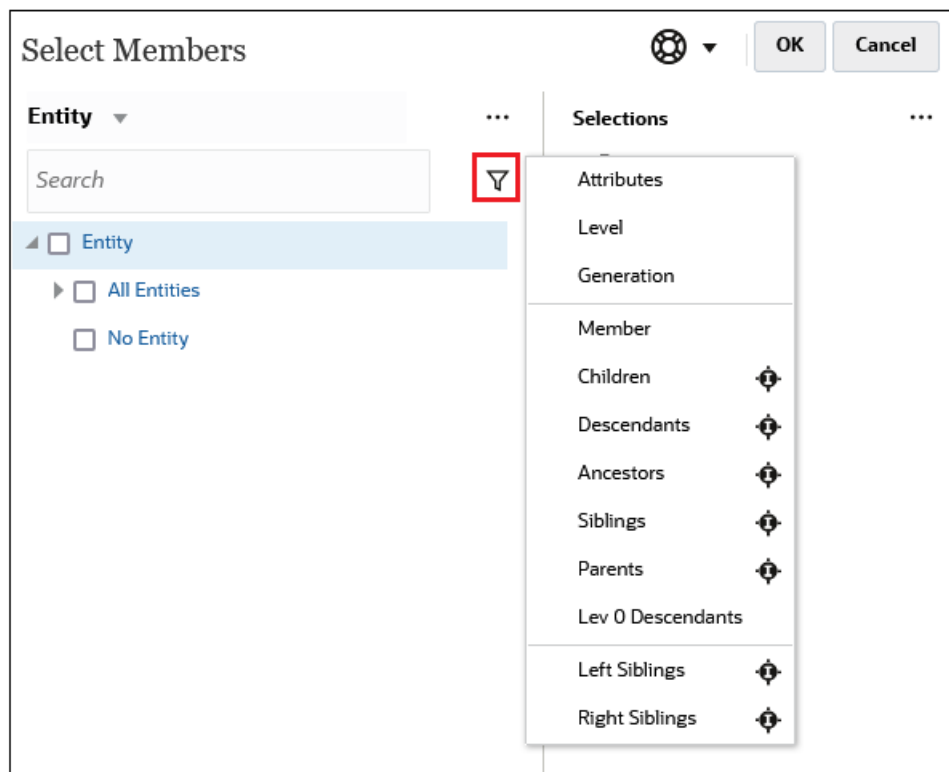
You can filter by a specific attribute, by level, by generation, or by a member relationship.

• Filtering by Attributes

• Filtering by Level

• Filtering by Generation

• Filtering by Member Relationship

Filtering by Attributes

If attributes are defined, click ⧩ and select **Attributes** to filter the members displayed to specifc attribute values.
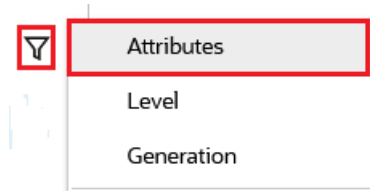
If more than one attribute is defined, click the links in the **Attribute** dialog box to display the available attributes and select the filters. For example, you could filter the results displayed for the **Customer** dimension to **Delivery Zone A**.

Attribute Dialog Box with Delivery Zone and A Selected
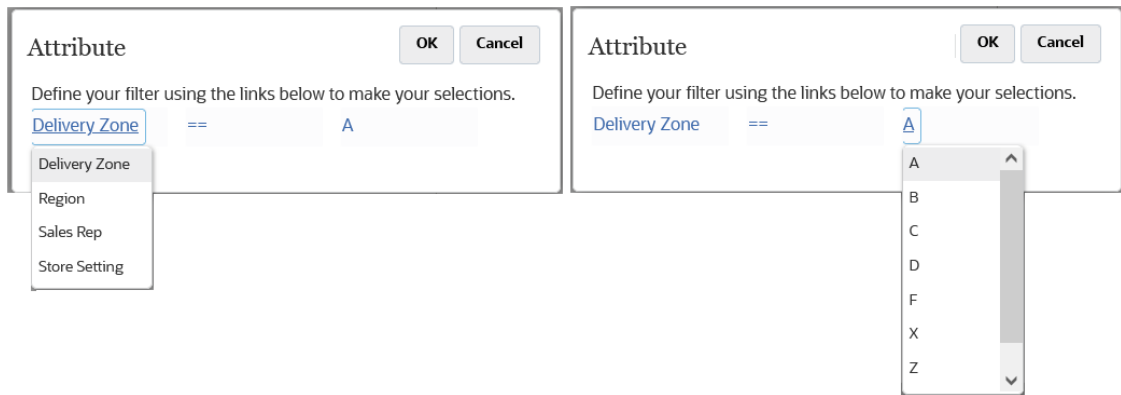
Members for the Customer Dimension Filtered by Delivery Zone A
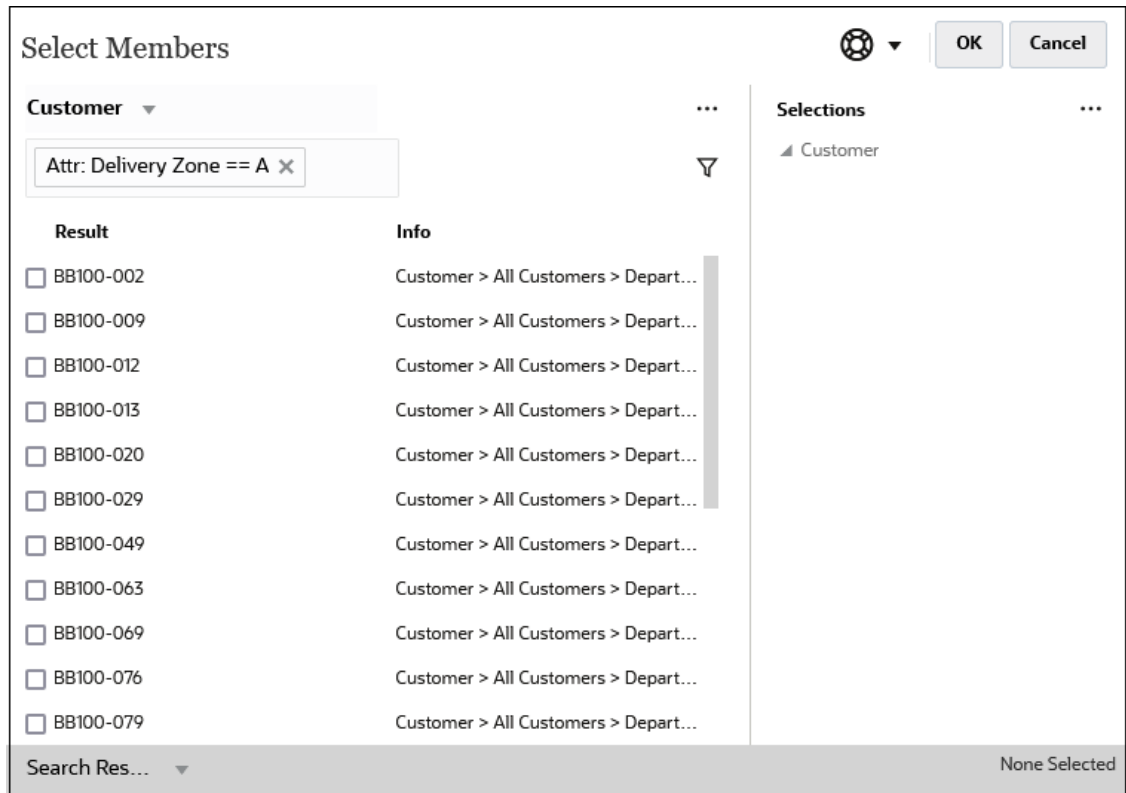
Filtering by Level

To filter the members displayed to a specific level, click ▽ , and select **Level**.
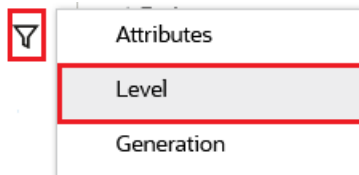
For example, you could filter by **Level 0** members in the **Entity** dimension.

Level Dialog Box with Level 0 Selected
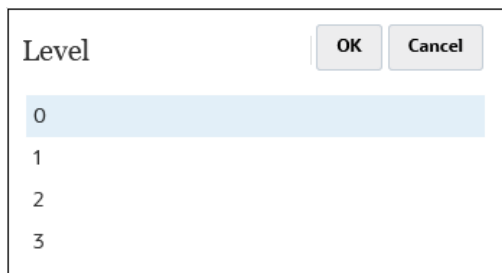
Members for the Entity Dimension Filtered by Level 0
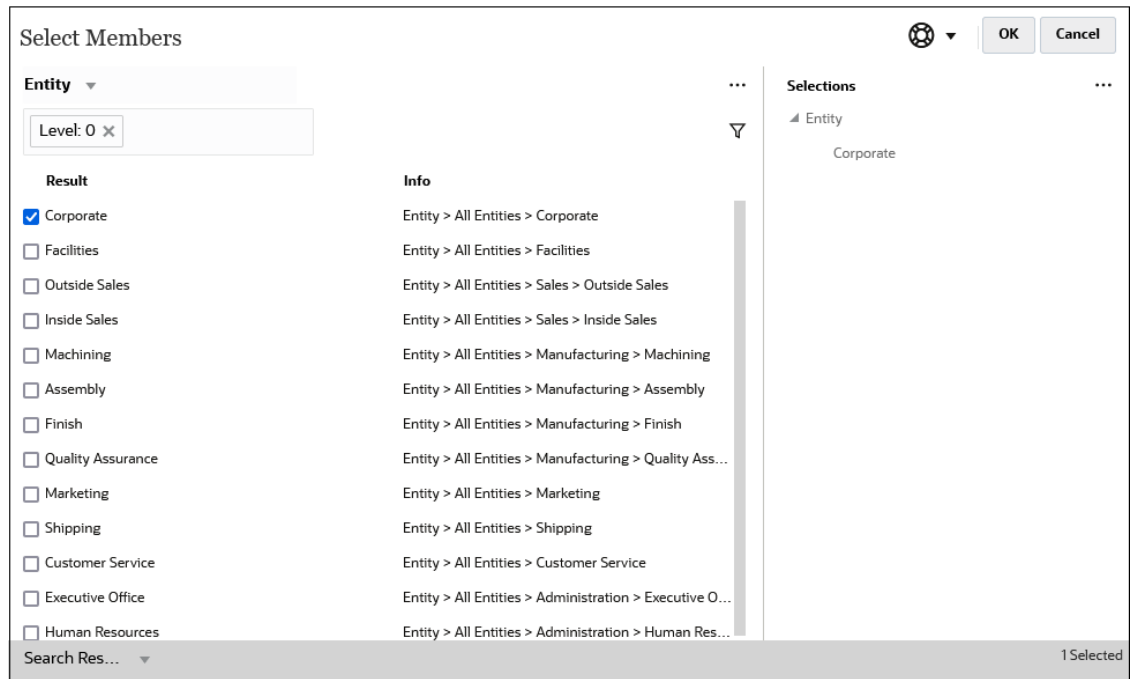
Filtering by Generation

To filter the members displayed to those in a specific generation, click ![filter icon] , and select **Generation**.
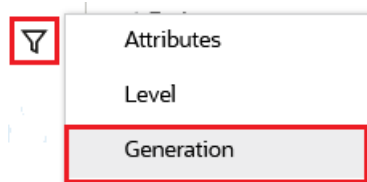
For example, you could filter by **Generation 2** members in the **Entity** dimension.

Generation Dialog Box with Generation 2 Selected
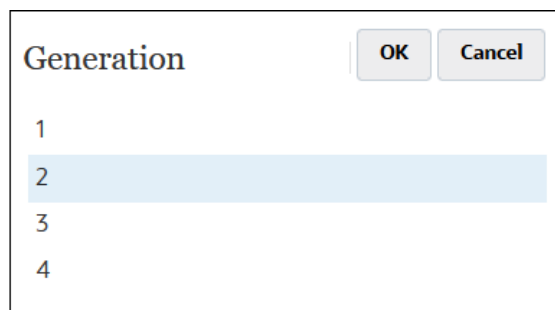
Members for the Entity Dimension Filtered by Generation 2
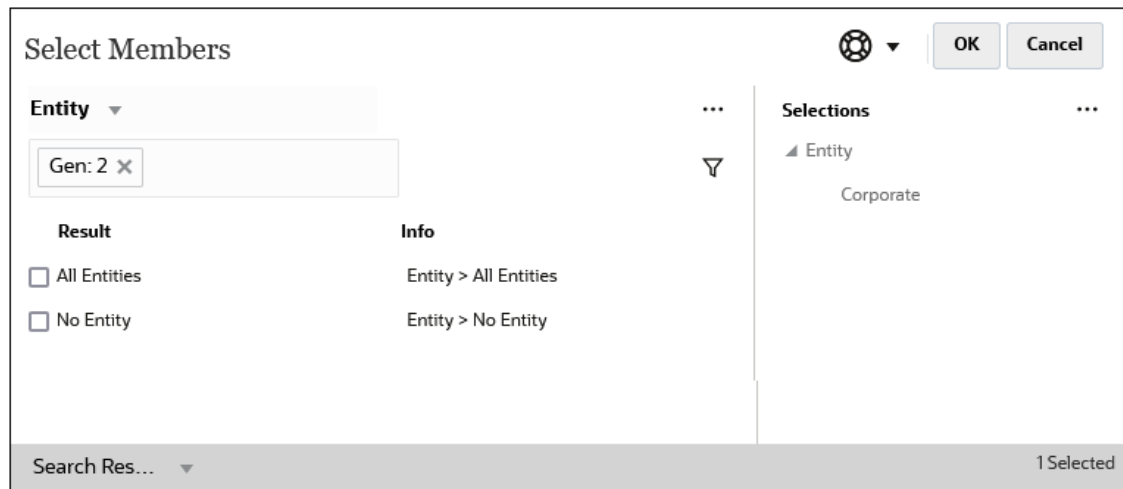
Filtering by Member Relationship

When you filter by member relationship, you can define whether to include the currently-highlighted member in the search results.

- Click the relationship name to select the related members, *excluding the currently-highlighted member*.

  For example, assume you select **All Entities**, click ▽ , and then select **Children**.
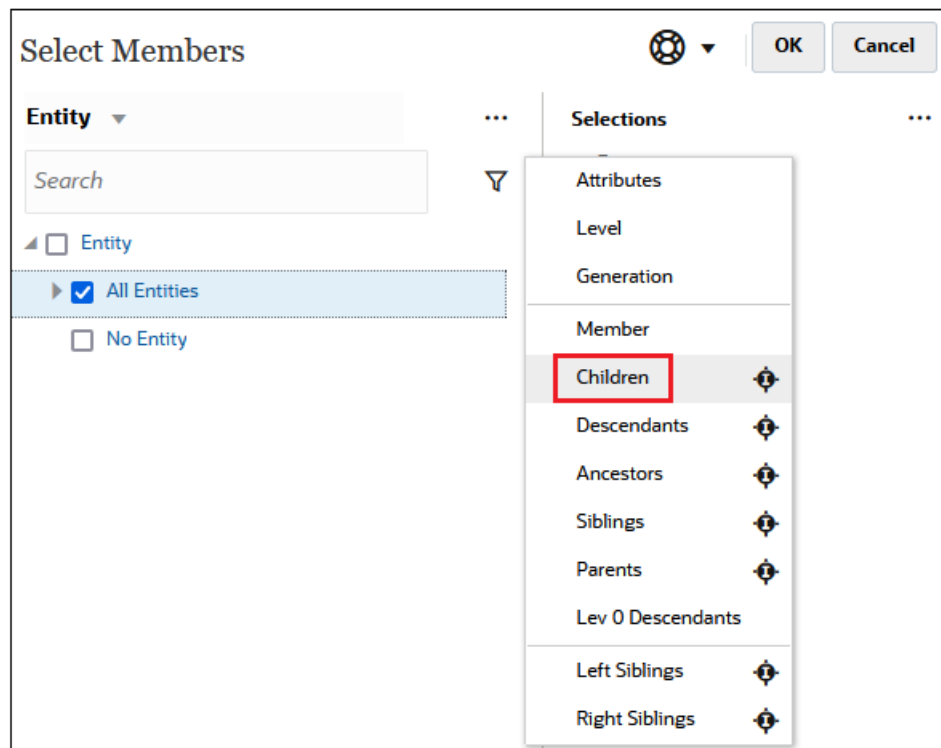
In this case, the children of **All Entities** are included in the filtered results, but *not* the **All Entities** member.
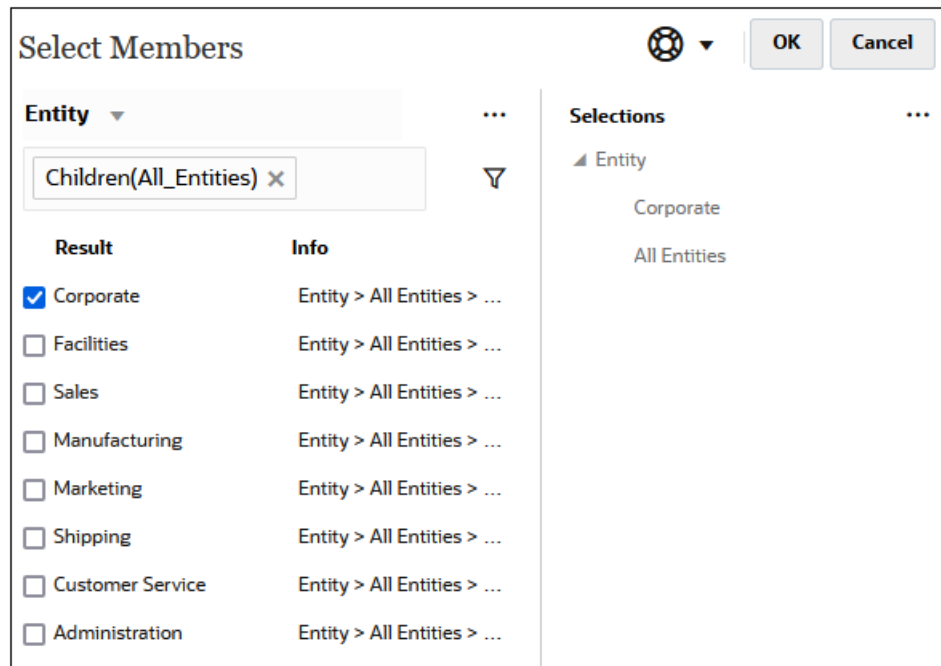
- Click the include icon ⊕ to the right of the relationship name to select the related members, *including the currently-highlighted member*.

  For example, assume you select **All Entities**, click ▽ , and then click ⊕ next to **Children**.
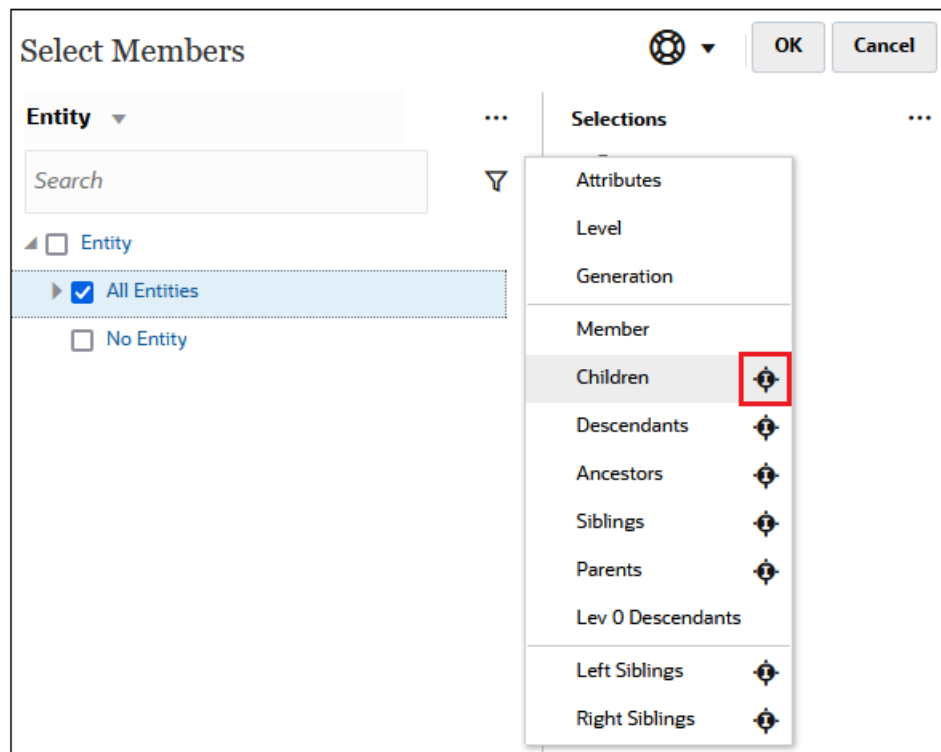
  In this case, both the children of **All Entities** *and* the **All Entities** member are included in the filtered results.

> **Note:**
>
> For more information, see Member Relationships.

Member Relationships

This table describes which members and related members are included during filtering and member selection.

Click the include icon ⊕ to the right of the relationship name to select the related members, *including the currently-highlighted member*.

Table 10-2   Member Relationships

Member	Which Related Members Are Included
Member	The selected member
Children	All members in the level immediately below the selected member
Descendants	All descendants of the selected member, excluding the selected member
Ancestors	All members above the selected member, excluding the selected member
Siblings	All members from the same level in the hierarchy as the selected member, excluding the selected member
Parents	The member in the level above the selected member
Level 0 Descendants	All descendants of the selected member that have no children
Left Siblings	The members that appear before the selected member with the same parent

Table 10-2   (Cont.) Member Relationships

Member	Which Related Members Are Included
Right Siblings	The members that appear after the selected member with the same parent
Previous Level 0 Member	The previous level zero member that appears before the selected member Examples: PrevLvl0Mbr(Jan) returns BegBalance; PrevLvl0Mbr(Jul) returns Jun; PrevLvl0Mbr(BegBalance) returns an empty result
Next Level 0 Member	The next level zero member that appears after the selected member Examples: NextLvl0Mbr(Mar) returns Apr; NextLvl0Mbr(Dec) returns an empty result
Previous Generation Member	The member that appears immediately before the selected member within the same generation
Next Generation Member	The member that appears immediately after the selected member within the same generation
Previous Sibling	The member that appears immediately before the selected member with the same parent
Next Sibling	The member that appears immediately after the selected member with the same parent

Making Member Selections

To select a member, click the checkbox next to the member in the **Select Members** dialog box. The selected member displays a check mark and is moved to the **Selections** pane.
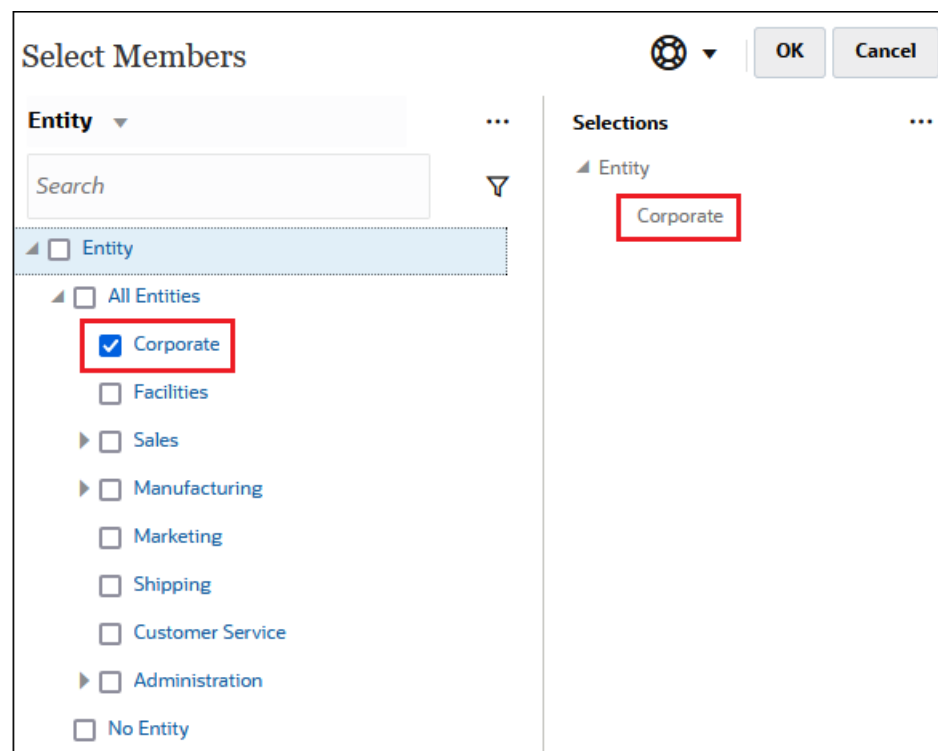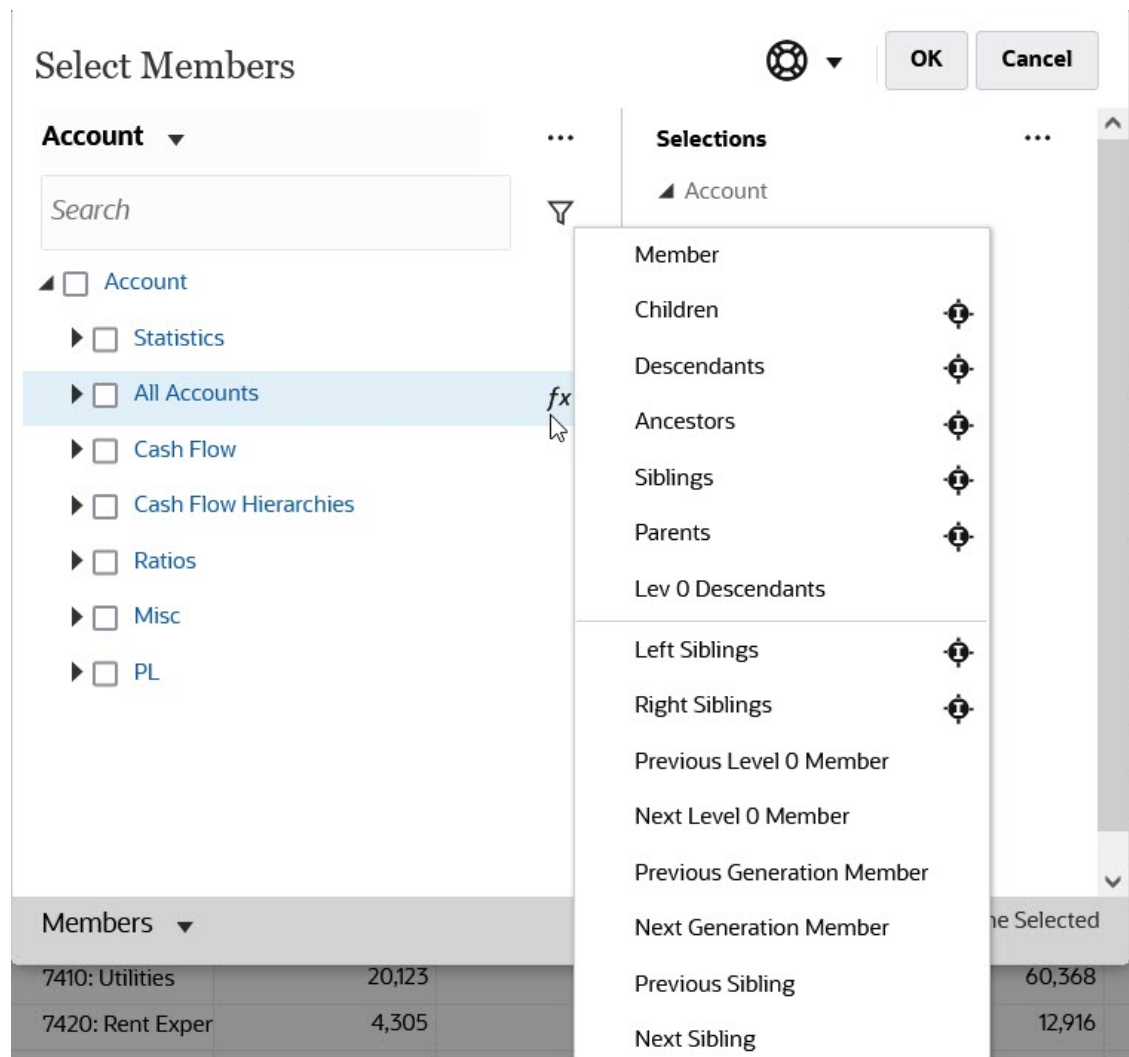
> **Note:**
>
> In certain situations, you are limited on the members you can select.

To expand a parent member to see its child members, click the expansion icon ▶ to the left of the parent member name. Clicking the expansion icon will not select the parent member.

In some places, you can use the Function Selector in the **Select Members** pane fx to make member selections. Click the Function Selector fx next to a member to see the Function Selector menu, and then select a member relationship option.

For example, if you click the Function Selector fx next to All Accounts, and then click **Children**, then Children("All Accounts") is added to the **Selections** pane.
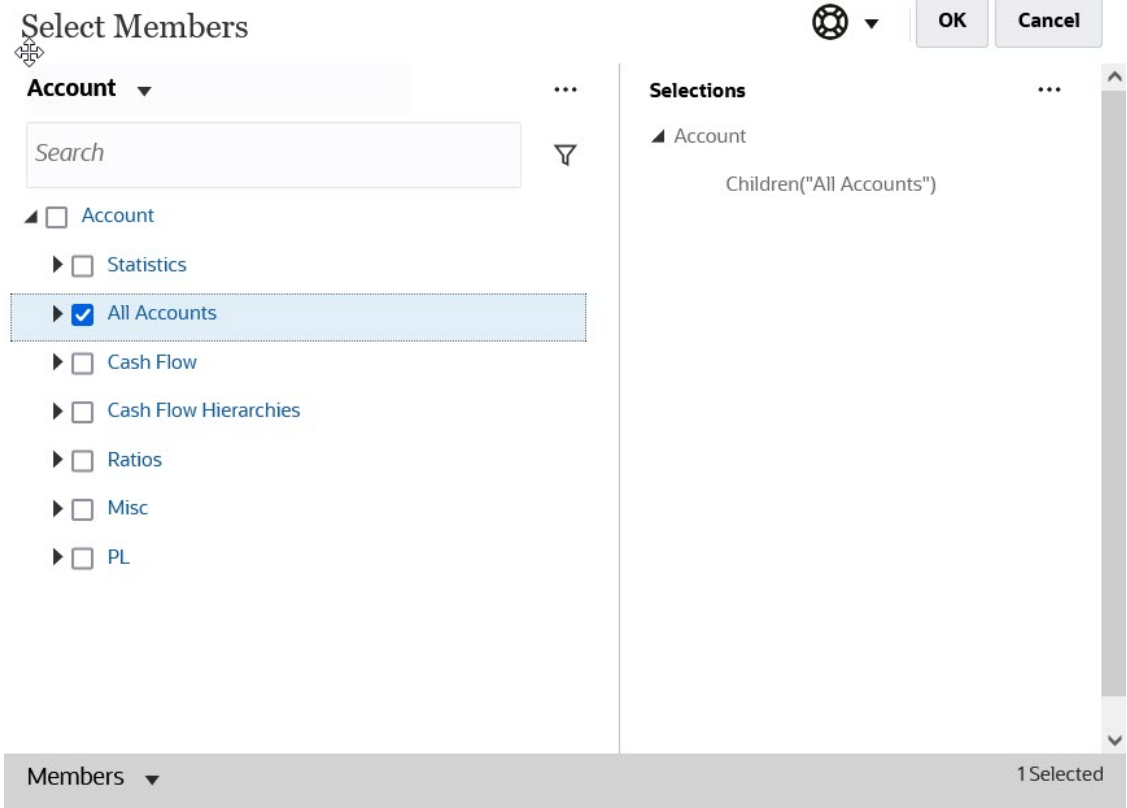
To remove, sort, or move selected members, click (Selected Items icon) in the
Selections pane, and select an option. You can also select whether to display the alias or the
member name.
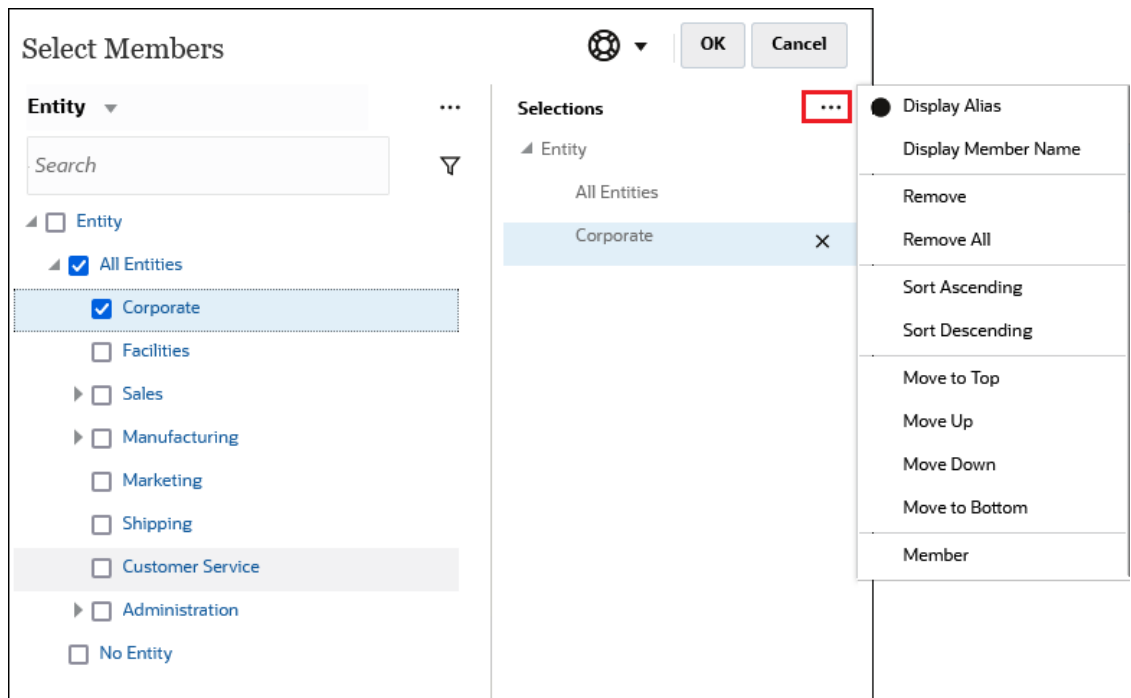
You can add additional members to the **Selections** pane for selected members in several ways:

- Click the Function Selector fx next to a selected member to see the Function Selector menu, and then select a member relationship option.
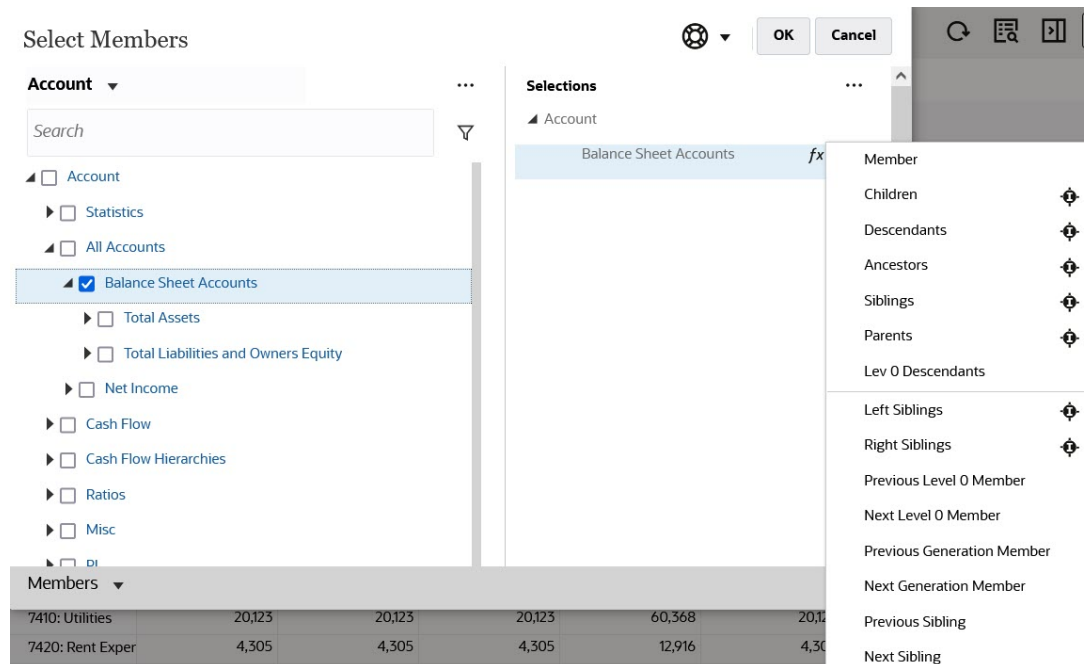
- Select a member in the **Selections** pane, click the **Selected Items** icon , and then click a member relationship option.
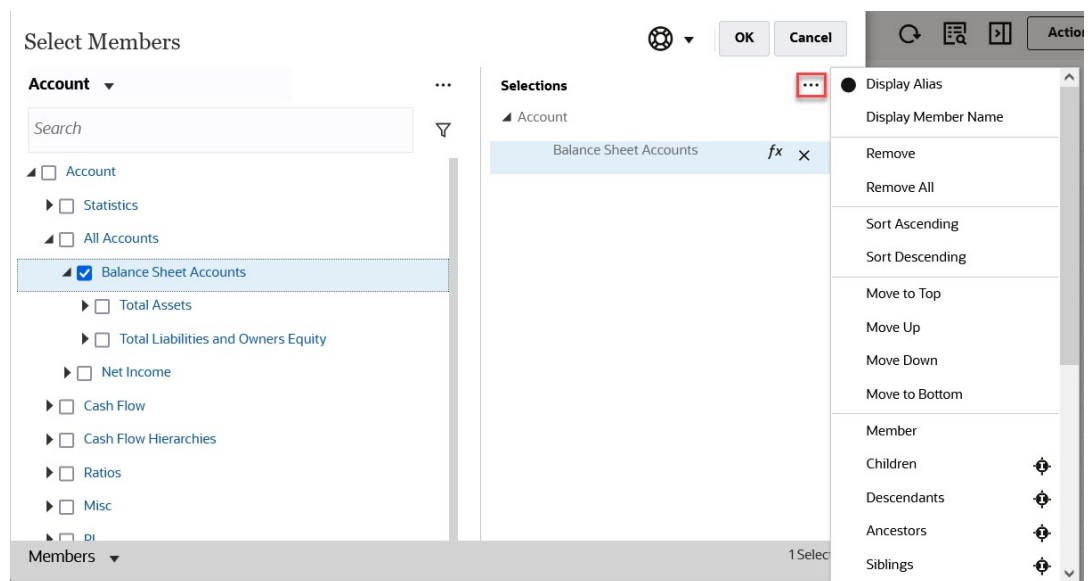
For more information about member relationships, see Member Relationships.

11

Using IPM Insights to Inform Your Decision-Making

Related Topics

- About IPM Insights
  IPM Insights empowers finance and operational users with data science optimized for multidimensional planning and forecasting use cases.

- Analyzing Insights
  IPM Insights helps you accomplish a data-driven approach to forecasting using data science.

About IPM Insights

IPM Insights empowers finance and operational users with data science optimized for multidimensional planning and forecasting use cases.

IPM Insights analyzes past data and predicted data, helping you find patterns and insights into data that you might not have found on your own. Insights can be trends, anomalies, forecast bias, or variations. With IPM Insights, the insight discovery phase of the planning process is automated with data science and financial pattern recognition, enhancing your forecast effectiveness. Using IPM Insights, you can analyze and explore data across any account. IPM Insights automates processing large amounts of multidimensional data, so that as new actuals come into the system, you quickly detect patterns in your data or hidden correlations, streamlining reporting, improving your forecasting, and strengthening your decision making. You spend less time in analysis, saving time in the overall planning process.

IPM Insights offers these benefits:

- Reduces time spent in data analysis.

- Minimizes hidden biases.

- Improves forecast accuracy and reliability, enhancing forecast effectiveness with informed decision-making.

- Encourages collaboration with your colleagues.

- Helps you detect trends early to enhance strategic decision-making.

IPM Insights provides three types of insights, using both historical and predicted data:

- **Forecast variance and bias insights** reveal hidden bias in forecasts submitted by planners by analyzing historical data. This type of insight measures the variance or bias between two historical scenarios such as Forecasts and Actuals, and calculates the percentage of risk associated with the current forecast.
  Forecast variance indicates the level accuracy of the forecasts submitted by planners. Forecast bias indicates the tendency of the direction of forecast error. For example, a tendency to forecast in excess of the actuals is called the over-forecasting bias; a tendency to forecast below the actuals is called the under-forecasting bias.

  IPM Insights triggers an insight when either the variance or risk crosses the specified threshold.

- **Prediction insights** help you uncover significant deviations in forecasts compared to predicted values. This type of insight looks for variances between two future scenarios such as forecasts and computer-generated predictions, and can calculate a measure of risk, for example the risk of meeting a target forecast.
  By comparing a planner's forecast with a machine-generated prediction, prediction insights measure the variance as well as the presence of any hidden bias (a planner's tendency towards over-forecasting or under-forecasting).

  IPM Insights triggers an insight when either the variance or bias crosses the specified threshold.

- **Anomaly insights** detect unusual patterns in data that deviate from expected results. This type of insight detects outlier values that vary widely from other values, for example, a sudden volatility in actuals compared to the base level, or missing actuals data. Anomalies can result from key business actions or they could contain valuable information about a hidden trend.

  Anomalies in historical data can also result from events that historically led to spikes or declines in the data. You can choose to take these spikes or declines into consideration during predictions, so that historical spikes or declines are also reflected in future predictions.

  IPM Insights triggers an insight when an outlier measure crosses the specified threshold.

To get started with IPM Insights, administrators configure insights and then run them, and can schedule them to run on a regular basis.

Planners can then review and analyze insights in a dashboard, and take appropriate action to improve the forecast.

Figure 11-1   Forecast and Bias Insight
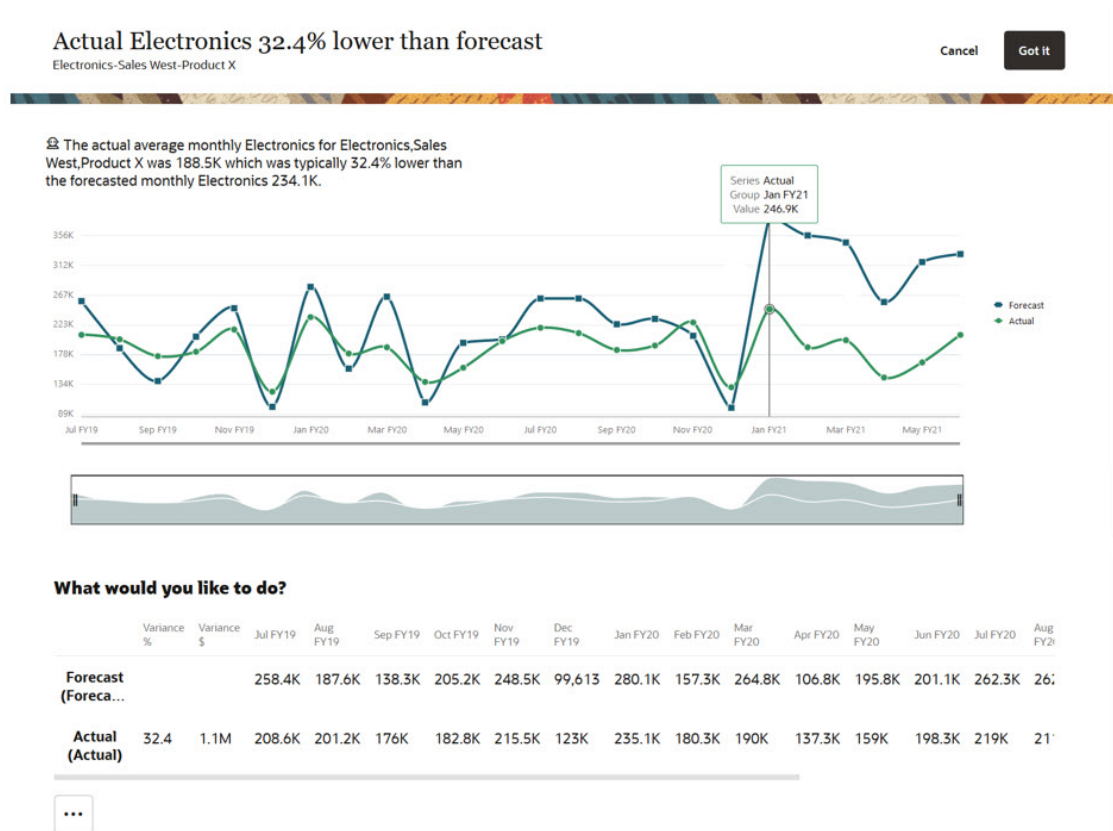
Figure 11-2   Prediction Insight
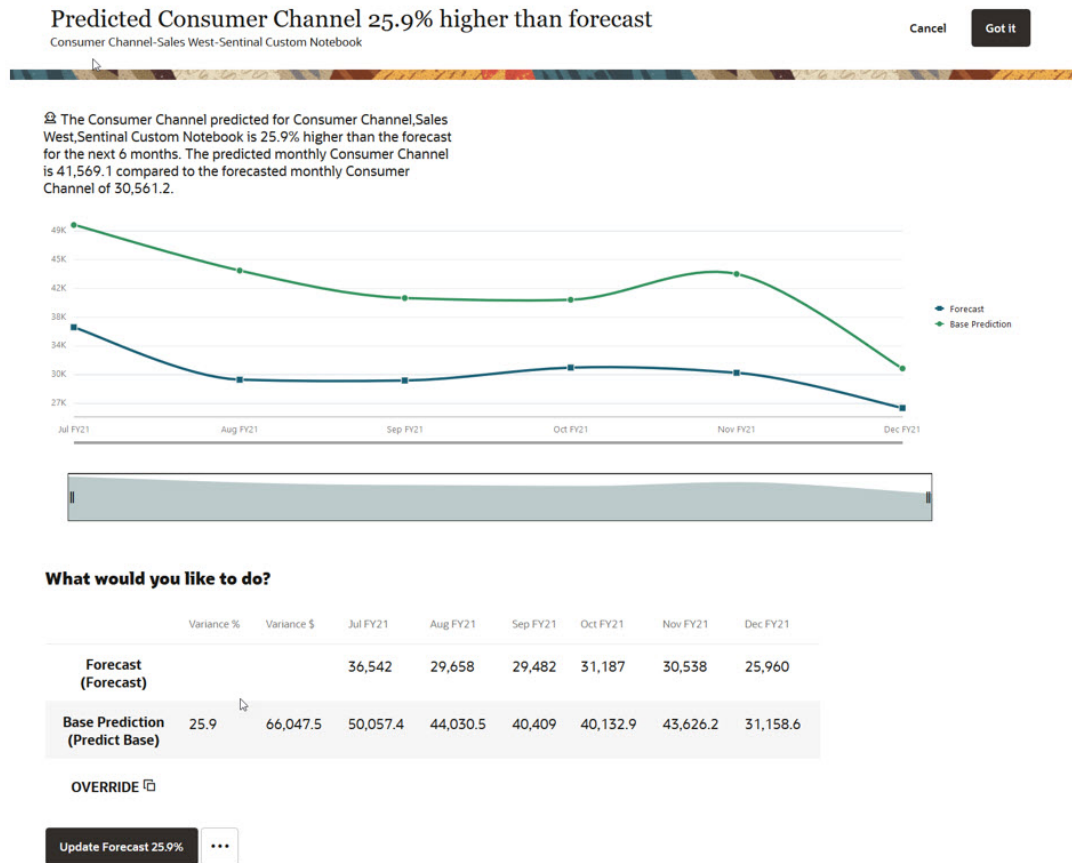
Figure 11-3   Anomaly Insight

Videos

Your Goal	Watch This
This overview introduces you to Insights. Insights empowers finance and operational users with data science optimized for multidimensional planning and forecasting use cases. Insights analyzes past data and predicted data, helping you find patterns and insights into data that you might not have found on your own. You can evaluate those insights and take action on them.	[▶] Overview: Insights in Cloud EPM

Analyzing Insights

IPM Insights helps you accomplish a data-driven approach to forecasting using data science.

Use the Insights dashboard to review the insights your administrator configured for you. The dashboard includes all available insights based on your user security. Each row on the Insights dashboard represents an insight, which can help you find patterns to analyze. Insights are displayed in the order of magnitude of the deviations to help you prioritize the order in which to evaluate them. For example, if the deviation is higher, it's more important for you to evaluate it.

1. From the Home page, click **IPM** and then click **Insights**.

2. Review your insights on the dashboard.
   Each row on the Insights dashboard represents an insight; the columns represent

   attributes for each insight. Unread insights are flagged with an indicator: ● . Your insights are listed in order of magnitude.

   > **Note:**
   >
   > - **Priority** categorizes insights into **High**, **Medium**, and **Low** priority, using magnitude thresholds defined by your administrator.
   >
   > - **Impact** indicates the relative amount of deviation. You can focus your attention on the insights that have more extreme variations, or a higher magnitude.
   >
   > - **Amount** displays the absolute value of the deviation for this insight.

3. To see details about an insight, from the **Actions** menu for the insight, click **View Details**. You can also click the link in the **Details** column on the Insights dashboard.
   You see the Analyzer view that includes a description of the insight, along with a graph of the values.

   Hover over any graph point to see details about the value.

   You can see up to 18 periods on a time on the graph. Use the slider bar to see more periods, or to zoom in on a timeframe or set of values.

4. Review the graph to help evaluate the data, and take action:

- For **Forecast Bias** insights, review where variances are greatest between historical forecasts and actuals. This can help you recognize any hidden bias in forecasts. You can review the data in graph and in table form.

- For **Prediction** insights, review where variances are greatest between future forecasts and the predicted values.
  To update your forecast to use the predicted values, click **Update Forecast**. If you want to manually revise any of the predicted values before you update the forecast, select a row (for the scenario you want), click **Override** to copy the values, modify the values, and then click **Update Forecast**.

- For **Anomaly** insights, outlier values are marked with a star ★ to make them easy to spot.

5. From the Analyzer view for an insight, take an action:

- To see details about in insight or to enter comments, click 🖾 . The **Explainability** tab shows details about the insight including metrics and methods used in the insight. This detail makes the insight data more promiment and more transparent.
  Click **Comments** to enter your comments about the insight, for example to explain a variance to a colleague, and then click ◁ .

  > **Note:**
  >
  > To delete a comment, on the **Comments** tab, hover over a comment, and then click ⊗ . To delete a comment from the Insights dashboard, click the Comments box 🖾 , hover over a comment, and then click ⊗ . You can delete comments you have entered. Administrators can delete comments entered by any user.

- Collaborate with your peers about Insights using tags (# or @) in comments. For more information, see Collaborating with Insights Using Tags.

- Click **Open As Adhoc** to open the insight for further ad hoc analysis. To open the ad hoc grid in Oracle Smart View for Office, click the **Actions** menu (⁝⁝⁝) and then click **Open in Smart View**.

- For **Prediction** insights, you can view the historical data along with the prediction data. Click **Show historical data**. The chart is updated to show historical data as well as future data.

- Click **Dismiss** to change the insight status to **Closed**. This status is reflected on the Insights dashboard for all users.

  > **Tip:**
  >
  > **Add Comments**, and **Open As Adhoc** are also available from **Actions** menu on the Insights dashboard.

6. Click **Cancel**, or close the tab for the insight to close Analyzer view and return to the Insights dashboard.

7. When you've evaluated or taken action on an insight, you can change the status: On the Insights dashboard, from the **Actions** menu next to the insight, click **Dismiss**. This

changes the insight status to **Closed**. This status is reflected on the Insights dashboard for all users.

8. For Prediction insights, from the **Actions** menu, click **Accept** to update the forecast data with the predicted values.

Insights are available on the Insights dashboard for six months, after which they are purged the next time an administrator runs an IPM Insights job.

> **Note:**
>
> IPM Insights is not available in FreeForm applications.

Tutorials

Tutorials provide instructions with sequenced videos and documentation to help you learn a topic.

Your Goal	Learn How
Learn how to use the Insights dashboard to review the insights your administrator configured for you. The dashboard includes all available insights based on your user security. Each row on the Insights dashboard represents an insight, which can help you find patterns to analyze. Insights are displayed in the order of magnitude of the deviations to help you prioritize the order in which to evaluate them. For example, if the deviation is higher, it's more important for you to evaluate it.	Analyzing Insights and Taking Action

Searching and Filtering the Insights Dashboard Display

You can search and filter the Insights dashboard to focus your analysis.

To search for an insight, enter a search term in the **Search** box above the dashboard.

You can filter the Insights dashboard to show only the insights you want to evaluate.

1. Click a filter type. The default value for the filter is displayed but is not yet applied to the results on the page.

2. Enter parameters for the filter. The dashboard is updated with insights that meet the filter criteria.

   - **Created**: Enter start and end dates for insight creation.

   - **Type**: Select one or more insight types.

   - **Status**: Select from **Open** or **Closed**.

   - **Priority**: Select from **High**, **Medium**, or **Low**, based on thresholds defined by your administrator.

   - **Percentage of Impact**: Enter a range of percentage impact values.

   - **Absolute Impact**: Enter a range of abolute impact values.

3. Remove a filter by closing it (click the X) on the filter bar.

Collaborating with Insights Using Tags

You can collaborate with your colleagues more effectively and leverage the power of automated analysis with IPM Insights using tags.

- Use # to tag insights with a custom label. For example, you can tag a set of insights for team review by adding #TeamReview.

- Use @ to tag a user or group.

Then, filter your Insights dashboard to see tagged insights.

You add tags in the Comments box for an insight.

To add tags to an insight:

1. From the Home page, click **IPM** and then click **Insights**.

2. From the **Actions** menu for an insight, click **Add Comment**.
   Alternatively, from the **Actions** menu for an insight, click **View Details** and then from the Insights Details page, click the **Comments** icon.

   You can also click the link in the **Details** column on the Insights dashboard and then from the Insights Details page, click the **Comments** icon.

3. In the Comments box, add a tag **#** followed by your custom label. Or, to tag a user or group, add a tag @ followed by a user or group name.
   When you type **#**, a list of existing tags appears. You can select from the list or enter a new tag name.

   When you type @, a list appears with the users and groups that have access to the members in the insight.

   Entering tags in the Comments box from the Insights dashboard:
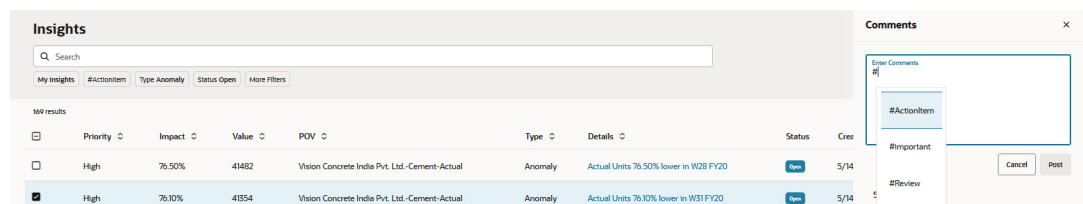
   Entering tags in the Comments box from the Insights Details page:
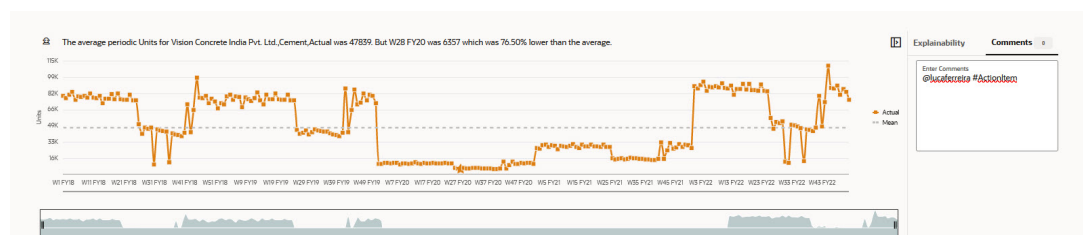
   To review insights tagged with your user name or group name, in the Insights dashboard, click **My Insights** in the Filter area.
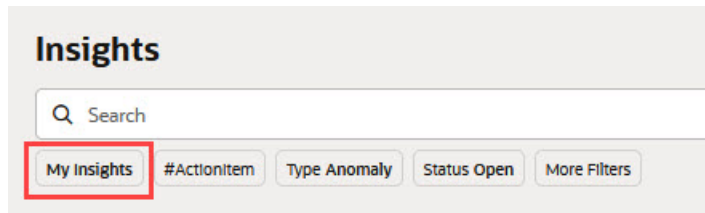
The most frequently-used tag is highlighted with a chip in the Filter area. Select it to see all insights associated with that tag.
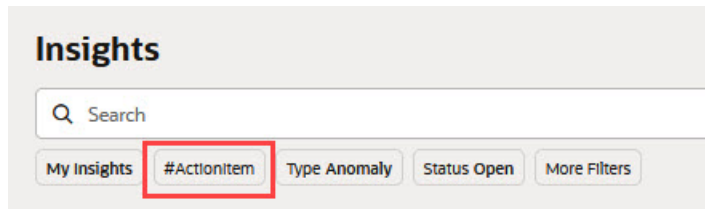
To search for tagged insights, enter # or @ followed by the tag text in the Search box.

For example, the Insights dashboard is filtered to show **My Insights** and insights tagged with **#ActionItem**:

Notes about tags:

- Tags are case sensitive.
- Tags can appear anywhere in the Comments text.
- You can include any number of tags in the Comments.

12

Improving Forecasting Accuracy with Predictive Planning

Use Predictive Planning to predict future performance based on your historical data.

You can compare and validate plans and forecasts based on the predictions. For a more accurate and statistically-based forecast, you can copy the prediction values and paste them into a forecast scenario for your plan.

Predictive Planning works with:

- EPM Standard
- EPM Enterprise applications for Custom and Module application types
- For legacy applications, Predictive Planning works with Standard, Enterprise, and Reporting application types.

Predictive Planning is not available in FreeForm applications.

Videos

Your Goal	Watch This Video
Learn how to predict future performance based on historical data and prepare plans and forecasts based on predictions.	▶ Overview: Improving Forecasting Accuracy With Predictive Planning in Planning and Budgeting Cloud

Tutorials

Tutorials provide instructions with sequenced videos and documentation to help you learn a topic.

Your Goal	Learn How
This tutorial covers the essential tasks for using predictive planning as part of your planning and forecasting cycle.	📍 Planning and Forecasting Using Predictive Planning

Predicting Future Values Based on Past Performance

You can start a prediction from a valid form or ad hoc grid. When you run a prediction, historical data for each member on the form is retrieved and then analyzed using time series forecasting techniques to predict the future performance for these members.

For details about valid forms, see Using Valid Forms.

1. From a form or ad hoc grid, click **Actions**, and then **Predictive Planning**. The prediction runs, and a results area opens below the form with a chart and detailed information about the prediction.

Use the results to compare the predicted values to your forecasted values for each member.
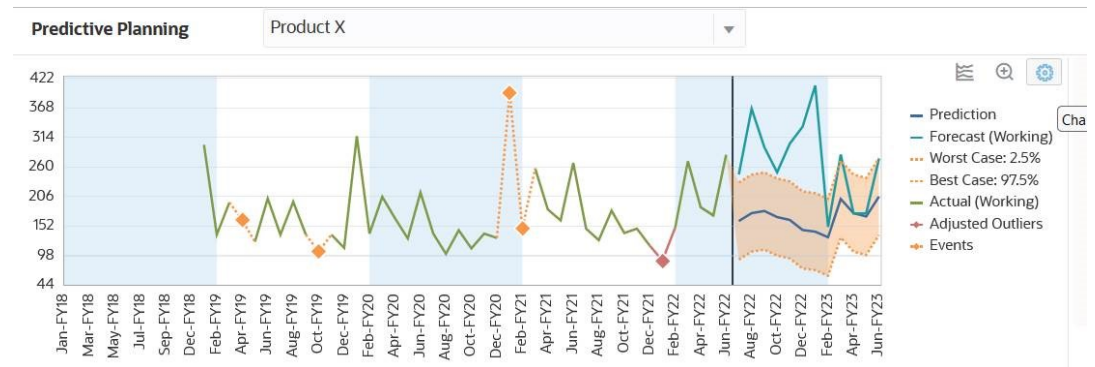
Depending on the chart settings:

- The historical data is shown as a green series to the left of the vertical separator line. Administrators determine the scenario/version to use for historical data values.

- The base case for predicted data is in the blue series to the right of the vertical separator line.

- The predicted data series is bounded by dotted lines that show the upper and lower prediction intervals—the range between the Best Case predicted scenario and the Worst Case predicted scenario.

- Your forecast values are in the red series on the right side of the chart. The chart displays a data series for each scenario on the form.

- If the form has a calendar with events associated with it, events are displayed as orange diamonds in the historical data section.

> **Tip:**
>
> If the selected calendar includes Skip type events, you can choose to exclude or include the Skip events to see the impact on the prediction results. Hover the cursor over the upper right corner of the prediction area,
>
> and then click [icon] **Exclude Skip Events** or **Include Skip Events**.

You can change the way the chart is displayed. See Customizing the Chart.

2. To see predicted values for a different member, select the member from the member list in the results area, or click the row for the member in the grid area.

The prediction area is updated so you can see the historical trends and predictions for each member on the form.

> **Tip:**
>
> Hover the cursor over the upper right corner of the prediction area, and then click
>
> **Zoom In** [icon] to zoom in to the future values area of the chart. Click **Zoom Out**
>
> [icon] to restore the chart view to the original size.

About predictions:

- Predictive Planning predicts all members on a form.

- The lowest Period dimension member level on a form determines the time granularity of the prediction. A form with lower level Period members (for example, months instead of quarters) has more historical data, which improves the accuracy of the prediction. There should be at least twice the amount of historical data as the number of prediction periods.

- Predictive Planning can detect seasonal patterns in the data and project them into the future (for example, spikes in sales numbers during holiday seasons). At least two complete cycles of data must be available to detect seasonality.

- Predictive Planning detects missing values in the historical data, filling them in with interpolated values, and scans for outlier values, normalizing them to an acceptable range.

- Your administrator may have designed the form to use events in predictions by default. Alternatively, when running a prediction from a form, you can use the **Settings** option to select a calendar to use for the prediction and whether to include events in the prediction. Use the **Chart Settings** to specify whether to show events on the chart. You can also choose to exclude Skip events. You can run the prediction with and without events to see the impact of the events on the prediction results. Using events for predictions improves the accuracy of the predictions. See Changing the Chart Appearance and Changing Prediction Options. For information about calendars and events, see "About Using Calendars and Events in IPM Insights, Auto Predict, and Predictive Planning" in *Administering Planning*.

For detailed information about the forecasting methods and error measures used in Predictive Planning, see Predictive Planning Forecasting and Statistical Descriptions.

Predictive Planning always runs a full prediction. Full predictions predict all members on a form without regard to dimension hierarchies. With this method, Predictive Planning makes no assumption about the type of aggregation on the form. If you want to preserve the results at the summary-levels, ensure that the business logic does not aggregate the results from lower level members. For more information about hierarchical prediction issues, see Hierarchical Data Prediction Issues.

Using Valid Forms

Before you can predict using Predictive Planning, make sure you have a valid form.

In general, a valid form must have the following:

- A series axis, containing one or more non-time dimensions, such as Account or Entity. The series axis may not contain Year or Period dimensions.

- A time axis, containing the Year or Period dimensions, or both. The time axis may contain Scenario and Version dimensions. The time axis may not contain other non-time dimensions.

- Scenario and Version dimensions are permitted on the series or time axes, or both.

- The form must not be empty.

- No hidden dimensions on the rows or columns. (Hidden dimensions are allowed on the POV.)

Getting More Information About a Prediction

After you run a prediction, you can get more information about the data in the chart and the predicted values.

To get more information:

- Use the tooltips for each data series in the chart to get more information about the values.

- Use the Info Boxes to see details about each data series on the chart:

- The risk gauge in the Info Box indicates the probability of a scenario occurring above or below the prediction.

- Click (**Details**) to get more information about the prediction data or the historical data:

Historical Data Details

Total Values	54
Filled-in Missing Values	0
Adjusted Outliers	1
Seasonality	12
Start Date	Jan-FY10
End Date	Jun-FY14

- Use the tooltips to get insight about the detail information.
- The Growth Rate makes it easy to quickly compare any two series.

Prediction

-0.2%
Growth Rate

Forecast (Working)

12.5%
Growth Rate

Risk   Far Above Prediction

The tooltips explain the comparison. For example, the growth rate statistic for the prediction indicates the year-over-year growth rate for the first year of future values compared to the last historical year.

- For more information, see Predictive Planning Forecasting and Statistical Descriptions.

About Prediction Accuracy

When you click ⓘ (**Details**) to get more information about the prediction data or the historical data, you see the accuracy of the prediction.

The amount of historical data available impacts the accuracy of the predictions; the more data the better. At a minimum, there should be at least twice the amount of historical data as the number of prediction periods. A ratio of three or more times the amount of historical data as the prediction periods is preferable. If not enough historical data is available at the time of prediction, a warning or error is displayed. Predictive Planning can detect seasonal patterns in the data and project them into the future (for example, spikes in sales numbers during holiday seasons). At least two complete cycles of data must be available to detect seasonality.

In addition, Predictive Planning detects missing values in the historical data, filling them in with interpolated values, and scans for outlier values, normalizing them to an acceptable range. If there are too many missing values or outliers in the data to perform reliable predictions, a warning or error message is displayed.

The prediction accuracy can also be affected by how noisy the data is. Even though a large amount of historical data may be available, the noise or random fluctuations in the data can obscure the underlying trend and cause the prediction accuracy to be low.

Using events for predictions improves the accuracy of the predictions and helps you plan ahead for the events and take advantage of opportunities by allowing you to see anticipated spikes and falls in the predicted data for specific events. Without events, spikes or falls in data are normalized and distributed over the prediction period, potentially leading to less accurate predictions.

In general, use these guidelines to determine a prediction's accuracy:

- 95 – 100%: Very Good. The historical data has a strong trend or seasonal pattern.

- 90 – 94.9%: Good. The historical data has a moderate trend or seasonal pattern.

- 80 – 89.9%: Fair. The historical data has a weak trend or seasonal pattern.

- 0 – 79.9%: Poor. The historical data has no detectable trend or pattern.

Modifying Future Values

After running a prediction, you can modify the values for any future data series, such as the forecast or best case and worst case scenarios.

For example, after reviewing the predicted values, you might want to adjust your forecast values to more closely align with the prediction.

To adjust values for a future data series:

1. In the chart area, click one of the future data series.
    An **x** is displayed for each data point and a triangle—the chart grabber—appears at the end of the line.

2. Change the values for the selected series using one of these methods:

    - Move the chart grabber up or down to increase or decrease values. By default, the first predicted value is constant. Moving the chart grabber up or down increases or decreases all values relative to the first value.

    - To unlock the first point in the data series, hover the cursor over the upper right corner of the prediction area, click **Unlock First Period** 🔓 , and then move the chart grabber to increase or decrease all values evenly.

        To keep the first predicted value constant, hover the cursor over the upper right corner of the prediction area, and then click **Lock First Period** 🔒 .

    - Click a data point and move it to adjust only that value. A tooltip indicates which value is adjusted and how it is changing.

    The values in the grid (for writable members) and the prediction Info Boxes are updated to reflect the adjusted values.

> **Note:**
>
> You can modify values for writable cells only. You can always modify the prediction series and best/worst case series because they are not linked to values in the grid.

3. To restore the original values, hover the cursor over the upper right corner of the prediction area, and then click **Reset Series** .

4. You can also change forecast values by entering new values in the grid. The chart and the Info Boxes are updated to reflect the adjusted values (for writable members).

Customizing the Chart

Changing the Chart Appearance

You can change the chart's appearance by changing the chart settings.

To change the chart appearance:

1. Hover the cursor over the upper right corner of the prediction area, and then click **Chart Settings** .

2. Select from the following options, and then click **Apply**.

   - **Highlight seasonality**—Uses vertical bands to separate periods of cyclical data (years, months, and so on)

   - **Highlight missing values and outliers**— Graphically emphasizes filled-in or adjusted-outlier data if these are present

   - **Highlight Prediction Interval**—Uses dotted lines and shading that show the upper and lower prediction intervals—the range between the Best Case predicted scenario and the Worst Case predicted scenario.

   - **Show separator between past and future data**—Displays a vertical line between historical and predicted data sections

   - **Animate chart transitions**—Animates the change in the chart when data values change

   - **Show Events**—Graphically emphasizes any events defined for the selected calendar as orange diamonds in the historical data section.

   You can also select a grid line style and legend placement.

> **Note:**
>
> Changing these settings affects only the appearance of charts on your local computer and does not affect the charts of other users. These settings revert to defaults for each new login session.

Changing Prediction Options

You can change the date ranges used for historical and predicted data, adjust which data series display in the chart, and define advanced options for the prediction, such as selecting a calendar to use for the prediction and whether to include events in the prediction. These settings apply to all forms.

1. After you run a prediction, in the results area, click (**Settings**).

2. Click **Date Ranges** to select a calendar to use to set historical date range and prediction date range. If you don't select a calendar, you can manually set the historical date range and prediction date range.

    A single end date for historical data is used for all members on the form. If the members do not all have the same amounts of historical data, the end date is determined by those members that have the greatest amount of similar historical data.

    The prediction range starts one period after the end of the historical data. By default, the end date on the form determines the end date of the prediction.

    You can't predict values beyond the end date defined in Planning.

3. Click **Chart View** to select the data series to display in the chart.

    Data series in the view can include a Past section, which contains historical data, and a Future section, which contains future values.

    If you add the Growth Curve to the chart, click **Edit Growth Rate** and enter a value for the growth curve you want to see.

4. Click **Prediction Options** to define advanced options for:

    -   Data Screening. For more information, see Data Screening Options.

    -   Data Attributes. For more information, see Data Attributes Options.

    -   Methods. For more information, see Methods Options.

    Changes you make on the **Prediction Options** tab apply only to this session.

    Advanced options for predictions improve the quality of predictions, especially in cases where it is difficult to detect seasonality (predictions tend to go flat in these cases), where there is not enough historical data compared to the prediction range (predictions tend to be negative in these cases), or where events cause spikes or declines in historical data.

5. The prediction runs again when you click **Apply**.

Data Screening Options

Historical data can have missing values and outliers, which are data points that differ significantly from the rest of the data, or can include events, which are typically one-off or recurring events that historically led to spikes or declines in the data. **Data Screening** options enable you to select several ways of handling missing values, identifying and adjusting outliers, and including events in predictions. Because adjusted outliers are treated as missing values, both of these situations are discussed and handled together.

Select from these options for **Data Screening**.

-   **Include Events**—This option is available for planners working with Predictive Planning on forms. When this option is selected, any events defined for the selected calendar are taken

into consideration during the prediction. (Planners must first select a calendar. From the prediction area on the form, select **Settings**, and then select **Date Ranges**).
If you include events, historical spikes or declines are also reflected in future predictions. For example, a North American calendar might include an event for Christmas, or an APAC calendar might include an event for Diwali, when sales would typically spike. By including the historical data spikes in the prediction, you see the spikes in the predicted data, so you can plan ahead for volume or to make use of the opportunity.

Without events, spikes or falls in data are normalized and distributed over the prediction period, potentially leading to less accurate predictions.

- **Adjust Outliers**—When this option is selected, when an outlier is detected in the series, outlier values are replaced with the prediction trend line value to avoid the impact of outliers.

- **Fill in missing values**—When this option is selected, if there are missing values in the time series, the missing values are populated with the prediction trend line value to continue with the prediction.

- **Minimum missing threshold**—When this option is selected, missing values in the time series are filled until the threshold is met. If the number of missing values is above the threshold provided, the prediction is not done. The maximum value can't be greater than 50%.

Data Attributes Options

Select from these options for data attributes and seasonality:

- **Override prediction range**: When this option is selected, the prediction overrides the minimum number of historical data points typically required to run a prediction. Instead, it predicts the number of periods based on the number of historical data points that are available. For example, it predicts y periods when 2y historical data points are available. If this option is not selected, if the prediction range is set to x periods, a minimum of 2x historical data points are required to run a prediction. If the minimum number of historical data points are not available, the prediction does not proceed.

- **Auto Detect**: When this option is selected, the prediction automatically detects seasonality based on the data.

- **Yearly Seasonal Override (12 periods)**: When this option is selected, seasonality is defined by the number of level 0 periods from the selected hierarchy. In cases where the number of historical data points is less than 2x of yearly seasonality, the prediction reverts to using **Auto Detect** for seasonality.

- **Custom**: When this option is selected, you can override the seasonality with a custom value by providing it in **Periods per cycle**. You can select this option when seasonality is not yearly.

- **Periods per cycle**: When **Custom** is selected, select the exact number of periods to be considered. If not enough data points are available, the prediction reverts to using **Auto Detect** for seasonality. The maximum allowed value for **Periods per cycle** is half of the total number of historical data range periods.

Methods Options

Select the method to use for predictions.

- **Apply seasonal methods**: Seasonal forecasting methods extend the nonseasonal forecasting methods by adding an additional component to capture the seasonal behavior of the data. For information on seasonal methods, see Classic Seasonal Forecasting

Methods in *Working with Planning*. The prediction selects the best seasonal forecasting method to use.

- **Apply non-seasonal methods**: Nonseasonal methods attempt to forecast by removing extreme changes in past data where repeating cycles of data values are not present. For information on non-seasonal methods, see Classic Nonseasonal Forecasting Methods in *Working with Planning*. The prediction selects the best nonseasonal forecasting method to use.

- **Use ARIMA**: For more information about Autoregressive Integrated Moving Average (ARIMA), see ARIMA Time-series Forecasting Methods in *Working with Planning*.

- **Use Extended ARIMA Search**: Performs extended model search on ARIMA models by comparing with historical data. Results are accurate, but analysis will take noticeably more time.

Using Predicted Values in Your Plans

For forms, after you run a prediction, for a more accurate and statistically-based forecast, you can copy predicted values and paste them into a scenario on the form.

For example, you can paste predicted values into a scenario named Forecast or Plan. You can paste values for only the currently selected member or for all members on the form.

> **Note:**
>
> If you want to save prediction data for later comparisons without overwriting other scenarios, an administrator can add a Prediction scenario to the form.
>
> You can't paste values to ad hoc grids.

1. To paste values for only a specific member, click the member on the form, or from the prediction results area, select the member from the member list.

2. Make sure the form displays the time periods for the type of data used in the prediction. For example, to paste data for months, make sure that month members are displayed and not hidden in collapsed columns or rows.

3. In the results area, click (**Paste**).

4. Specify the paste options:

   - **Results**: Which predicted values to copy, and the scenario to paste them to.

   - **Prediction Range**: The range of values to paste—the entire prediction range, or the number of periods you specify.

   - **Members**: Whether to paste values for only the currently selected member or all members on the form.

5. Click **Paste**. The values in the grid are updated.

   If the prediction range overlaps the data range on the form, only the dates shown on the form are pasted.

   Members that are read-only on the form are predicted, but you can't paste results to read-only members.

6. Click **Save**.

Using Predictive Planning with Smart View

When the Predictive Planning Oracle Smart View for Office extension is installed, and you load a valid form in Smart View, you can use the **Predict** item on the **Planning** ribbon to predict performance based on historical data.

To install the Predictive Planning Smart View extension:

1. Click ▼ on the top right of the Home page.

2. From **Settings and Actions**, click **Downloads**.

3. Under **Predictive Planning**, click **Download**, and then follow the prompts.

See *Working with Predictive Planning in Smart View*.

> **Note:**
>
> Events are available only on the web, not in Smart View. Because events aren't supported in Smart View, if you run a prediction on a web form that includes events, and then you open the same form in Smart View and run a prediction, you might see different prediction results on the web and in Smart View.

13

Working With Strategic Modeling

Related Topics

- Task Overview
- Working with Templates
- Working with Models
- Working with Reports
- Creating and Running Scenario Rollups

Task Overview

Review the tasks you'll perform in Strategic Modeling. In general, you'll perform tasks in this order:

1. Open an application, review the templates used to create models, and then create a model or open an existing model. See Working with Templates and Creating a Strategic Modeling Model.

2. Check out a model, if required. You can also open a copy of a model. See Opening, Checking Out, and Deleting Models.

3. Perform strategic analysis tasks such as:

   - Manage accounts and subaccounts.
   - Define the forecast method for accounts.
   - Identify a target value for an account.
   - Perform what-if analysis using the Scenario Manager.
   - Determine how values are calculated.
   - Calculate the model.
   - Improve your forecast accuracy using simulations.
   - Work with time periods.
   - Work with funding options.

   See Working with Models.

4. Review built-in and custom reports. Working with Reports.

5. Build and run scenario rollups to roll up data. See Creating and Running Scenario Rollups.

> ✏ **Note:**
>
> You might not see all the features you see described in this section, depending on the access your Administrator has given you to models and features.

To get started, click **Strategic Modeling** and then select a component:

Table 13-1   Strategic Modeling Tasks

Task	Perform These Tasks	More Information
Models	• Create, check out, and open models. • Work in the Account View. • Work with Account Groups. • Manage accounts and subaccounts. • Define the forecast method for accounts. • Identify a target value for an account. • Perform what-if analysis using the **Scenario Manager**. • Improve your forecast accuracy using simulations. • Determine how values are calculated. • Manage time periods. • Work with funding options. • Review built-in reports such as Income Statement, Balance Sheet, Funds Flow. • Review custom reports that were designed in Oracle Smart View for Office.	Working with Models
Scenario Rollups	• Create scenario rollups. • Specify model characteristics. • Build a business case. • Run scenario rollups. Additionally, you can review the status of scenario rollups in the Job Console.	Creating and Running Scenario Rollups
Templates	Review templates used to create models.	Working with Templates

Additionally, you can perform these tasks in the Strategic Modeling Smart View extension:

• Work with local models

• Edit a worksheet, or add new worksheets

• Add and modify user defined accounts

• Modify account input status

• Use the Depreciation Scheduler

• Use Sensitivity Analysis

• Modify the Time structure and settings

• Add and edit Debt Schedules

• Change funding options

• Perform currency translations

• Work with tax and valuation options

• Design a custom report or modify a standard report

• Save a model as a template

• Generate or assign custom dimensions

• Modify a template and upload it for use on the Web

- Convert and upload reports from the on premise version of Oracle Hyperion Strategic Finance to Strategic Modeling on the Web

- Upload templates you created from the on premise version of Strategic Finance to Strategic Modeling on the Web

See Working with Strategic Modeling in Smart View.

Troubleshooting

For help with troubleshooting Strategic Modeling issues. see Fixing Strategic Modeling Issues in *Oracle Enterprise Performance Management Cloud Operations Guide*.

Working with Templates

Use templates to quickly create a model. Templates include a hierarchical set of accounts without time periods or data.

Strategic Modeling includes templates for commonly used account structures. You can use one of the provided templates, or create and upload custom templates.

Oracle provides these templates:

- Standard

- Utility

- Healthcare

- Retail

- Higher Education

These templates are available when you enable Strategic Modeling so you can get up and running quickly. You can't modify the templates provided by Oracle, but you can save a copy of a template and modify it for your business use case.

To review the account structure of the provided templates and any custom templates you've uploaded:

1. From the Home page, click **Strategic Modeling**, and then click **Templates**.

2. From the **Action** menu for the template you want to review, click **Open**.

3. Change the **Scenario**, **Dataview**, or **Account Groups** to show different sets of accounts.

You can also review and edit the account structure in the templates provided by Oracle using Strategic Modeling in Oracle Smart View for Office.

Working with Models

The Strategic Modeling **Models** component provides several options to help you work with models and perform strategic analysis.

Table 13-2   Working with Models

Task	Description	More Information
Account View	• Open a model. • Work in the Account View. • Add and delete account members. • Define the forecast method for accounts. • Manage accounts and subaccounts. • Identify a target value for an account. • Perform what-if analysis. • Determine how values are calculated. • Review built-in reports such as Income Statement, Balance Sheet, Funds Flow.	• Opening, Checking Out, and Deleting Models • Working in the Account View • Adding and Deleting Subaccount Members • Defining the Forecast Method for Accounts • Managing and Editing Subaccounts • Specifying a Target Value for an Account • Performing What-If Analysis with Scenarios • Determining How Values are Calculated • Reviewing Reports
Custom Reports	Review custom reports that were designed in Oracle Smart View for Office.	Reviewing Reports

Managing Models

You can create, check out, modify and delete models. You can also view templates used to create models.

Creating a Strategic Modeling Model

Administrators and Modelers can create Strategic Modeling models using templates—financial model frameworks that contain predefined reporting and modeling standards. Oracle includes several pre-defined templates to get you up and running quickly. You can also create a model that is based on an existing model.

Users check out models to work with them, or they can work with a copy of the model. When users work with a copy of a model, they can't save changes to the data or to the model.

When you create a model, the model is populated with a hierarchical chart of accounts, a time structure, reports, dataviews, account groups, and all the metadata from the template or the model it was created from.

You must have already created an application and enabled Strategic Modeling. If you want to use a custom template (customized using Oracle Smart View for Office) to create the model, it must already be uploaded.

To create a Strategic Modeling model:

1. From the Home page, click **Strategic Modeling**, and then click **Models**.

2. Click **Create**.

3. On the **General** page, specify the following options and then click **Next**.

    • Specify a model name and description.

- Select whether to create the model from a template, from an existing model in the current application, or from a local `.alc` file, and then select the template, model, or file.
  If you are creating a model from a local `.alc` file, the file must have already been converted in Smart View for use on the Cloud.

  To integrate Strategic Modeling data with Financials, select the **Financials** template.

- Select **Place at Root** to create a standalone model or a model that will be the parent of another model, or to create a hierarchical structure, clear **Place at Root** and select a model from **Parent Model**.
  Creating a hierarchical model structure can be useful for scenario rollups and managing access control, or for visually organizing models.

- Select a base currency and units.
  Each model can have its own currency and units, independent of the application.

  If you create a model from a local `.alc` file or from an existing file if you keep source data, these options are not available; the model is created using the units and currency of the original model.

> **Note:**
>
> You set up currency conversions in Smart View. See Translating Currencies in *Working with Strategic Modeling in Smart View*.

- If you created the model from an existing model, select **Keep Time Structure** if you want the new model to use the same time period structure as the existing model.
  If you selected **Keep Time Structure**, you can select **Keep Source Model Data** to include the source model's data values in the accounts.

  If you select **Keep Time Structure**, skip to step 5.

- If you created a model using the **Financials** template for integration with Financials, in **Select Entity**, select a Financials Entity dimension member. The model will be mapped to the selected Entity dimension member.
  This option is available only when creating a model from the **Financials** template. For more information, see Integrating Data Between Strategic Modeling and Financials.

4. On the **Calendar**, **Time Period**, and **Configure Years** pages, specify the options for building the calendar for this model.

5. Review the model creation options, and then click **Create Model**.

The model is created with a chart of accounts and a calendar structure based on the options you selected.

You can convert an Oracle Hyperion Strategic Finance model to a Strategic Modeling model in Smart View. See *Working with Strategic Modeling in Smart View*.

Video

Your Goal	Watch This Video
Learn about creating a Strategic Modeling model.	Creating Strategic Models in Oracle Enterprise Planning Cloud

Opening, Checking Out, and Deleting Models

You can check out a model, open a version, or work with a copy.

To open or check out a model:

1. From the Home page, click **Strategic Modeling** and then click **Models**.

2. Click the model you want to open, and from the **Actions** menu, select **Open-Checkout**, **Open Model Version**, or **Open As Copy**.
   When you check out a model or open a version, you can save changes to the data and the model. When you work with a copy of a model, you can't save changes to the data or the model.

3. If you checked out the model, after you make changes to it and save the changes, click **Close** to close the model. Then, select **Check In** to save the changes or **Discard** to discard the changes.

   If you selected **Open as Copy**, you can save your changes temporarily, but when you click Close to close the model, the model clses and the changes are not saved.

4. If you selected **Open Model Version**, you can see any versions created for that model. Select the model version you want to open, and then click **Open as Copy**.

   When you open a model verion as a copy, you can't save changes to the data or the model.

   Additionally, in the **Open Model Version** dialog box, you can:

   - Use the filter to filter the model versions as required.

   - Sort the model versions based on name and version creation date by using the arrows. This affects the display order in the model version list.

To delete a model, select it from the Models list, and then, from the **Actions** menu, click **Delete**. To delete a parent model and all of its descendants, select the parent model from the Models list, and then, from the **Actions** menu, click **Delete Hierarchy**.

Pushing Data from Model to Model Using Data Maps

Users with the Modeler role can create and run data maps that use Strategic Modeling models as a source and target to move data from one model to another.

You must have Modeler access to the models you want to use as the source and target for the data map.

1. From the Home page, click **Strategic Modeling** and then click **Models**.

2. From the **Actions** menu next to the model you want to push data from (the source for the data map), click **Model Data Maps**.
   On the **Data Maps** page, you see any data maps associated with the selected model.

3. To create a data map, click **Create**.
   For detailed steps for creating data maps to push data from one model to another, see Pushing Data from a Strategic Modeling Model to Multiple Strategic Modeling Models Using Data Maps in *Administering Planning*.

4. To run the data map, from the **Actions** menu next to the model you want to push data from (the source for the data map), click **Model Data Maps**. On the **Data Maps** page, you see any data maps associated with the selected model. Click **Actions** next to the data map you want to run, and then click **Clear and Push data**.

Working in the Account View

When you open a model, it opens in the **Account View**, where you can view and manage the accounts and subaccounts in a model.

About Accounts, Subaccounts, and Account Groups

Account types include:

- **Input accounts**—Manually enter financial data into Input accounts for historical and forecast periods. In forecast periods, use forecast methods or freeform formulas to calculate values. The forecast method you specify determines the format for the input data in forecast periods. For example, if Sales uses the Growth Rate forecast method, you enter input data as a growth rate into the forecast periods.
  For details about entering data in input accounts, see Entering Account Data.

- **Calculated accounts**—Calculates values with formulas using output from other accounts. You can't edit formulas in calculated accounts; they are fixed to retain accounting integrity.

- **User-Defined Accounts**—Defined in Oracle Smart View for Office. Includes Memo Accounts to create additional detail in the financial accounts, Custom Ratio accounts to create additional ratios for analysis, and Debt Covenant accounts to define measures within Custom Ratios testing against performance standards (debt covenants).

Subaccounts are used for additional input detail in main accounts. Subaccounts inherit attributes of main accounts in both historical and forecast periods. You can distinguish subaccounts because they have a colon in their account key.

Account groups are used to group accounts together to make them easy to find and display when doing data entry. Default account groups are inherited from the template. Administrators and modelers can create additional account groups. See Working with Account Groups.

Dataviews are used to filter the type of accounts that are displayed. Administrators and modelers can create and edit dataviews. See Working with Dataviews.

Strategic Modeling account numbers have up to three segments, separated by a decimal point or, for subaccounts, a colon:

- Main account number (v**xxxx**). These accounts drive the accounting integrity of the model.

- Related account number (vxxxx.**xx**)

- Subaccount number (vxxxx.xx:**xxxx** or for a subaccount of a main account: vxxxx:**xxxx**)

For descriptions of the accounts, see Strategic Modeling Account Definitions.

About the Account View

In the Account View, you can:

- Change the point of view: Select from the **Scenario**, **Dataview**, or **Account Groups** lists and then click **Refresh** ➡ .

- Add and delete subaccount members in the account hierarchy. See Adding and Deleting Subaccount Members.

- Calculate and save a model.

- Perform analysis tasks using the actions available on the **Actions** menu.

Working with Account Groups

Use **Account Groups** to manage accounts in bulk. For example, you can create a group containing all Income Statement accounts that shows data input rows only. You also use Account Groups to select the accounts to display on the **Account View**.

Administrators and Modelers can create and edit account groups. All users can use Account Groups to select the accounts to display on the **Account View**.

To create and edit account groups:

1. Open a model.

2. In the **Account View**, from the **Actions** menu, click **Account Groups**.

3. In the left pane, click ➕ **Add Account Groups**, and then select a type to add:

    *   **Add List of Accounts**—Creates groups of accounts.

    *   **Add List of Groups**—Creates groups of account groups.

    *   **Add a Separator**—Creates a line to separate groups in a list. If you add a separator, reorder the Separator as needed, and then click **OK**. You can skip the remaining steps in this procedure.

4. Enter a name and then click ✅ **OK**.

5. Click ➕ **Add Accounts** to add accounts or account groups to the list.

6. Select the accounts or account groups to add to the list, click ➕ **Select Accounts**, and then click **OK**.
    You can use Search to easily find the account or group you want.

7. For a list of a accounts, select options for how to display the accounts:

    *   **Subaccounts**—Specify how to display subaccounts.

    *   **Dimensions**—Specify how to display dimensions when adding main accounts. Available only when **All** subaccounts are selected.

    *   **Default View**—Specify the default view to display accounts.

8. Select whether to hide this group from the **Account Group** list, and for account lists, select whether to include subaccounts for user-defined accounts and whether to include accounts that have been turned off.

9. Click **OK**.

The new Account Group is available in the **Account Groups** list in the **Account View**.

Additionally, in the **Account Groups** dialog box you can:

*   Edit, rename, and delete account groups. Note that you can't edit, rename or delete the default account groups that are provided with Strategic Modeling.

*   Reorder the account groups by dragging and dropping or by using the arrows, which affects the display order in the **Account Groups** list in the **Account View**.

Working with Dataviews

Use dataviews to filter the accounts and manage the display of data in the **Account View**. Models include default dataviews:

*   Standard

- Input Only
- Output Only

Administrators and modelers can create and edit dataviews to customize the display in the **Account View**.

To create a dataview:

1. Open a model.

2. In the **Account View**, from the **Actions** menu, click **Dataviews**.

3. In the left pane, click ✚ **Add Dataview**.

4. Enter a name and then click ✅ **OK**.

5. Specify the properties and attributes for the new dataview, and then click **OK**.

   - **Display Options**

     – **Display Group Headers as Titles**—displays Account Group headings.

     – **Hide Input Row if a Calc Account**—hides input rows for calculated accounts.

     – **Hide Calculated Time Period Column**—hides calculated time period details.

   - **Attributes**—Select whether to display input rows, output rows, or both, and specify the row order.

   - **Time Period**—Specify the time period to display. If you select **Set Time Range**, specify the **Beginning Boundary** and **Ending Boundary** using functions or by entering values.

The new dataview is available in the **Dataview** list in the **Account View**.

Additionally, in the **Dataviews** dialog box you can:

- Edit, rename, and delete dataviews.

- Reorder the dataviews by dragging and dropping or by using the arrows, which affects the display order in the **Dataviews** list in the **Account View**.

Entering Account Data

You enter account data (historical values, project forecast assumptions, and estimate valuation assumptions) in the Accounts view.

Tips for entering data:

- To enter negative values, start the value with a minus sign (-).

- Enter '#' or '##' into a cell to override current values. The '#' and '##' overrides are not valid for use within historical time periods unless those periods are calculated using Freeform Formulas.

- Strategic Modeling stores numbers up to 16 significant digits, before and/or after the decimal point. You can change the number of decimal places displayed.

Adding and Deleting Subaccount Members

You can add subaccount members to the account hierarchy by adding a child or sibling member to the selected account.

You can also add children or sibling subaccount members in bulk.

ORACLE

For information about editing subaccounts, see Managing and Editing Subaccounts.

Video

Your Goal	Watch This Video
Learn about working with subaccounts.	▶ Managing Subaccounts with Strategic Modeling in Enterprise Planning Cloud

Adding Subaccounts One at a Time

To add a subaccount one at a time:

1. In the **Account View**, right-click an account, and from the context menu select **Add Sibling** or **Add Child**, depending on where you want to add the new member in the account hierarchy.

   > **Tip:**
   >
   > To quickly find an account, from the **Actions** menu, click **Find Account**, and then enter the name or the subaccount identifier number.

   A new subaccount is added, with the name **New***NN* appended to the account ID.

   - You can't add siblings to main accounts.

   - The subaccount ID must be unique within this group of subaccounts.

2. Enter a name in the **Account Names** column.

3. To make further edits to the new account, right-click the account and select **Edit**. See Managing and Editing Subaccounts.

Adding Subaccounts in Bulk

To add subaccounts in bulk:

1. Prepare a file that contains the subaccount member names to be added, and then copy the subaccount member names.
   You can prepare the file in Microsoft Excel or in any editor. The subaccount delimiter is a new line character. For example, copy a column in Excel that includes all the subaccounts.

2. In the **Account View**, right-click the row header for the account or subaccount to which you want to add children or siblings, and then click **Paste Children** or **Paste Sibling**. **Paste Sibling** is available only when you select a subaccount row.

3. In the **Paste** window, paste the copied subaccounts.
   You can edit the pasted text, or add additional subaccounts to the list.

4. Click **Paste**.
   The subaccounts are added as children or siblings of the currently selected account.

   For **Paste Children**, the subaccounts are pasted at the end of the currently selected subaccount's children list.

   For **Paste Siblings**, the subaccounts are pasted above the currently selected subaccount row as siblings.

The pasted text is used as the descriptions for the newly created subaccounts. Subaccounts keys are automatically generated.

Deleting Accounts

To delete an account, in the **Account View**, right-click an account, and from the context menu select **Delete**. When you delete an account, its children are also deleted.

> **Note:**
>
> Because main accounts drive the accounting integrity of the model, you can't delete them. Main accounts are recognizable by an account ID of **vxxxx**.

Managing and Editing Subaccounts

To edit a subaccount:

1. In the **Account View**, select the subaccount you want to edit, and then from the **Actions** menu, select **Subaccounts**.
   You can also right-click a cell and click **Subaccounts**.

2. Edit the member name (subaccount ID) and the description, if needed.

> **Note:**
>
> If the fields are not available (greyed out), it means that the subaccount is not editable, for example if you don't have access permissions to edit it.
> For main accounts, to maintain the accounting integrity of the model, you can edit the name but not other fields.

3. In **Type**, select the rollup option for this subaccount.

4. To edit related accounts:

   a. Click **Edit** next to **Related Accounts**.

   b. In the list of related accounts, click **Edit** .

   c. You can make changes to a group of accounts all at one time. Enter search text in the **Find** box, and then: Click **Find and Replace**, enter the replacement text, and then click **Replace All**. Or, click **Append**, enter the text to append, select whether to append at the **Front** or **End** of the name, and then click **Append All**.

   d. Make changes to one account at a time by clicking or tapping the account name in the right-hand panel of **Related Accounts** and making the changes in the **Name** box.

   e. Click **Save**.

5. Click **Apply** to save the changes.

Defining the Forecast Method for Accounts

Every account uses a unique forecast method to project account values in future (forecast) time periods. Use **Account Forecast** to review or define the forecast method for accounts. You can use pre-built forecasting methods, or build your own freeform formula. Many of the

accounts in the template have a pre-defined forecast method; you can revise the method if required for your business. (All the accounts that accept input do have a default forecast method defined.)

To define a forecast method for accounts.

1. Open a model.

2. In the **Account View**, click the cell for the account you want to review or change.

> ⊙ **Tip:**
>
> To quickly find an account, from the **Actions** menu, click **Find Account**, and then enter the name or the subaccount identifier number.

3. From the **Actions** menu, click **Account Forecast**. The Forecast page shows the calculation used to calculate the forecast value.
   You can also right-click a cell and click **Account Forecast**.

   In this example, Unit Volume uses a standard formula:

   In this example, OFS_Product Revenue uses a freeform formula:

4. Edit the standard formula options, or edit the freeform formula and options, and then click **Apply**. Click **Apply to** to apply the formula to selected subaccounts or children of the current account.

For information about editing a standard forecast formula, see Creating a Standard Formula for the Account Forecast Method.

For information about editing a freeform forecast formula, see Creating a Freeform Forecast Formula for the Account Forecast Method.

Creating a Standard Formula for the Account Forecast Method

To edit a standard formula:

1. In the **Account Forecast** page, for **Forecast Type**, select **Standard**.
2. Specify values for these options:

Table 13-3   Options for Defining a Standard Formula for the Forecast Method

Option	Description
Forecast As	Select the account to forecast. Typically you use the name of the selected account, but in some cases you select a related account. For example, if you are forecasting cash, you can choose to forecast increase in cash, rather than cash.

Table 13-3   (Cont.) Options for Defining a Standard Formula for the Forecast Method

Option	Description
Method	Select the forecast method to use. The method determines the format of your input data.
	• **As Actual Value**—Enter data as the actual value as defined by the default currency units. This is the default method, using the base currency.
	• **Growth Rate**—Enter an annual or a periodic growth rate. For example, for Sales growth of 10% per year, enter `10` for the forecast period input.
	• **Growth Rate (Year over Year)**—Enter data as a growth rate over the same period one year prior. For example, if January 2020 Sales are to be 5% higher than January 2019 Sales, enter `5` in January.
	• **% of Another Account**—Enter data for one account as a percentage of another account (Associated Account) in the same period. If you select this option, you must specify the **Associated Account**.
	• **Days**—Enter data for an account as the number of days (typically of sales or cost of goods sold) that this item represents. It is most commonly used for working capital balances, such as receivables and payables forecasting. If you select this option, you must specify the **Associated Account**.
	• **Turns**—Enter data for an account as the number of turns (how often the balance turns over) this item represents. This method is most commonly applied to inventory forecasting. If you select this option, you must specify the **Associated Account**.
	• **Absolute Multiple of Another Account**—Enter data for one account as an absolute multiple of another account (Associated Account) in the same period. This method is primarily used for price/quantity forecasting. For example, you might forecast unit volume (100 million units) in a Memo Account (v300) and calculate revenue as a unit price of $50 (absolute multiple) times unit volume in the Memo Account (v300). If you select this option, you must specify the **Associated Account**.
	• **Default Multiple of Another Account**—Enter data for one account as a default currency unit multiple of another account (Associated Account) in the same period. This method is also primarily used for price/quantity forecasting. For example, you might forecast unit volume (10 units) in a Memo Account (v300) and calculate revenue as a unit price of $20 million (default multiple) times unit volume in the Memo Account(v300). If you select this option, you must specify the **Associated Account**.
Input	Select the input method; available options depend on the forecast method you selected.
Associated Account - Account	Select the account to use for methods that require an associated account.
Take Output Value From	If the forecast method requires an associated account, select the value to use for the Associated Account's output—**Current Period**, **Prior Period**, **Change In**, or **Average**.

**Table 13-3   (Cont.) Options for Defining a Standard Formula for the Forecast
Method**

Option	Description
Match Dimensions	If the forecast method requires an associated account, select **Match Dimensions** to match the dimension of the associated account with the dimension of the account being forecast.
	For example, to forecast Cost of Goods Sold/Product XX/Region YY as a percent of Sales/Product XX/Region YY, choose Sales as the associated account and select **Match Dimensions**.
Lag to Prior Input Period	If the forecast method requires an associated account, and you are forecasting a balance account, you can forecast the ending balance or the change in the ending balance from the prior period.
	Use this option when you don't want to use the prior period's value. This option finds the previous period that has input values (rather than calculated values) and uses that value.
	For example, if you have year-to-date values through July, but actuals only for January, if you want to forecast July, choosing this option would use the value from January because it has an actual value.
Associated Account Value	Depending on the forecast method, select an appropriate value:
	• **Unadjusted**—Make no changes
	• **Annualized**—Take the value and annualize it
	• **Normalized**—Take an existing previous value and normalize for a time period of a different length
	If the forecasting method is **Days** or **Turns**, this option is not available.
Forecast Input Period Values	If the forecast method requires an associated account, select from:
	• **Variable in each period**—You can enter different values in each period
	• **Constant for all periods**—All forecast periods use the same value
	• **Equal to the historical average**—No input is required; the historical average is applied to all forecast periods
Use Grid Pricing	Indicates that the input for this field varies—input values adjust depending on the value of another account. For example, you can increment or decrement a contract interest rate based on selected criteria. Click **Add** and then specify the grid pricing options and pricing criteria. You define the criteria for when the values change and how they should change (usually additive or multiplicative).
Spread Over Another Account	Adds the input value to another account's output value to compute the final input value. Select the check box and then select the account over which to spread.
	Usually used for forecasting interest rates.
Spread Over Account	Select the account over which to spread.

Creating a Freeform Forecast Formula for the Account Forecast Method

To edit a freeform formula:

1. In the **Account Forecast** page, for **Forecast Type**, select **Free Form**.

2. To edit a freeform formula, type in the text box, or click **Edit** to open the Formula Builder.

3. In the Formula Builder, select from accounts, functions, and operators to build the formula to calculate output values for selected accounts, and then click **Save**.
   See "Using Freeform Formulas" in *Working with Strategic Modeling in Smart View* for a description of functions and arguments. The formula is validated when you save it.

4. Specify values for these options:

Table 13-4   Options for Defining a Freeform Formula for the Forecast Method

Option	Description
Forecast As	Select the account to forecast. Typically you use the name of the selected account, but in some cases you select a related account.
Method Description	Enter a description of the formula.
Input	**Optional:** For formulas using `@input`, from **Input** select the format of the input data. • **Currency**—Enter input data using the option set in **Units**. • **Items**— Enter input data using option set in **Units**. • **Percent**—Enter input data as a percentage. Useful for tax rate formulas. • **Ratio**—Enter input data as a ratio. • **Days**—Enter input data as a number of days. The input must be multiplied by another account to produce the output value. • **Turns**— Enter the input data as the number of turns. The input must be multiplied by another account to produce the output value.
Units	For formulas using `@input`, select the input data unit (thousands, or millions, for example).
Use in History	Select to use freeform formulas in historical periods. For example, you might want to calculate Sales as Price x Quantity in both historical and forecast periods. If this option is not selected, the freeform formula is used only in forecast periods and historical data must be input separately.
Lag to Prior Input Period	For formulas using lag time periods.
Allow Overrides	Select to allow users to input values instead of using the formula. In input periods, you can override the selected input method to enable input of that period's value as Default Currency/Items. To override the input method, enter a pound sign (#) before or after the number.

5. Click **Apply**.

Specifying a Target Value for an Account

Use **Goal Seek** to specify a target value for an account and determine the values that are needed to drive that result. To use goal seek, you select the account value you want to change, an associated account to drive the change, and a time range over which to make the changes.

For example, suppose your total payroll percentage of budget is 16.69% in 2017 and you want to reduce it to 16.18%. You decide to reduce payroll percentage by changing the Selling Hours Productivity in the time range January through December 2017. When you select **Seek** in the **Goal Seek** panel, Strategic Modeling calculates the changes required in Selling Hours Productivity to reach the Total Payroll Percentage target for 2017, spreading the adjustment in

Selling Hours Productivity between January and December 2017 (by a percentage or an amount, depending on your selection) to achieve the target value. When you use Goal Seek, you don't have to make manual adjustments to accounts or write complex business rules to see how to reach your target.

Video

Your Goal	Watch This Video
Learn about **Goal Seek**.	Setting Goals with Strategic Modeling in Oracle Enterprise Planning Cloud

To specify a target value for an account:

1. Open a model.

2. In the **Account View**, click the cell for the account you want to change.

3. From the **Actions** menu, click **Goal Seek**.
   You can also right-click a cell and click **Goal Seek**.

4. In the **Set Goal** area, change the Account, Scenario, or Time Period if needed, and then enter the target value for this account in **Goal**.

5. In the **Adjust By** area, specify the account you want to adjust to meet the goal in the target account, the time periods over which to make the change, and whether to adjust by a percentage or an amount.
   The change account must be related to the goal account through a formula, or the goal seek will fail.

   For example, in this image, the current value for Product Sales in 2020 is 819.3. Suppose you want to increase that to 900. Product Sales is calculated from several accounts, including Unit Volume. You want to reach the product sales goal by adjusting the Unit Volume by the same percentage for each time period between 2017 and 2020. When you use Goal Seek, the unit sales are adjusted to meet the product sales target of 900 in 2020.

6. Click **Seek**.

   The change account values are recalculated and updated by the same amount or percentage for the time periods you specified in order to reach the target in the goal account. The model is updated and calculated with the new values, so you can see the result across the chart of accounts.

7. Review the resulting changes to the goal account and the change account in the **Goal Seek Results** panel. You can also see the adjusted percentage or amount in the **Goal Seek** panel.

   In this example, you can see that Unit Volume was adjusted by 49.96% between 2017 and 2020 to reach the Product Sales goal of 900 in 2020.

8. Click **Apply** in the Goal Seek Results panel to save the changes in the model, or click **Cancel** to discard the goal seek results.

9. If you checked out the model, save it and check it in.

Performing What-If Analysis with Scenarios

You can model different business outcomes and evaluate different sets of forecast assumptions by defining scenarios. Use **Scenario Manager** to create scenarios and define the accounts to include—the entire chart of accounts, a subset of accounts, or just a single account. All accounts are in the Base scenario; you add an account to a scenario because you want the values to come from your new scenario rather from the Base scenario (or other standalone scenario).

Perform what-if analysis by creating different scenarios and changing the input values (including the forecast method) for different accounts in the scenario. Then, see how these changes affect the output in the account.

All models include two scenarios by default:

*   **Base**—Includes all accounts and contains the original inputs of each account. It does not inherit any values from any other scenarios. All inherited scenarios end their inheritance order with the base scenario, or another standalone scenario; Base is always the ultimate source of data if no other scenario supplies it.

*   **Actuals**—Contains actuals values

You can't remove the accounts from Base and Actual scenarios.

About Scenario Inheritance

You can define a scenario that inherits accounts, input values, and the forecast methods from other scenarios. For any values not in the current scenario, Strategic Modeling uses values from the scenario it inherits from. You can also set up a multiple inheritance scenario, where your scenario first looks for values in the lowest level scenario in the inheritance order. For any values not in that scenario, it searches in the next scenario in the inheritance order, and so on, until it reaches a standalone scenario, such as Base. Inherited scenarios save time in data entry and let you experiment with changing values in a scenario without breaking relationships in the model. With multiple inheritance, you can mix and match the sets of changes without breaking the relationships.

Creating a New Scenario

When you define a new scenario, you create it from an existing scenario.

To define a new scenario for what-if analysis:

1. Open a model, either by checking it out or opening it as a copy.

2. In the **Account View**, select the scenario to use as a basis for the new scenario.
    When you create a new scenario, the properties and account selection are based on the currently active scenario in the model, with the exception of inheritance order.

3. From the **Actions** menu, click **Scenario Manager**.
    You can also right-click a cell and click **Scenario Manager**.

4. Click **New Scenario** .

5. Enter a name and description for the scenario.

6. Select the type of scenario to create:

    *   **Standalone**—Creates a scenario that does not inherit values from any child scenarios and includes all the accounts in the model.

- **Inherits**—Specifies that the current scenario inherits values and forecast methods from the **Inherit From** scenario or scenarios if the values do not exist in the current scenario.

- **Input Only**—Creates a scenario of input-only accounts that doesn't generate any output. This option is useful for scenario rollups when you want the parent to contribute data to the scenario rollup instead of getting the data from the child for the accounts specified in the input only scenario. By adding an account to the input only scenario, it is blocked from getting data from a child node during scenario rollup. For more details about using input only scenarios in scenario rollups, see About Using Input Only Scenarios in Scenario Rollups.

7. If you selected **Inherits**, select the scenario or scenarios from which this scenario should inherit values and forecast methods.
   If you select multiple scenarios, drag and drop the scenarios to indicate the inheritance order. Note that inheritance order doesn't matter if the values from the inheriting scenarios don't overlap.

8. For **Use Actuals**, select when to use actuals values:

   - **Never**

   - **When Available**—If there's an actual value for this period, use it.

   - **In History**—Use actual values in historical periods.

   For example, your budget stays static, so you would select **In History** for a budget scenario. But for actuals, you would want to select **When Available** to use the actual values as they become available over time.

9. In **Accounts**, click **Add** to select the accounts to include in this scenario, select the accounts, and then click **Add**.
   You can filter the list of accounts by using the **Search** box. Use Ctrl-click to select more than one account.

10. Click **Apply**.

The scenario is added to the model.

After creating a scenario, update values or forecast methods as needed and then calculate the model.

Managing Scenarios

You can edit or delete scenarios, filter the display of scenarios, or change the scenario order.

To delete a scenario, click the scenario and then click **Delete** ✖ .

To filter the scenario display (by default, all scenarios are displayed), click **All Scenarios**, and then select the scenarios to display: **Inheriting Scenarios**, **Standalone Scenarios**, **Input Only Scenarios**, **Output Only Scenarios** (from currency translations).

To change the order of scenarios in the Scenario Manager panel, drag and drop the scenarios to reposition them in the list. You can reorder scenarios only when **All Scenarios** are displayed. The Base and Actual scenarios can't be re-ordered and are always the first and second scenarios in the list. Changing the order of scenarios affects the order of scenarios in the Scenario list in the POV in Account View.

Videos

Your Goal	Watch This Video
Learn about working with scenarios.	[▶] Creating Scenarios with Strategic Modeling in Oracle Enterprise Planning Cloud

Determining How Values are Calculated

To determine how a value is calculated, use **Audit Trail**. From any cell, you can drill to see the values that contributed to the cell value.

Video

Your Goal	Watch This Video
Learn about determining how values are calculated using **Audit Trail**.	[▶] Analyzing Account Calculations with Strategic Modeling in Oracle Enterprise Planning Cloud

To determine how a cell's value is calculated:

1. From the **Account View**, click an output cell, and then from the **Actions** menu, click **Audit Trail**.
   You can also right-click a cell and click **Audit Trail**.

   The Audit Trail for the cell value shows the formula that was used to calculate the value.

2. Perform any of these tasks in the **Audit Trail** window:

   • Drill down in elements of the formula to get more details about the value. Values that can be drilled display as blue hyperlinks.

   • Change the time period or scenario to show the audit trail for a different cell value.

   • Click the arrow next to **Audit Trail** [« Audit Trail] to see a history of audit steps. Click one of the steps to go back to that point in your audit. The audit trail is cleared and restarted when you change the time period, scenario, or account.

3. To change an input value to see how it affects the data:

   a. Change the input value. Affected cells are highlighted in yellow.

   b. Click **Update** to save the updated values, or click **Discard**.

   c. Click **Save** to save the data in the model.

Improving Forecast Accuracy Using Simulations

Simulations allow you to perform automated what-if analysis on your Strategic Modeling models, optimizing your decision making.

Simulation allows you to assign a range of possible values to inputs that are uncertain and analyze how that uncertainty affects related accounts. You can:

• Quickly calculate and review hundreds of possible outcomes and the likelihood they will occur

- Analyze best and worst case scenarios

- Assess the likelihood of meeting target goals

- See how key uncertain inputs affect your bottom line

For example, you can use simulations to evaluate an expansion scenario for a Sales division. As part of forecasting overall sales in the upcoming year and identifying the likelihood of reaching targets, you can investigate the profitability of the Expansion scenario in which more retail stores are added. Without a simulation, you're limited to performing a simple and error-prone what if analysis by entering best guess estimates one cell at a time for uncertain input accounts such as Unit Volume, Services Revenue, and Maintenance Revenue and evaluating their impact on Total Sales Revenue. By running a simulation using a range of assumptions for these input accounts, the model is calculated hundreds of times using random scenarios created from the input assumptions. The simulation results show the range of forecast sales and their likelihood.

Strategic Modeling uses Monte Carlo simulation to randomly generate a range of values for assumptions that you define. For more information about Monte Carlo simulation, see About Monte Carlo Simulation and Simulation Accuracy.

Overview of steps to define and run a simulation:

1. From the Home page, click **Strategic Modeling**, then **Models**, and then open and check out the model you want to analyze.

2. In the **Account View**, from the **Actions** menu, click **Simulation**.

   Users with Modeler permissions can run simulations.

3. Determine your key input cells and define them as assumptions. See Defining Assumptions.

4. Select output cells that are the target of your analysis and define them as forecasts. See Defining Forecasts.

5. Optionally, adjust the simulation settings. See Adjusting Simulation Settings.

6. Click **Run** ▶ to run the simulation.

   > **Note:**
   >
   > - The model is calculated hundreds of times using random scenarios created from the input assumptions.
   >
   > - For each trial of the simulation, the values within assumption and forecast cells are recalculated.
   >
   > - Assumptions and forecasts in the model are simulated, not just those in the current account view.
   >
   > - Only one simulation can run on a server at a time.

7. Review the results.
   The simulation chart shows the range and likelihood of possible results.

   Simulation results are available as long as the model is open and the session hasn't expired.

   Simulations are associated with a model, not with a specific scenario.

8. To review other metrics, click **Add Metric** ✚ under the information panels, click the metric to add, and then enter the required parameters.
An information box is added, along with the certainty of achieving the metric.

For example, to add a target value, click **Target Value** and then enter a label, such as Stretch Goal, and a target value. The information box is updated to show the certainty of meeting the target value. The forecast chart is updated to include a vertical line representing the target value, and is shaded to emphasize the values that meet or exceed the target value.

To adjust parameters for a metric, change the label for an information box, or change the order of the information box display, click **Metric Item Menu** ▬▬▬ in an information box.

You can also work at a later time with a simulation you previously defined. Note that forecasts and assumptions are saved, but simulation results are not saved when you save the model or check it in. See Working with Simulation Objects.

Video

Your Goal	Watch This Video
Learn about using simulations in Strategic Modeling.	▶ Overview: Enhanced, Range-Based Probability Analysis With Simulations in Strategic Modeling

Defining Assumptions

To define a simulation, first determine your key input cells and define them as assumptions.

An assumption is a probability distribution that describes a range of results for an uncertain input and their likelihood of occurring.

1. Select a cell on an input row in the **Account View**. The cell should contain a value that you are uncertain of that drives the values of accounts you want to evaluate.
For example you might want to define Unit Volume as an assumption to evaluate its impact on Total Sales Revenue.

2. On the **Simulation** panel, click **Set Assumption**.

3. Click the distribution type you want to use for your assumption. Select the distribution type that best represents your knowledge about the uncertain input.

> 💡 **Tip:**
>
> Hover over the distribution to learn more about it. For more information, see

Probability Distribution Descriptions for Strategic Modeling Simulations.

4. Enter the required parameters for your selected distribution type. The current cell value is used as a starting point.

5. Define assumptions for as many input cells as you need.

Defining Forecasts

Forecast cells are output cells that contain formulas that refer to one or more assumption cells. These are the accounts that you want to see the effects of uncertainty on.

1. Select an output row in the **Account View**.

2. On the **Simulation** panel, click **Set Forecast**.
   After you run a simulation, the **Forecast** results area displays the results of the simulation for cells you defined as forecast cells.

Adjusting Simulation Settings

You can adjust the settings for simulations.

1. From the **Simulation Main Menu** ≡ menu on the **Simulation** panel, click **Settings**.

2. Enter the number of trials to run.
   You can enter up to 1,000. The more trials you run, the more accurate the results.

3. Under Random Numbers, specify the options you want to use for sequence and method.

   - Sequence—Defines how to set the random number generator.

     – Same Sequence Each Time—Generates the same set of random numbers each time you run a simulation so you can repeat simulation results.

     – Vary Sequence Each Time—Varies the set of random numbers that are generated.

   - Method—Defines the sampling method.

   - Monte Carlo—More random. Uses random numbers to measure the effects of uncertainty in a model. The default.
     Use Monte Carlo sampling to simulate "real world" what-if scenarios for your model.

   - Latin Hypercube—More even. Samples more evenly using bins by dividing an assumption's probability distribution into intervals of equal probability. It generates values more evenly and consistently across the distribution and produces a smoother, more even results chart.
     Use Latin Hypercube sampling when you are concerned primarily with the accuracy of the simulation statistics.

Working with Simulation Objects

You can work with simulations you've previously defined.

Simulations that you previously defined are stored with the model, so you can work with them later.

To work with existing simulation objects:

1. From the Home page, click **Strategic Modeling**, then **Models**, and then open and check out the model you want to analyze.

2. From the **Actions** menu, click **Simulation**.

   When the **Simulation** panel is open, any cells with forecasts or assumptions defined are outlined in blue (forecasts) or green (assumptions).

3. In the **Account View**, from the **Simulation Main Menu** ≡ menu on the **Simulation** panel, click **Select Simulation Object**.

4. Select from existing forecasts or assumptions by selecting from the list or entering an account number or name in the **Search** box.
    Only simulation objects from the current account group are displayed.

5. For an existing assumption, click the **Assumption** menu   to change assumption options:

    •   **Delete Assumption**—Deletes the assumption definition from the selected cell.

    •   **Show Gallery**—Review or change the distribution type for the assumption.

    •   **Overlay Data**—Select to show the simulation trials overlaid on top of the distribution on the forecast chart.

6. For an existing forecast, click the **Forecast** menu   to change forecast options:

    •   **Delete Forecast**—Deletes the forecast definition from the selected cell.

    •   **Expense Item**—For forecast cells, determines whether cells are treated as expense or revenue accounts, and controls how the results of the simulation are interpreted. This option is automatically selected based on the account type but you can override this setting to handle special accounts.

About Monte Carlo Simulation and Simulation Accuracy

Strategic Modeling uses Monte Carlo simulation to randomly generate a range of values for assumptions that you define.

After you've defined input cells as assumptions and output cells as forecasts, you run a simulation. Strategic Modeling uses Monte Carlo simulation, which uses random numbers to measure the effects of uncertainty in a model.

A simulation iteratively performs these steps:

1. For every assumption cell, a random number is generated according to the range you defined and is placed in the model.
    Strategic Modeling generates random numbers using the Multiplicative Congruential Generator method.

2. The model is recalculated.

3. A value is retrieved from every forecast cell and added to the chart in the forecast results area.

This is an iterative process that continues until either the number of trials is reached or you stop the simulation.

The final forecast chart reflects the combined uncertainty of the assumption cells on the forecast cells.

The accuracy of the simulation is primarily governed by two factors:

•   The number of trials, or length, of the simulation—Generally speaking, the more trials you run in a simulation, the greater the accuracy of the statistics and percentiles information. For a given number of trials, the accuracy of the statistics and percentiles greatly depends on the shape and nature of the forecast distribution.

•   The sampling method—Monte Carlo sampling generates natural, "what-if" type scenarios while Latin Hypercube's sampling is constrained, but more accurate.

Working with Custom Dimensions

Strategic Modeling now allows you to build, manage, and assign sparse custom dimensions.

Sparse Custom Dimensions allow users far more flexibility when designing Strategic Modeling models. Dimension members can be assigned to accounts individually, while unrelated members can be excluded. This will help reduce the model size and increase performance and make the model account structure more relevant to the business needs.

You can import custom dimensions from external .xlsx or .csv files. You can assign and filter custom dimensions and their members as required.

Overview of the process:

1. Create custom dimensions. See Creating Custom Dimensions.
2. Assign custom dimensions. See Assigning Custom Dimensions.

Creating Custom Dimensions

You can define or upload the custom dimensions. Oracle supports .xlsx and .csv format files.

To create custom dimensions:

1. Open the **Models** listing page.
2. Click the model you want to open, and from the **Action** menu, select **Open-Checkout**.
3. In the **Account View**, from the **Actions** menu, click **Create Custom Dimensions**.

   The **Custom Dimensions** page is displayed.

   > **Note:**
   >
   > You can add up to 1500 members and 10 dimensions.

4. Select an option:

   • Click and upload the custom dimensions file by selecting a file.

     The **Upload Dimensions Results** dialog is displayed. Verify then click **OK**.

   • Click **Create Custom Dimensions**.

     The options are:

Options	Description
	Click to create a new custom dimensions.
	Click to add a child member. **Note**: You can add multiple children by selecting **Insert Children** from the context menu.

Options	Description
	Click to add a sibling. **Note**: You can add multiple siblings by selecting **Insert Siblings** from the context menu.
∧	Click to move the dimensions or members up.
∨	Click to move the dimensions or members down.
✖	Click to delete the dimensions or members.
	Click to expand the selection.
	Click to collapse the selection.

> **Note:**
>
> You can also use context menu options.

5. **Optional:** Click **Select Another Dimension File** to add custom dimensions to the existing file.

6. Click **Save and Close**.

> **Note:**
>
> The **Custom Dimension Filter** is active on the **Account View** page.

In *Administering Planning*, see:

• About Dimensions and Members

• About Sparse and Dense Dimensions

Assigning Custom Dimensions

You can assign, copy custom dimensions to multiple accounts, and delete the created custom dimensions to accounts.

> **Note:**
>
> Dimension members can be assigned to accounts individually, while unrelated members can be excluded.

To assign custom dimensions to accounts:

1. Open the **Models** listing page.

2. Click the model in which you have created custom dimensions, and from the **Action** menu, select **Open-Checkout**.

3. In the **Account View**, select an account to which you want to assign custom dimensions, and from the **Actions** menu, click **Assign Custom Dimensions**.

   The selected account page is displayed.

4. Click ⊕ to add custom dimensions to the account.

5. Select the custom dimensions from the list, then click **OK**.

   The selected custom dimensions are displayed on the POV and are ready for associating to the account.

6. Select the members from the **Select Members** drop-down as required, then click **Add** ✔

   .

   > **Note:**
   >
   > POV displays the selected members.

7. Click **Associate Members** to associate the selected members to the account.

8. Click **Save and Close**.

   The associated members are displayed in the account view upon loading the data.

Deleting Associations

To delete association(s):

1. Click **Associate Dimension Menu** ▪▪▪ from the selected account **Assign Custom Dimensions** page

2. Select ✕ Delete association(s).

   A warning message is displayed.

3. Click **OK**.

   You can also delete the individual associations as required.

Copying Custom Dimensions to Multiple Accounts

To copy custom dimensions to multiple accounts:

1. Click **Associate Dimension Menu** ▪▪▪ from the selected account **Assign Custom Dimensions** page.

2. Click ⧉ Copy custom dimension to….

   The **Select Accounts** dialog is displayed.

3. Select the account to which you want to copy members.

4. Click **Copy**.

5. Click **Save and Close**.

   The copied custom dimensions are displayed under the selected account.

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Enabling the Custom Dimensions Filter

The custom dimension filter is available on the **Account View** page. The filter gets active upon creating custom dimensions. Use custom dimensions filter to filter the dimensions as required.

To enable the custom dimensions filter:

1. Click **Custom Dimension Filter** on the **Account View** page.

   The **Filter Custom Dimension** dialog is displayed.

2. Select the members as required.

3. Click **Apply**.

> **Note:**
>
> The **Custom Dimension Filter** gets enabled. Click **Clear Custom Dimension Filter** to remove the custom dimensions.

Working with Time Periods

You can manage time periods to include the detail required for your financial models.

When you create a model, the model is populated with a hierarchical chart of accounts, a time structure, reports, data views, account groups, and all the metadata from the template or the model it was created from.

The model's time structure can be defined based on different levels of granularity for different years. For example, you can set the years toward the end of your forecast period to show only annual values while years within a five year forecast can be set to show more granular details such as quarterly or monthly.

After creating your model, you can modify time period structure and settings. See Managing Time Period Details.

You can create deal periods in which the balance sheet is restated to reflect merger and acquisition activities. See Working with Deal Periods.

Video

Your Goal	Watch This Video
Learn about managing time periods.	Managing Time Periods in Strategic Modeling

Managing Time Period Details

You can define the start and end year, last historical period, years for historical average, and base period for a model. You can also configure time periods to include the detail required for your financial models.

To manage time period details:

1. Open a model.

2. In the **Account View**, from the **Actions** menu, click **Time Period,** and then click **Manage Details**.

3. Perform a task:

   - Define time period parameters. See Defining Time Period Parameters.

   - Configure time periods. See Configuring Time Periods.

   - Add sub periods. See Adding Sub Periods.

   - Add trailing periods. See Adding Trailing Periods.

   - Add periods to date. See Adding Periods to Date.

4. When you finish managing time periods, click **Apply** in **Manage Time Period Details**.

5. When you apply your changes, you can select whether to calculate inputs for all scenarios, only for the current scenario, or to not calculate any inputs. Select a calculation option, and then click **OK**.
   Calculated data is displayed based on updated time periods.

> ### Tip:
>
> To view time period properties, in the **Account View**, from the **Actions** menu, click **Time Period** and then click **View Properties**. **Time Period Properties** displays the model's smallest time periods available, the calendar type, the number of months per year, and the end month for the fiscal year.

> ### Note:
>
> Strategic Modeling now requires that the first period in a model be a Beginning Balance period designed to hold the initial values for Balance accounts. Therefore, it is labeled as the first year in the model but is a snapshot period with no length. Therefore, Flow accounts will not hold values (nor be calculated) in the Beginning Balance period as they measure value accumulated over time.
> For example, Cash (v2000) and its associated funds flow account, Increase in Cash (v2000.01). Ignoring all the other accounts that are related to Cash, Increase in Cash computes in any period as follows:
>
> ```
> Increase in Cash = Cash in the current period - Cash in the prior period
> ```
>
> Since the value of Cash before the Beginning Balance period in the model is unknown, there is no way to compute Increase in Cash in the Beginning Balance period. However, in any period following the Beginning Balance period the value of Increase in Cash can be found.

Defining Time Period Parameters

To define time period parameters for a model:

1. In **Manage Time Period Details**, in the **Parameters** section, click **Edit**   .

2. Define the parameters, and then click **OK**.

a. Select a **Start Year** and **End Year** to add or remove years from the model.

b. In **Last Historical Period**, select a year to be the last historical year of the model.

c. In **Years For Historical Average**, enter a number to define the number of historical years in the model.

d. In **Base Period**, select a year to be the base period of the model.

e. Click **Apply**.

Configuring Time Periods

To configure time periods for a model:

1. In **Manage Time Period Details**, in the **Configure Period** section, in the **Period** column, click the year you want to configure.

2. Click the level of detail to include in the time period—weeks, months, quarters, or halves, and then click **Apply** in the **Configure Period** section.

   • All years have **Yearly** selected by default.

   • For any year other than the beginning balance year, you can select and combine periods of years, halves, quarters, months, and weeks (if the model was created with weekly enabled) for historical and forecast data.

   • The **Input** option is cleared for upper level time periods when you add time detail, because the time period becomes an aggregate.

3. Click **Apply**.

4. Each period, other than the beginning balance year, allows for additional customization from the **Actions** menu . You can add sub periods, trailing periods, and periods to date.

Adding Sub Periods

Define sub periods for input periods when transactions such as acquisitions or leveraged buyouts occur. For example, for a leveraged buyout that took place on April 15 in a yearly period, the sub-period length is 105 days.

To add sub periods:

1. In **Manage Time Period Details**, in the **Configure Period** section, in the **Period** column, click the time period for which you want add to sub periods.

   • Expand the time periods to see the level of detail you want.

   • You can add sub periods only to the lowest level time period. For example, if you've defined a year to include Halves, Quarters, and Months, you can add sub periods only to months.

2. From the **Actions** menu , click **Sub Period**.

3. Click **Add Period**, enter a name for the sub period, and then enter the number of days in the sub period.

4. Continue adding sub periods until **Unallocated days** is zero.

   • To remove a sub period, click **Delete** next to the sub period.

   • Sub-periods must be at least one day long.

5. Click **Apply**.

Adding Trailing Periods

Trailing periods are time periods that collect the most recent number of time periods. You can set up trailing periods to occur in either a historical or a forecast period. With trailing time periods, you can measure business performance over a specific time duration.

> ✏️ **Note:**
>
> Trailing period input status can be toggled **On** or **Off**. When on, values can be entered into the trailing period as aggregate, and back-solved to included periods.

To add trailing periods:

1. In **Manage Time Period Details**, in the **Configure Period** section, in the **Period** column, click the time period for which you want to add trailing periods.

   - Expand the time periods to see the level of detail you want.

   - You can add trailing periods only to the lowest level time period. For example, if you've defined a year to include Halves, Quarters, and Months, you can add trailing periods only to months.

2. From the **Actions** menu ⚙️, click **Trailing Period**.

3. Click **Add Trailing Period**, enter the length of the trailing period, and then click **OK**.

4. Enter as many trailing periods as you need.

   To remove a trailing period, click **Delete** ✖️ next to the trailing period.

5. Click **Apply**.

Adding Periods to Date

Use period to date to create year-to-date, half-year-to-date, quarter-to-date, or month-to-date periods. You can create a period to date on any period other than year. For example, if the time period detail for 2020 is months, you can create a period to date on months.

All financial accounts in period to date periods are calculated by default. You can view period to date periods in the Accounts view and in Reports.

To add a period to date:

1. In **Manage Time Period Details**, in the **Configure Period** section, in the **Period** column, click the time period for which you want to add a period to date.

   > 💡 **Tip:**
   >
   > Expand the time periods to see the level of detail you want.

2. From the **Actions** menu ⚙️, click **Period to Date**.

3. Click **Add Period to Date**.
   Period to dates are created for the current period and every upper level time period defined except Year. For example, if you've defined a year to include Halves, Quarters, and

Months, if you add a period to date on a month, then Quarter to Date, Half to Date, and Year to Date are created.

- Enter period to date names if you want.

- To remove a period to date, click **Delete** next to the period to date.

- To add a period to date, click **Add Period to Date**.

4. Click **Apply**.

Working with Deal Periods

You can create a deal period in which the balance sheet is restated to reflect merger and acquisition activities. By adding a deal period, you can simulate the effects that mergers, acquisitions, or divestitures have on the organization based on the timing of the transactions. A deal period is a zero-day period that is used for transaction analysis.

To work with deal periods:

1. Open a model.

2. In the **Account View**, from the **Actions** menu, click **Time Period**, and then click **Add Deal Period**.

3. Select the time period to which you want to add a deal period and then click **Save and Close**.
   When you add a deal period, the original period is split into three periods: closing, deal, and a calculated total of the two.

   The closing period contains the data from the original input time period.

   The deal period is an additional input column strictly for recording deal information.

4. To move a deal period, from the **Actions** menu, click **Time Period**, click **Move Deal Period**, select the time period to move the deal period to, and then click **Save and Close**.

5. To delete a deal period, from the **Actions** menu, click **Time Period**, click **Delete Deal Period**, select an option for deleting or keeping deal period data, and then click **OK**.

Working with Funding Options

Funding Options enables you to specify how a model will behave as it attempts to balance the balance sheet in the forecast periods for a model.

You pay off debt accounts with cash from surplus accounts. You specify which surplus accounts go to which debt accounts, and the order in which they should be repaid. You can specify fund sources the company should borrow from in paying deficits. You can identify affordable dividends, handling of common and preferred stocks, and issuance or repurchase of shares.

Items that can be used to balance the model are called Funds. There are a number of different types of Funds:

- Dividends

- Assets

- Contra-Equity

- Debt (Term and Revolving)

- Preferred

- Equity

Increases in Dividends, Assets, and Contra-Equity are uses of funds, while increases in Debt, Preferred, and Equity are sources of funds. The reverse is true of decreases in the various types of Funds, so decreases in Dividends, Assets, and Contra-Equity are sources of funds; decreases in Debt, Preferred, and Equity are uses of funds.

When balancing, if there is a surplus of funds, the model looks for available uses of funds to balance; if there is a deficit of funds, then the model looks for available sources of funds to balance.

In order to guarantee that balancing can succeed (if required), a model must provide at least one source and one use of funds that has no maximum value and that can provide as large of a funding source or as large of a funding use as is required to balance. In the provided templates, these accounts are Excess Debt and Excess Marketable Securities.

For more information about the accounts used for funding options, see Funding Options Accounts, Types of Debt Accounts, and Types of Asset Accounts.

Overview of the process:

1. Set options for funding accounts. See Setting Options for Funding Accounts.

2. Set up a funding method. See Using Funding Methods.

   - Standard funding method

   - Target Capital Structure funding method

Video

Your Goal	Watch This Video
Learn about funding options.	▶ Setting Up Funding Options in Strategic Modeling

Setting Options for Funding Accounts

Set funding options to identify funding account information before setting up a Standard or Target Capital Structure funding method.

Use funding options to change the type for some accounts and identify funding account attributes such as whether the account is zero-based, has an unlimited maximum, a minimum funding requirement, or a minimum change amount.

To set the options for funding accounts:

1. Open a model.

2. In the **Account View**, from the **Actions** menu, click **Funding Options**, and then on the **Funding Options** page click **Open Settings** ⚙ .

3. Select or clear **Actual Override Defeats Funding** to determine how '##' overrides function during data entry:

   - Cleared—'##' overrides the account maximum.

   - Selected—'##' overrides the account balance.

4. In the **Type** column, click a cell to change the account type (Term Debt or Revolving Debt) for debt accounts and subaccounts, if needed.

5. Select **Zero Based** for an account to be set to zero before the funding sequence begins.

6. Select **No Max** for an account to accept or fund with no cap or maximum.

7. Select **Specify Min** to indicate whether this funding item has a minimum value that the user can enter. If not, the minimum value is 0.

8. In **Min Change**, enter a minimum amount for the account that is required before it can be used as a source or use of funds.

   If the minimum change is not met, the account is not utilized for funding surplus or deficit. The value that you enter should reflect the default currency of the file. For example, if the file is in Thousands of Dollars, a 10 reflects a minimum change of $10,000.

   This option allows you to prevent balancing from tapping certain funding items (for example, Equity) where the transaction costs would be prohibitively high for a small amount of required funding.

9. Click ⟨ to go back to **Funding Options**.

10. After you've set options, set up a funding method. See Using Funding Methods.

Using Funding Methods

You can use the standard funding method or the target capital structure funding method.

Before using a funding method, make sure you set options for funding accounts. See Setting Options for Funding Accounts.

For more information about funding plans, see Funding Options Strategies.

To use a funding method:

1. Open a model.

2. In the **Account View**, from the **Actions** menu, click **Funding Options**.

3. Select a funding method to use. By default, the funding method is **Standard**.

   - Standard funding method—applies cash surpluses and funds cash deficits for funding accounts regardless of funding category (debt, preferred equity, or common equity) providing a unified funding priority plan across all funding account categories. You identify additional funding account characteristics and the funding of deficits or receiving cash surpluses.

   - Target Capital Structure funding method—applies cash surpluses by funding accounts category: debt, equity, and preferred. You can create target level and prioritize the order of funding categories (for example, target debt-to-total capital). Strategic Modeling calculates each category target level and applies surpluses to deficits in each category based on priority.

   Apply Cash Surplus to and **Fund Cash Deficit with** columns display the order in which accounts are processed.

   Within each set of funds (cash surplus and cash deficit), you see **First**, **Next**, and **Last**:

   - **First** lists zero-based accounts, for which a decrease to zero is a Use (for Surplus) or Source (for Deficit) of fund.

   - **Next** lists user-added accounts.

   - **Last** lists excess accounts.

4. If you selected **Target Capital Structure**, select the funding account category: **Debt**, **Equity**, or **Preferred**. If you select **Allocate Preferred as Debt**, all preferred accounts are debt, and **Preferred** is unavailable from the list.

5. In the **Apply Cash Surplus to** and **Fund Cash Deficit** sections, add, re-order, or delete accounts in the **Next** category to indicate the order in which to process accounts. For more information, see Order of Repayment and Funding.

    - To add an account, click ✚ , select the account, and then click **Add**.

    - To delete an account, select it from the list and click ✖ .

    - To reorder accounts, select the account and click ⌃ or ⌄ .

6. Click **Save and Close**.

7. From **Account Groups**, select **Funding Options** to see the funding accounts.

8. Click **Calculate**.

9. Use the **Funding Analysis** report to review the results of your funding strategy.

> ✎ **Note:**
>
> Funding Options never attempt to balance funding during historical or actual periods, so you may see non-zero values in Net Funds Flow Source (Use) (v3040) in historical or actual periods.
>
> Funding Options balance all input periods that are neither historical nor actual periods. These are typically called input forecast periods, but actual periods may occur in what are typically forecast periods.
>
> When there is a forecast leaf period (a non-aggregate period) that is not an input period because its values are interpolated using inputs from a period-to-date or trailing period, Funding Options balance that period unless it is the last period before the input period-to-date or trailing period that is driving it's values.

Order of Repayment and Funding

In the **Funding Options** dialog box, you can reorder accounts in **Apply Cash Surplus to** and **Fund Cash Deficit with** to specify the order of account use, in the event of cash surpluses or deficits.

Order	Apply Cash Surplus to	Order	Fund Cash Deficits with
First	L-T Debt: Excess	First	Excess Marketable Securities
Next	Other Selected Surplus Accounts	Next	Other Selected Deficit Accounts
Last	Excess Marketable Securities	Last	L-T Debt: Excess

With a cash surplus, by default, Long-Term Debt: Excess is reduced first if a balance exists. Funds remaining, after reducing other surplus accounts selected, accumulate in Excess Marketable Securities. With a cash deficit, by default, Excess Marketable Securities is used as

funding first. If there is still cash deficit after other selected funding accounts are used up to their forecasted limits, Long-Term Debt: Excess funds the remaining cash deficit in its entirety.

> **Note:**
>
> Excess Marketable Securities is last in the **Apply Cash Surplus to** order and by default is first in the **Fund Cash Deficit with** order. **Long-Term Debt: Excess** is by default first in the **Apply Cash Surplus to** order and last in the **Fund Cash Deficits with** order.

About Importing Data to Strategic Modeling Model

You can import data from a flat file into a Strategic Modeling model.

Working with Import Data

You can import data using a Strategic Modeling model page.

To import data:

1. Open a model.

2. In the **Account View**, from the **Actions** menu, click **Import Data**.

    The **Import Data** dialog appears.

3. Click **Choose File**

    Select a file to be imported.

    > **Note:**
    >
    > Only *.csv format is supported.

4. Click **Import**.

    The **Import Data Status** dialog displays indicating the number of rows imported successfully and the number of rows rejected with the reason for rejection.

5. The successfully imported data is refreshed and displayed on the **Account View**.

Valid Flat File Format

The maximum of 100000 cells can be imported at a time. Files containing more than 100000 cells displays an error on import.

If any rows fail to import, an option is displayed to export a log of the failures to an Excel file.

The following fields are accepted in the header:

*   **Account or Measure.** (Required) - the account key. For example, "*v1080:010*" or "*v1000:020|Laptops|North*" (if the account has custom dimensions applied).

*   **Scenario** (Required) - the name of the scenario to which data is imported.

*   **Values** (Optional) - either "*input*" or "*output*", if not specified output is defaulted.

- **Period(s)** (Required) - For example, "*2017*" or "*Q419*".

	A	B	C	D	E
1	Account	Scenario	Values	2015	2017
2	v1000:020|Laptops|North	Base	Output	1000000	2000000
3	v2040	Base	Input	182400000	22000000
4					

> **✎ Note:**
>
> The header items are not case sensitive. If any of the required headers are missing the header validation fails. Irrespective of the default unit of the model (Ones, Thousands, Millions, etc.), the .csv file being imported should contain values expressed in Ones.

Working with Reports

You can work with built-in reports or with custom reports built in Oracle Smart View for Office.

Table 13-5   Working with Reports

Task	Description	More Information
Account View	Work with built-in reports. Built-in reports are provided with the templates.	Reviewing Reports
Custom Reports	Work with custom reports. You can create and customize reports in Smart View and upload them for use in Strategic Modeling on the Web. You can also convert reports from Oracle Hyperion Strategic Finance to Strategic Modeling using Smart View.	• Reviewing Reports • *Working with Strategic Modeling in Smart View*

Reviewing Reports

To review reports:

1. From the Home page, click **Models** and then open a model. The model opens in Account View.

2. If you've made any changes to the model, click **Calculate**.

3. To review built-in reports, select a report from the horizontal tabs.

4. To review custom reports, click **Custom Reports**   , and then select a report from the horizontal tabs.

5. Optionally, select a different scenario from the **Scenario** list, and then click **Refresh** .

Creating and Running Scenario Rollups

Creating scenario rollups allows you to roll up data into a parent entity for analysis. For example, you might store data in multiple models such as geographic territories. You can roll up the geographic territories to a parent level to help you make business decisions at the enterprise level.

About Business Cases

A business case defines how child node data is rolled up into the parent. It is defined by selecting the scenario to use for rolling up data to the parent model during rollup, and then defining model characteristics. By defining different scenario rollups that use different business cases and have different model characteristics, you can analyze how these different business cases affect the business at a more global, rolled up level.

Overview of Creating and Running Scenario Rollups

Follow these overall steps for creating and running scenario rollups.

1. Create the scenario rollup and build the scenario rollup structure. See Creating a Scenario Rollup.

2. Create and assign one or more business cases. See Defining Business Cases for Scenario Rollups.

3. Define model characteristics. See Defining Model Characteristics.

4. Run the scenario rollup. See Running a Scenario Rollup.

Video

Your Goal	Watch This Video
Learn about creating and running scenario rollups.	▶ Consolidating Models with Strategic Modeling in Oracle Enterprise Planning Cloud

Creating a Scenario Rollup

To create a new scenario rollup:

1. From the Home page, click **Scenario Rollups**.

2. Click **Add** and enter a name.

3. From the **Actions** menu, click **Open** to start building the scenario rollup structure.

4. Click ➕ to add models to the scenario rollup structure.

5. From the **Available Models** list, drag and drop a model to the scenario rollup structure.

6. To add an additional model, drag and drop a model from the **Available Models** list to the location you want in the scenario rollup structure.

7. To delete a model from the scenario rollup structure, select the model, and from the **Actions** ⚙ menu, click **Remove Model**. The selected model and all of its children and business cases are removed from the scenario rollup structure.

> **Tip:**
>
> You can also create a new scenario rollup based on a model hierarchy. In **Models**, from the **Actions** ••• menu for the model you want to convert, click **Convert to Scenario Rollup** and then enter a scenario rollup name. The selected model and its child models are converted to a scenario rollup with the same hierarchical structure.

If you delete a scenario rollup that you've already run, it deletes the associated business cases in all of the models in the structure.

After creating the scenario rollup structure, you must create a business case to define how child node data is rolled up to the parent. See Defining Business Cases for Scenario Rollups.

About Valid Scenario Rollup Structures

To ensure that your scenario rollup structure is valid, avoid these conditions that cause scenario rollups to fail:

- Fiscal years don't match
- Subperiods exist in the parent that don't exist in the child
- Deal period exists in the parent without a matching deal period in the child

These conditions won't stop a scenario rollup from running, but could cause meaningless data:

- The child has years that the parent doesn't have
- The parent and child have different historical boundaries
- There are matching periods in the parent and child but the number of days in the periods are not the same
- The actual period boundaries don't match
- The user-defined dimensions are not compatible
- The parent and child have a different number of months or weeks in a year or the end of the year falls on different days
- The parent has periods with more time detail than the child (for example, the parent has months but the child only has years)

Defining Business Cases for Scenario Rollups

Once you've built a scenario rollup structure, you must create one or more business cases to complete the scenario rollup definition. A business case defines how child node data is rolled up into the parent.

To create a business case:

1. Select a model in the scenario rollup structure, and then click **Add New Business Case**.

2. Enter a business case name.
   The business case name can't be the same as an existing scenario name.

3. In **Leaf Node Scenario to Contribute**, select the default scenario to use for the leaf nodes in this structure for rolling up data to the parent model during scenario rollup, and then click **Add**.
   You can change the scenario associated with individual leaf nodes later in the scenario rollup tree structure list in the **Scenario** column.

The business case is added and becomes the currently active business case.

4. To add an additional business case, click the business case name next to **Business Case**, and then click **Add Business Case**. For example, you might want to add a business case that reflects a different default scenario or has different model characteristics.

5. To exclude a model from a business case during rollup, but keep it in the scenario rollup

structure, select the model, and from the **Actions** ⚙ menu, click **Exclude Model**, and then select whether to exclude **From the Parent Business Case** or **From All Parent Business Cases**. When a model is excluded from the parent business case, **[Excluded]** is displayed next to the model name. When a model is excluded from all parent business cases, **[Excluded from All]** is displayed next to the model name.

   For example, there could be a model where the additive process for rolling up does not apply. For example, non-currency accounts such as inflation rates and price/quantity relationships would not make sense to include in the scenario rollup.

6. To remove a business case, select the business case from the **Business Case** list, and

   from the **Actions** ⚙ menu, click **Remove Business Case**.

> ✏️ **Note:**
>
> If users are also working in Oracle Smart View for Office, click **Refresh** to get the changes from the database.

After adding business cases, you define model characteristics to further define your business case. See Defining Model Characteristics.

Defining Model Characteristics

After you've added models to a scenario rollup and added a business case, you can further define the scenario rollup by defining the model characteristics.

1. To define model characteristics, select a model from the scenario rollup structure, and from

   the **Actions** ⚙ menu, click **Model Characteristics**.
   The attributes available depend on whether the model is a child or parent in the scenario rollup structure.

2. To specify model characteristics for a child level model, see Specifying Child Model Attributes.
   To specify model characteristics for a parent level model, see Specifying Parent Model Attributes.

   For intermediate nodes in the scenario rollup structure, you define both child and parent characteristics.

Specifying Child Model Attributes

To specify child model attributes:

1. In **Method Used**, specify the method for rolling up the entity to the parent:
   When you use the **Cost**, **Equity**, or **Minority Interest** methods, the subaccount structures should be similar.

   • **Full Scenario Rollup**—Use this method to roll up 100% of all accounts.

- **Cost**—Use this method when the amount of investment in a company is less than 20% and is held for at least one year.

- **Equity**—Use this method when the amount of investment in a company is at least 20% and less than 50% and is held for at least one year. Business unit values roll up into Dividends from Subsidiaries and Earnings from Investments accounts, which are used to calculate the parent's investments.

- **Minority Interest**—Use this method when the amount of investment is between 50% and 100% of the company's stock. This method also rolls up output values. While 100% of the business unit is rolled up, these calculations recognize the outside interest in the business.

For more details about the calculations used for each method, see Data Management in *Working with Strategic Modeling in Smart View*.

2. If you specified **Equity** for the method, in **Target Subaccount**, specify which subaccount receives the child entities' values.
   This option is available if account v2420 in the parent entity was set up to include subaccounts. This method has calculations for v2420. If v2420 has subaccounts, specify which subaccount receives the child entities values.

3. If you specified **Equity** for the method, in **Equity Groups**, select an account group. Account groups you select here are rolled up into the parent.

4. In **Ownership**, enter the percentage of the entity to be rolled up.
   For example, if sales in the first forecast period of the child entity are $200 and ownership is 100%, $200 is rolled up. If ownership is 80%, $160 is rolled up.

5. In **Periods to roll up into parent**, specify the **Start Period** and **End Period** across which the scenario rollup should run. The time period range must be within the range of the rolled up parent. Select a specific time period or one of the following:

   - **First Period in File**—Rolls up starting in the first time period in the model.

   - **<Deal Period>**—Rolls up starting in the deal period (defined in Time Periods in Oracle Smart View for Office).

   - **Residual value period**—Uses the last period in the model. Or, if ending periods don't match between child and parent, the residual value period is calculated.

6. Click **Apply** to apply changes for this node in the scenario rollup structure to the currently selected business case. Click **Apply All** to apply changes for this node in the scenario rollup structure to the all business cases for this node.

Specifying Parent Model Attributes

To specify parent model attributes:

1. In **Contributing Scenarios**, if applicable, from the **Input Only Scenarios** list, select the input only scenario or scenarios that include accounts that you don't want rolled up to the parent. All input only scenarios in the parent model are listed.
   You can also define input only scenarios for parent models that are at an intermediate level in a nested scenario rollup.

   Use this option when you want the parent node to contribute data values to the scenario rollup instead of getting values from the child for the accounts specified in the input only scenario.

   See About Using Input Only Scenarios in Scenario Rollups.

2. In **Elimination Groups Based On**, select the source for elimination groups. Elimination groups define accounts to eliminate from scenario rollup. Select **Current Model** or **Child**

Model, and then from the **User Defined Elimination Groups**, select account groups to eliminate from scenario rollup.
Eliminated accounts are set to zero in the scenario rollup parent during processing.

3. Click **Apply** to apply changes for this node in the scenario rollup structure to the currently selected business case. Click **Apply All** to apply changes for this node in the scenario rollup structure to the all business cases for this node.

About Using Input Only Scenarios in Scenario Rollups

If you've created an input only scenario in a model, and that model is a parent model in a scenario rollup, you can specify the input only scenario when you define the parent model attributes for the scenario rollup. When you run the scenario rollup, for the accounts specified in the input only scenario, the parent node contributes data values to the scenario rollup instead of getting values from the child.

For example, suppose you want to set up a scenario to define the financing for your business. Financing is typically defined at the parent level rather than at the business unit (child) level. You define accounts that have the data you want to contribute to financing the business plan in an input only scenario in the parent model. You can have more than one version of the data in different input only scenarios and contribute different input only scenarios to different business cases in the scenario rollup. When you roll up, you can analyze different results depending on different finance options from the different business cases. The financing data always comes from the parent model during a scenario rollup for the accounts specified in the input only scenario.

If there is more than one input only scenario in a parent model, you can select one or more. For example, if you are modeling financing scenarios, but you also want to model operating scenarios, you can combine multiple scenarios that input values to different accounts so you can analyze different result sets.

> **Note:**
>
> If you select more than one input only scenario at the same time for a parent in a scenario rollup, ensure that each scenario contributes to different accounts in the scenario rollup.

About input only scenarios:

- They have no output values and cannot be calculated.
- They contain input values only for those accounts that are selected as members.
- They can be contributed as data to a business case in a scenario rollup. Multiple scenarios can be contributed to the same business case.
- Because data values and forecast methods are statically copied from the contributing input only scenario(s) to the business case at rollup time, the data is refreshed from the original source each time you run the scenario rollup.
- Define member accounts that automatically block the rollup of values for the business case that they were contributed to.

Running a Scenario Rollup

After you've defined your scenario rollup structure, business cases, and optionally model characteristics, you can run the scenario rollup.

To run a scenario rollup:

1. From **Scenario Rollups**, select a scenario rollup, and then click **Run**.

2. On the **Run Rollup and Data Maps** page, select the business case or business cases to roll up.
   By default, the currently selected business case is selected. You can also choose to display only the selected business cases.

3. For each selected business case, select **Refresh** or **Publish** to run the **Refresh** or **Publish** data maps associated with the business case:

   • **Refresh** data maps bring data into scenario rollups from outside sources, such as a Planning cube or Strategic Modeling models that are not part of the rollup. They are run before the scenario rollup if you select **Refresh** for the business case.

   • **Publish** data maps push final rolled up data to external targets, for example, Planning, after a scenario rollup is complete if you select the **Publish** option for the business case.

   Any **Before** or **After** data maps that are associated with the scenario rollup run automatically when you run the scenario rollup.

4. If you mapped the Business Case in Strategic Modeling to Scenario and Version in Planning, when you run the scenario rollup, you have the option to select **Overwrite Target Version**, which overwrites the Version defined in the data map.

5. Click **Run**.

The scenario rollup is submitted to the Job Console, where you can monitor the progress of the scenario rollup. From the Home page, click **Application**, and then **Jobs**. If the scenario rollup process includes data maps, they are shown as child jobs to the scenario rollup job.

When the scenario rollup is complete, you can open the parent model and see the data rolled up from child models.

Backsolving for Input Values

In some cases, Strategic Modeling calculates input values based on output values:

• Running a scenario rollup

• Importing data

• Changing the level of time detail (either spreading or collapsing)

In cases where the output values would produce an unrealistic input value (a scaled absolute value greater than 10,000 percent or one billion), or when the input value can't be calculated, then Strategic Modeling performs an actual override (##override), as follows:

1. During reverse calculation of input values from output values, Strategic Modeling sets the input value to the output value with Actual override selected (##override).

2. During forward calculation, the override causes the input value to be copied to the output value.

14
Adjusting and Spreading Data

Related Topics

- Adjusting Cell Values
  Planning offers a number of ways to adjust cell values quickly.

- Performing What If Analysis
  Before you commit data by saving it, you can perform "what if" calculations and review the changes.

- Spreading Data for Time Periods
  While working in forms, you can spread, or distribute, values, as described here.

- Spreading Values Using Grid Spread
  If your administrator has enabled **Grid Spread** as a form property, you can specify an amount or percentage by which values across multiple dimensions on the form are increased or decreased, based on the existing values in the target cells.

- Spreading Values Using Allocations
  Using **Allocate**, you can mass allocate data to multiple cells, even across dimensions.

Adjusting Cell Values

Planning offers a number of ways to adjust cell values quickly.

You can increase or decrease values by a specific amount or by a percentage. You can also enter operators and commands in a cell. See Performing What If Analysis and Entering Data Quickly Using Commands.

Performing What If Analysis

Before you commit data by saving it, you can perform "what if" calculations and review the changes.

By experimenting with data, you can see the impact of various scenarios before saving the data, which is useful for manipulating values to produce the results you want.

You can manipulate data values by:

- Entering values (see Entering Data Quickly Using Commands).

- Locking a value during spreading (see Locking Cells).

- Changing values by typing an operator, followed by a number, described here.

- Using ad hoc functionality in Planning and Oracle Smart View for Office (see Using Ad Hoc for Data Entry and Analysis).

- Experiment with various outcomes in "sandboxes" (see Keeping Your Work Private with Sandboxes).

To perform quick calculations on a value:

1. Select the cell to perform a calculation on.

2. Enter an operator (**+**, **+–**, *****, **/**, or **%)**, and then enter a value.

3. Move the cursor from the cell.

    A color change indicates a modified cell.

Spreading Data for Time Periods

While working in forms, you can spread, or distribute, values, as described here.

You can:

- Spread the value in a summary time period back to its base time periods, or to the first parent or first child of its parent time period

- Spread values among children and parents proportionally, based on existing distribution

- Spread values based on a calendar's weekly distribution in a quarter, which could be 4-4-5, 5-4-4, 4-5-4, or None

- Fill the parent's value to all its descendants

- Temporarily lock certain cell values while spreading data over time periods (see Locking Cells)

You can select, copy, paste, or adjust multiple values. If you paste data to time periods, Planning applies the spreading rules for each cell in succession, starting from left to right and top to bottom. The data resulting from a paste operation may not match the original copied data. See How Spreading Data Works.

> **✎ Note:**
>
> - You can't spread data in a summary time period that includes members with mixed currencies.
>
> - Values for summary time periods are automatically spread, even if the form uses an alternate hierarchy for Period, so ensure that the spread results are correct. Oracle recommends against entering data into alternate hierarchy members, because the values could spread incorrectly.

To spread data for time periods:

1. In a form, put the cursor in the cell with the value to spread.

2. Enter the value.

    The value is distributed according to the rules described in How Spreading Data Works.

3. Click **Save**.

How Spreading Data Works

Factors such as account type, the **Time Balance** property, existing distribution, member hierarchies, and data type affect how values are distributed, assuming that no data cells are locked.

For information on locking cells, see Locking Cells.

> **Note:**
>
> Date and text values are excluded when spreading data.

The following table shows examples of the effect on data of entering or changing a currency or non-currency value:

Table 14-1   Examples: The Effect on Data of Entering or Changing a Currency or Non-currency Value

Time Balance Property of the Account	New Value Distribution	Examples
FLOW **Revenue**, **Expense**, **Saved Assumption** (where the **Time Balance** property is set to **Flow**)	To all its children and its parents proportionally, based on the existing distribution. The value affects the entire Summary Period Rollups hierarchy so that the parent time period is the sum of its children. If no distribution exists (that is, the values for all the children are zeros or are missing), and the changed value is a Quarter, the value spreads down proportionally, based on the weekly distribution (which can be 4-4-5, 4-5-4, 5-4-4, or evenly distributed if the account's spreading is set to **None**). If the changed parent is a **Year Total** or some other kind of summary time period, the value is spread evenly.	Example 1 You change Qtr 1 from 250 to 500, with these current values for its months: • Jan = 100 • Feb = 50 • Mar = 100 **Result**: 500 is distributed to its children proportionally, replacing their previous values with: • Jan = 200 • Feb = 100 • Mar = 200 The increment of 250 is aggregated to the parents of Qtr 1. If Year Total was 1000, its new value is 1250. Example 2 You change March from 100 to 200. **Result**: March, Qtr 1, and Year Total all increment by 100. Jan and Feb remain unchanged.
FIRST All types of Accounts	Upward to its first parent and downward to its child only if the changed cell is the first child of its parent time period. The summary time period equals the first of its child time periods. If no distribution exists (that is, values for all children are zeros or are missing), the value is copied to each of the children.	Example You change Qtr 1 from 20 to 40, with these current values for its months: • Jan = 20 • Feb =15 • Mar = 05 • Q1 = 20 **Result**: 40 is distributed to its children, replacing their previous values with: • Jan = 40 • Feb = 15 • Mar = 05 • Q1 = 40

Table 14-1   (Cont.) Examples: The Effect on Data of Entering or Changing a Currency or Non-currency Value

Time Balance Property of the Account	New Value Distribution	Examples
BALANCE **Asset**, **Liability**, **Equity**, **Saved Assumption** (where the **Time Balance** property is set to **Balance**)	Downward to its last child and upward to its parent only if the changed cell is the last child of its parent time period. The summary time period equals the last of its child time periods. If no distribution exists (that is, the values for all children are zeros or are missing), the value is spread across its children.	Example 1 You change Qtr 1 from 30 to 50. **Result**: March also changes to 50. Jan and Feb don't change. Year Total does not change because Qtr 1 is not its last child. Example 2 You change Qtr 4 from 100 to 50. **Result**: Dec changes to 50 because it is Qtr 4's last child. Oct and Nov remain unchanged, as do Qtrs 1, 2, and 3. Year Total changes to 50 because Qtr 4 is its last child. Example 3 You change Qtr 2 to 100 with these current values: • Apr = 0 • May = 0 • June = 0 **Result**: • Apr = 100 • May = 100 • June = 100 Year Total is unchanged.
AVERAGE **Revenue**, **Expense**, **Saved Assumption**, (where the **Time Balance** property is set to **Average**)	To all its children and its parents proportionally, based on the existing distribution. The value affects the entire Summary Time Period Rollups hierarchy so that the parent is the average of its children. Assumes an equal number of days in each period, such as 30 days for each month.	Example You change Qtr 1 from 5 to 10 with these current values: • Jan = 05 • Feb = 10 • Mar = 00 • Q1 = 05 **Result**: • Jan = 10 • Feb = 20 • Mar = 00 • Q1 = 10
FILL All types of Accounts	The value set at the parent is filled into all its descendants.	Example You change YearTotal from 100 to 200. **Result**: Values for Q1, Q2, Q3, Q4 and all months are changed to 200 Consolidation operators and member formulas overwrite FILL values when the members are recalculated.

Table 14-1   (Cont.) Examples: The Effect on Data of Entering or Changing a Currency or Non-currency Value

Time Balance Property of the Account	New Value Distribution	Examples
Weighted Average - Actual_365 **Revenue**, **Expense**, **Saved Assumption**, (where the **Time Balance** property is set to **Average**)	Weighted daily average based on 365 days in a year, assuming that February has 28 days. This does not account for leap years. About Weighted Average - Actual_365: • You can't customize month labels, although you can use aliases. • Years must have 12 months, and quarters must be the sum of three base months. • You can't change the fiscal start month after Planning is set up. • All months are included in the calculation. #MISSING is treated as 0 in the numerator, and all the days are included in missing months in the denominator. This means, for example, that QTR means three months, not QTD, and Total Year means all 12 months, not YTD.	Example You enter values for Jan, Feb, and Mar. For any year, including leap years, February is assumed to have 28 days, and Q1 is assumed to have 90 days. **Value Entered** and **Number of Days** • Jan = 9,000 31 days • Feb = 8,000 28 days • Mar = 8,000 31 days • Q1 = 90 days (the total days for Jan, Feb, and Mar) **Result:** Q1 = 8,344 The average for Q1 is calculated thus: (1) Multiply the value for each month in Q1 by the number of days in that month, (2) Sum these values, and (3) Divide the total by the number of days in Q1. Using 28 for the number of days in Feb, and 90 for the number of days in Q1, the result is: (9,000 times 31 plus 8,000 times 28 plus 8,000 times 31) divided by 90 = 8,344.

Table 14-1   (Cont.) Examples: The Effect on Data of Entering or Changing a Currency or Non-currency Value

Time Balance Property of the Account	New Value Distribution	Examples
Weighted Average - Actual_Actual **Revenue**, **Expense**, **Saved Assumption**, (where the **Time Balance** property is set to **Average**)	Weighted daily average based on the actual number of days in a year. This accounts for leap years, in which February has 29 days. About Weighted Average - Actual_Actual: • You can't customize month labels, although you can use aliases. • Years must have 12 months, and quarters must be the sum of three base months. • You can't change the fiscal start month after Planning is set up. • All months are included in the calculation. #MISSING is treated as 0 in the numerator, and all the days are included in missing months in the denominator. This means, for example, that QTR means three months, not QTD, and Total Year means all 12 months, not YTD. • This time balance property is only supported for dimensions bound to a block storage cube. Aggregate storage cubes do not support the Weighted Average - Actual_Actual time balance property.	Example 1 For a leap year, you enter values for Jan, Feb, and Mar. February is assumed to have 29 days, and Q1 is assumed to have 91 days. **Value Entered** and **Number of Days** • Jan = 9,000 31 days • Feb = 8,000 29 days • Mar = 8,000 31 days • Q1 = 91 days (the total days for Jan, Feb, and Mar) **Result**: Q1 = 8,341 The average for Q1 is calculated thus: (1) Multiply the value for each month in Q1 by the number of days in that month, (2) Sum these values, and (3) Divide the total by the number of days in Q1. Using 29 for the number of days in Feb, and 91 for the number of days in Q1, the result is: (9,000 times 31 plus 8,000 times 29 plus 8,000 times 31) divided by 91 = 8,341. Example 2 For a non-leap year, you enter values for Jan, Feb, and Mar. February is assumed to have 28 days, and Q1 is assumed to have 90 days. **Value Entered** and **Number of Days** • Jan = 9,000 31 days • Feb = 8,000 28 days • Mar = 8,300 31 days • Q1 = 90 days (the total days for Jan, Feb, and Mar) **Result**: Q1 = 8,344 Using 28 for the number of days in Feb, and 90 for the number of days in Q1, the result is: (9,000 times 31 plus 8,000 times 28 plus 8,000 times 31) divided by 90 = 8,344.
CUSTOM	Spreading is disabled and the application designer is expected to add customized spreading. For instance, you can feed a value into the period total (Q1) using Groovy rules and it will calculate the summary time periods using the Flow method.	NA

Table 14-1   (Cont.) Examples: The Effect on Data of Entering or Changing a Currency or Non-currency Value

Time Balance Property of the Account	New Value Distribution	Examples
DISABLE	Spreading is disabled and the summary time period is read-only. Disable prevents data from being entered on non-level zero periods. The Flow method is used to aggregate into the period total (Q1), but it won't spread down to the summary time periods.	NA

> **Note:**
>
> The **Skip** option does not apply to data spreading but affects only the calculation of the member hierarchy.

If you change a percentage:

Regardless of account type, existing distribution, or 4-4-5 setting, the value is spread evenly across its children. If the changed cell is the last child of its parent time period, the value is copied upward to its parent.

Example 1

You change Qtr 1 from 10 to 20.

Result: Jan, Feb, and Mar also change to 20. However, Year Total does not change because Qtr 1 is not its last child.

Example 2

You change Feb from 10 to 20.

Result: Jan and Mar do not change because neither one is a child or parent of Feb. Qtr 1 (and therefore Year Total) does not change because Feb is not its last child.

Example 3

You change Qtr 4 from 30 to 20.

Result: Oct, Nov, and Dec also change to 20 because the value is copied to Qtr 4's children. Year Total also changes to 20 because Qtr 4 is its last child.

> **Note:**
>
> See Adjusting Cell Values and Spreading with Multiple Currencies.

Spreading with Multiple Currencies

When data is spread from a parent member to children of mixed currencies, the children assume the currency type of the parent time period.

Data is spread as described in How Spreading Data Works.

When currencies are mixed and a child time period is changed, the currency of the parent time period assumes the currency type of the child only if that time period does not contain children with multiple currencies.

Locking Cells

When spreading or manipulating data, you can temporarily lock cells while Planning calculates and fills in other values.

You can review the changes before saving them. See Examples of Spreading Data with Cell Locking.

To temporarily lock values:

1. Select the cells to lock.

2. Click **Data**, and then **Lock**.

   A lock icon indicates that a cell is locked. If you lock multiple cells, some of which are already locked, all the unlocked cells become locked.

   You can now spread or manipulate the other data. (See Spreading Data for Time Periods and How Spreading Data Works.)

3. To unlock cells, click **Lock** again.

   Clicking **Lock** unlocks all cells in a group only if they were all locked (or were read-only for another reason). When you save the data, locked cells become unlocked.

Examples of Spreading Data with Cell Locking

To learn how data is spread when cells are locked, see these examples.

Example 1

Before locking and spreading, Account A has these values:

	Jan	Feb	Mar	Q1
Account A	100	100	100	300

You then lock the Feb and Mar values at 100 and change Q1 from 300 to 600. Because Jan, Feb, and Mar must now total 600, and Feb and Mar are locked at 100 each, Planning calculates Jan to be 400 and fills in that value:

	Jan	Feb	Mar	Q1
Account A	400	100	100	600

Example 2

Before locking and spreading, Account B has these values:

	Q1	Q2	Q3	Q4	YearTotal
Account B	100	100	100	100	400

You then lock Q1 and Q2 values at 100 each and change Year Total from 400 to 800. Because the yearly total must equal 800, and Q1 and Q2 are locked at 100 each, Q3 and Q4 are calculated to be 300 each:

	Q1	Q2	Q3	Q4	YearTotal
Account B	100	100	300	300	800

Spreading Values Using Grid Spread

If your administrator has enabled **Grid Spread** as a form property, you can specify an amount or percentage by which values across multiple dimensions on the form are increased or decreased, based on the existing values in the target cells.

You immediately see the result in the form and can save the new data or discard it. When calculating the spread data, Planning ignores read-only and locked cells and cells that have Supporting Detail. Data integrity is ensured by spreading values only to cells you have write permission to.

> **✎ Note:**
>
> The **Time Balance** property setting affects how data is spread with the **Fill** option. See How Spreading Data Works.

To spread values using **Grid Spread**:

1. Place the cursor in the Subtotal or Total source cell whose value you want to spread to target cells.

2. Click **Data**, and then **Spread**.

3. In **Adjust By**, enter the change factor:

   - To change values by a specified amount, click [+/-]. Precede the value by a minus sign to decrease the value.

   - To change values by a percentage, click [%].

4. Click a spreading pattern:

   - **Proportional spread:** Spreads the value proportionally, based on the existing values in the target cells (default).

   - **Evenly split:** Spreads the value evenly among the target cells.

- **Fill:** Replaces the value in all target cells.

5. Click **Apply**.

   The specified value or percentage is spread across the target cells, replacing former values with new ones.

6. Click **Save**.

Spreading Values Using Allocations

Using **Allocate**, you can mass allocate data to multiple cells, even across dimensions.

Notes:

- You can't undo a mass allocation of values.
- The **Time Balance** property setting affects how data is spread with the **Fill** option. See How Spreading Data Works.

If your administrator assigned the Mass Allocate role to you and selected the **Enable Mass Allocate** property for your forms, you can spread data using **Allocate**. You can allocate data to all the source cell's descendants, allocate across multiple dimensions, and spread data even to cells not displayed on the form. In fact, you need not have write permission to the target cells.

To spread values using **Allocate**:

1. Place the cursor in the Subtotal or Total cell whose value you want to spread.

2. Click **Data**, and then **Allocate**.

3. In **Adjust By**, enter the change factor:

   - To change values by a specified amount, click [+/-]. Precede the value by a minus sign to decrease the value.

   - To change values by a percentage, click [%].

4. Click **Spread Type** for allocating the specified value or percentage across the target cells, as described in the following table.

   Table 14-2   Spread Types for Allocate

Spread Type	Description
Proportional Spread	Spreads the value proportionally, based on the existing values in the target cells (the default).
Relational Spread	Spreads into the selected cells, based on values in a different source location. Selecting this option displays the currently selected members for each dimension in the **Selected** column. Under **Relative**, select the members that identify the base values to be spread, creating a pattern based on the existing values in the relative cells. To select members, use the **Member Selector**. See Working with Members in *Administering Planning*.
Evenly Split	Spreads the value evenly among the target cells.
Fill	Replaces the value in all target cells.

5. Click **Spread**.

15

Working with Supporting Detail

Related Topics

- About Using Supporting Detail
  If you want to build logic into how a cell value is calculated, you can use the built-in calculator, called **Supporting Detail**, to develop that value and save your assumptions behind the value.

- More About Supporting Detail
  Supporting Detail helps you build and understand the assumptions behind data in a form.

- Adding Supporting Detail
  Use **Supporting Detail** to set how detail items aggregate to cell values.

- Pasting Multiple Cells into the Supporting Detail Window
  You can copy Supporting Detail from multiple cells in Microsoft Excel or another product and paste it into the **Supporting Detail** window.

About Using Supporting Detail

If you want to build logic into how a cell value is calculated, you can use the built-in calculator, called **Supporting Detail**, to develop that value and save your assumptions behind the value.

Watch this video to learn how to create Supporting Detail.

 Adding Plan Information in Planning

For example, say you want to plan for—using your own logic—the travel expenses for an upcoming quarter. This example shows how you could use **Supporting Detail** to plan travel expenses:

Supporting Detail

	Operator	FY13 Jul	FY13 Aug	FY13 Sep
⊟ AirFare	+	2400.0	3600.0	6000.0
CustomerVisits	+	2.0	3.0	5.0
AverageRate	*	1200.0	1200.0	1200.0
⊟ Hotel	+	450.0	900.0	1500.0
NumberOfNights	+	3.0	6.0	10.0
RatePerNight	*	150.0	150.0	150.0
Total		2850.0	4500.0	7500.0

You can include text, numbers, and operators that define how data is calculated. See Adding Supporting Detail.

More About Supporting Detail

Supporting Detail helps you build and understand the assumptions behind data in a form.

For example, you can add Supporting Detail for Pens: ballpoint, fountain, marker, and so on. The Pen member can then display the total for all pen types.

About Supporting Detail:

- Cells with Supporting Detail have a teal background.

- Supporting Detail does not add members to the form or change its organization.

- You must have write permission to cells that you create Supporting Detail for.

- To protect the Supporting Detail, the aggregate values in cells having Supporting Detail are read-only.

- You can add Supporting Detail to target and bottom-up versions.

- You can add Supporting Detail only to base time periods (level-0 members). You can't add Supporting Detail to Summary Time Periods, such as Quarters.

- Number and precision formatting is not reflected in the **Supporting Detail** window.

- The sequence of operators follows the same logic as is used to process multiple operators in a complex calculation. See Order of Supporting Detail.

- You can print Supporting Detail.

- Your administrator can use the Copy Versions functionality to copy Supporting Detail from one version to another.

- Your administrator can copy data, including Supporting Detail, from one dimensional intersection to another. For example, administrators can copy *Budget, FY19, Final* to *Forecast, FY20, First Draft*.

Adding Supporting Detail

Use **Supporting Detail** to set how detail items aggregate to cell values.

To work with supporting detail:

1. Select the cell or cells you want to add supporting detail to.

   You can select contiguous cells in a row or column, but can't include a combination of rows and columns. Select cells that are in the local or input currency so that you can write to them.

2. Click ⬌ , click ⚙ , and then click **Supporting Detail**.

3. From this window, click **Actions**, and then add rows that reflect the structure you want.

   For example, click **Add Child** to add a row directly below the selected item. See Working with the Supporting Detail Structure.

4. For each row, enter a description of up to 1,500 characters.

5. Set the mathematical relationships among the rows by selecting an operator for each row: click in each row's **Operator** cell, and then select from these operators: `+ - * /` and `~`(ignore).

6. Enter data to set or calculate.

   Enter numbers using the same scaling that was set up for the form.

7. Click **Save**.

   Values are dynamically calculated and aggregated before the data is saved. Data on the form is also saved.

See Working with the Supporting Detail Structure.

Working with the Supporting Detail Structure

Learn how to structure the elements in Supporting Detail.

To create or change the Supporting Detail structure:

1. Select a row, and then click one of the following options from **Actions**:

   Table 15-1   Supporting Detail Options

Option	Result
Add Child	Adds an item one level below the selected cell. You can add unlimited children, but consider the potential performance impact.
Add Sibling	Adds an item at the same level as the selected cell. You can add unlimited siblings, but consider the potential performance impact.
Delete	Removes the selected item.
Delete All	Removes all Supporting Detail.
Promote	Moves the selected item to the next-higher level.
Demote	Moves the selected item to the next-lower level.
Move Up	Moves the selected item before its sibling predecessor.

Table 15-1   (Cont.) Supporting Detail Options

Option	Result
Move Down	Moves the selected item after its sibling successor
Duplicate Row	Adds a row below the selected item, duplicating its structure (text, operator, and values)
Fill	When you select contiguous cells and then enter a value in one of the cells, fills the other empty cells

2. Click **Save**.

Save stores the rows, data, and calculated values.

Order of Supporting Detail

The Supporting Detail order affects the resulting value that is saved.

Understanding the calculation order helps you correctly enter Supporting Detail. Supporting Detail leverages the calculation order of + (addition), - (subtraction), * (multiplication), and / (division). A simple Unit times Rates example demonstrates how to correctly enter Supporting Detail.

See Incorrectly Entering Supporting Detail and Correctly Entering Supporting Detail.

Incorrectly Entering Supporting Detail

This example shows the order of rows in Supporting Detail generating incorrect data.

Because Rate in the following table is set to the unary operator +, the calculation order first adds the Rate and then multiplies by the Unit, resulting in incorrect data for Feb and Mar.

	Jan	Feb	Mar
Rate +	250	250	250
Unit *	10		
Total:	2500	250	250

Correctly Entering Supporting Detail

This example shows the order of Supporting Detail generating correct values.

The following table shows the correct order of the Units times Rates calculation, resulting in correct values.

	Jan	Feb	Mar
Unit +	10		
Rate *	250	250	250
Total:	2500		

Verify the Supporting Detail order, ensuring that correct values are calculated and saved.

Totaling When Supporting Detail Cells are Blank

If a data cell in Supporting Detail is blank, Planning ignores it when aggregating values (instead of assuming that a blank cell means zero).

For example, you might define Supporting Detail to calculate the daily rate of hiring an instructor ($250) times the number of days per month for which you plan to hire an instructor (4 in January, but none in February). The Instructor total for Feb is 250, even though you don't intend to hire an instructor in Feb:

	Jan	Feb
Instructor	1000	250
Rate +	250	250
Days	4	

To correctly total values that are aggregated by the * multiplier when some cells are blank, you can leave the Rate cell blank, or enter a zero in the Days cell, instead of leaving it blank:

	Jan	Feb
Instructor	1000	0
Rate +	250	250
Days	4	0

This causes the rate (250) to be multiplied by 0 (zero), resulting in a value of zero for Feb.

Pasting Multiple Cells into the Supporting Detail Window

You can copy Supporting Detail from multiple cells in Microsoft Excel or another product and paste it into the **Supporting Detail** window.

> **Note:**
>
> This functionality is available on desktops only, not on mobile devices.

For example, you can work on Supporting Detail in spreadsheets, and copy it back to Planning.
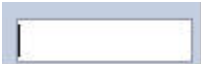
About copying and pasting Supporting Detail:

- The cell range of the data that you paste must exist in the **Supporting Detail** window. Any excess values on the clipboard are ignored when you paste the contents of the clipboard.
- You can copy only the *data* (not the row descriptions or labels) in a range of cells from Microsoft Excel into a range of cells in Supporting Detail.
- The pasted data does not retain the original formatting.

To copy Supporting Detail from a Microsoft Excel worksheet:

1. In Planning, select a cell or range of cells that you want to view or create Supporting Detail for, then click ⊢▪ , then ⚙ , and then click **Supporting Detail**.
2. In **Supporting Detail**, note the range of cells with Supporting Detail, or add cells with Supporting Detail, and then click **OK**.
3. In Excel, select the range of cells containing Supporting Detail, and then press **Ctrl+C** to copy the data.
4. In Planning, open the form to which to add Supporting Detail.
5. Select the cell or cells with the details to modify, and then click **Supporting Detail**.
6. In **Supporting Detail**, click in the gray frame of the range's upper-left cell that you want to paste Supporting Detail to [   ] , and then press **Ctrl+V**.

   In your browser, pressing **Ctrl+V** displays the clipboard. Press **Ctrl+V** again to paste the copied data.
7. Click **Save**.

16
Getting Plans Approved

Related Topics

- **About Approvals**
  Approvals structure the workflow and formalize authority levels as you prepare budget data.

- **Building a Plan with Approval Units**
  Plans are tracked and managed through *approval units*. An approval unit is the basic unit for preparing, annotating, reviewing, and approving plan data.

- **Selecting Approval Units**
  You can view approval units in many ways.

- **Entering Your Plan**
  An administrator kicks off the annual or quarterly planning process by "starting" approval units. Before your approval unit is officially started, you can enter data into it, but the data isn't part of the official planning cycle.

- **About the Review Process**
  The next topics describe the states that approval units can be in and what actions you can take on them.

- **Validating Approval Units**
  Your administrator may have set up data validation rules for the approval unit, so it's a good idea to validate an approval unit before sending the budget to the next reviewer.

- **Changing the Status of an Approval Unit**
  An approval unit changes status each time a reviewer passes the budget to another reviewer. The status of an approval unit is based on what action a reviewer takes to send the budget to another reviewer.

- **Adding or Viewing Approval Unit Annotations**
  Annotations are comments about the data in a started approval unit. Adding annotations helps create an "audit trail" of plan data.

- **Creating Approval Status Reports**

- **When You're Out of the Office**
  If you're out of the office during the budget review process, you can delegate someone else to handle review responsibilities while you are away. You can also include a message.

About Approvals

Approvals structure the workflow and formalize authority levels as you prepare budget data.

Approvals enables you to:

- Review and approve planning data

- Track the progress of the budget

- Identify issues in the review process

- View reviewers' remarks through annotations

- View the promotional path of planning data

- Ensure that the plan data meets data validation rules

Building a Plan with Approval Units

Plans are tracked and managed through *approval units*. An approval unit is the basic unit for preparing, annotating, reviewing, and approving plan data.

Using **Approvals**, you submit your plan data for a particular scenario, version, and entity (or part of an entity). For example, your approval unit might consist of a version (Worst Case), a scenario (Forecast), and an entity (New York).

To prepare for the approvals process, an administrator:

- Sets up approval units, typically based on the company's organization, geographical regions, or product lines.

- Designates who reviews and approves the plan data as the data moves through the organization (the *promotion path*).

- Begins the planning cycle by officially *starting* each approval unit. Its *state* then changes to **Under Review**. In the **Under Review** state, you can enter data (if you own the approval unit), and then **Promote** or **Submit** the approval units when you consider the data ready. After doing so, you can't change the data until you become the owner again.

Approval units that an administrator has started are part of the approvals process and are managed and tracked. When all reviewers approve all approval units, the planning cycle is complete.

To work with approval units, click **Approvals**

on the Home page.

Videos

Your Goal	Watch This Video
Learn about using Approvals.	▶ Overview: Approvals in Enterprise Planning and Budgeting Cloud

Selecting Approval Units

You can view approval units in many ways.

Click ▼ Filter to see:

- Your approval units, click . Only approval units that are Started are displayed.

- Approval units by **Scenario**, **Version**, **Approvals Status**, or **Approval Unit** name, click them.

- Approval units by other properties, click **More** at the bottom, and then select from these options:

- – **Approval Unit Generation**

- – **Validation Status**

- – **User Name**

- – **Current Location**

- – **Current Location's Generation**

- – **Approval Groups**

To view the Approvals page graphically, click . Click to return to the List View.

You can sort approval units by their name, approvals status, or current owner.

> **Tip:**
>
> When you sign in, all the latest Approvals set up information is current. If it's been awhile since you signed in to Planning, click **Refresh**. Doing so ensures that Approvals reflects updates that your administrator may have made since you signed in.

> **Note:**
>
> Administrators can set up approval unit owners and reviewers as groups. See About Group-based Approvals in *Administering Planning*.

Entering Your Plan

An administrator kicks off the annual or quarterly planning process by "starting" approval units. Before your approval unit is officially started, you can enter data into it, but the data isn't part of the official planning cycle.

After your administrator starts your approval units, you can enter data into the selected Scenario, Version, and Entity that comprise it. You can annotate, analyze, and revise an approval unit until you promote or submit it. After that, you can no longer change the data until you become the current owner again.

About the Review Process

The next topics describe the states that approval units can be in and what actions you can take on them.

Related Topics

- • Approval Unit Actions
  Actions available in an approval unit depend on what state the approval unit is in.

- • Approval Unit States
  Each approval unit has a status, depending on where it is in the review process.

- Viewing Approval Unit Totals
  With your administrator's support, you can view the total value of an approval unit. For example, you can see your budget's total before you approve it.

Approval Unit Actions

Actions available in an approval unit depend on what state the approval unit is in.

- **Start**: Starts the approval unit

  New approval unit state: 1st Pass for the free-form template, Under Review for the bottom-up and distributed templates

- **Exclude**: Stops the approval unit and deletes all its history

  New approval unit state: Not Started

- **Originate: Bottom Up**: Moves the approval unit to first in the promotion path

  New approval unit state: Under Review

- **Promote**: The free-form template moves the approval unit to anyone in the list. The bottom-up template moves the approval unit to the next position in the promotion path.

  New approval unit state: Under Review

- **Reject**: The free-form template moves the approval unit to anyone in the list. The bottom-up and distributed templates move the approval unit to anyone previous in the promotion path

  New approval unit state: Not Signed Off

- **Sign Off**: Moves the approval unit to the Signed Off state

- **Delegate**: Delegates the approval unit to a newly selected owner

  New approval unit state: Under Review

- **Take Ownership**: Takes ownership away from the current owner. For Groups, claims ownership of the approval unit from the group.

  New approval unit state: Under Review

- **Return**: Returns ownership to Group

  New approval unit state: Under Review

- **Pass**: When in a group, passes ownership to another person in the group

  New approval unit state: Under Review

- **Freeze**: Freezes the approval unit from data entry

  New approval unit state: Frozen

- **Unfreeze**: Unfreezes the approval unit and allows data entry again

  New approval unit state: Under Review

- **Distribute**: Moves the approval unit to previous in the promotion path

  New approval unit state: Distributed

- **Distribute Children**: Moves the approval unit to previous in the promotion path. Applied to children of the selected approval unit.

  New approval unit state: Distributed

- **Distribute Owner**: Moves the approval unit to first in the promotion path

New approval unit state: Distributed

- **Submit**: Moves the approval unit to next in the promotion path

  New approval unit state: Under Review

- **Submit to Top**: Moves the approval unit to last in the promotion path

  New approval unit state: Under Review

- **Approve**: Approves the approval unit. This completes the approval process, and users can't perform any additional actions.

  New approval unit state: Approved

- **Reopen**: Reopens an approved approval unit. Reopen is available to users and Power Users who are last in the promotion path.

  New approval unit state: Under Review

Approval Unit States

Each approval unit has a status, depending on where it is in the review process.

An approval unit has one of the following status:

- **Not Started**: Initial state of all approval units. An administrator begins the review process using the **Start** action, which changes an approval unit's state to either **First Pass** (in the free-form template); **Under Review** and first in the promotion path (in the bottom-up template); or **Under Review** and last in the promotion path (in the distribute template).

  > **Note:**
  >
  > First and Last in the promotion path are not states but locations of where and who owns the approval unit.

- **1st Pass**: Beginning state of approval units selected for the budgeting process. Approval units have no owners during **First Pass**. People having write permission can enter data and promote approval units during the **1st Pass** state. During this state, administrators may exclude members from approval units.

  When an approval unit is ready for review, you select one of several actions, changing approval unit status and passing ownership. To be notified by email if you become the owner of an approval unit, see Setting Up Email for Notifications and Setting Approvals Options.

  > **Note:**
  >
  > When using the free-form template for approvals, you must assign the next owner.

- **Under Review**: Occurs after a **Promote** or **Submit** action, and means that someone is reviewing the approval unit. Only the current owner or administrators can change data on approval units whose state is **Under Review**. While **Under Review**, approval units may undergo iterations of promotions, submissions, signoffs, and rejections until they are finally approved.

- **Frozen**: All related data in descendant approval units is locked (read only). The owner who froze the approval units, or an owner above that person, selects **Unfreeze** to reverse this action.

- **Distributed**: Multiple people are reviewing the budget. The reviewers are filtered by permissions and specified reviewers for the distribute action selected (**Distribute**, **Distribute Children**, or **Distribute Owner**).

- **Not Signed Off**: Occurs when the owner or administrator selects **Reject**. Only the current owner or administrator can change data or perform an action on an approval unit whose state is **Not Signed Off**.

- **Approved**: Occurs when **Approve** is selected. The last person in the promotional path (the owner of the approval unit) becomes the owner, regardless of whether they are an owner or a reviewer. Owners can edit the data if they have write permission to the member combination that defines the approval unit, and can perform the **Approve** action. Reviewers who are the last person in the promotional path can't edit the data in the approval unit, but can perform the **Approve** action. After all approval units are approved, the budgeting cycle is complete.

Notes:

- In all states except **Not Started**, people with read permission can view data, view the approval state, view the history, and read and add annotations.

- An approval unit may skip approval states.

- The review process can be managed at a higher level with parent approval units.

- Approval unit owners and reviewers can be individuals, or they can be a group. See About Group-based Approvals in *Administering Planning*.

> **✎ Note:**
>
> The actions available when changing approval unit status depend on which Approvals template is selected. For example, when using the distribute template, people can select **Submit** to pass ownership to the next user in the promotional path. When using the bottom-up template, however, **Submit** is not available. Instead, people select **Promote** to pass ownership to the next person in the promotional path. The **Freeze** and **Unfreeze** actions are available only for the bottom-up and distribute templates.

Viewing Approval Unit Totals

With your administrator's support, you can view the total value of an approval unit. For example, you can see your budget's total before you approve it.

To set up an approval unit so that you can view its total value:

- An administrator selects the cube from which the aggregated approval unit values are derived (see Setting Approval Unit Hierarchy Name, Scope, and Template in *Administering Planning*).

- An administrator selects members for all dimensions (see Assigning Approval Unit Owners and Reviewers in *Administering Planning*).

- In a multicurrency environment, you can set the reporting currency to display total approval unit values in. To ensure that the totals are calculated correctly, launch the Currency Conversion business rule.

Validating Approval Units

Your administrator may have set up data validation rules for the approval unit, so it's a good idea to validate an approval unit before sending the budget to the next reviewer.

Click **Validate** for the approval unit. If the validation finds an error, a **Validation** link displays. Click the link to get information on how to correct the error.

The review process follows the promotional path unless an event triggers a change. Events that affect the promotional path include:

- Exceeding or not reaching expense boundaries for budget items such as salaries, new hires, or capital equipment
- The current owner returning the budget to the previous owner for additional information
- The current owner requesting help from an authorized person who is not necessarily on the promotional path

> **Note:**
>
> Selecting **Promote** also runs the validation rules defined for the approval unit. If the conditions in all associated data validation rules are met, the approval unit is promoted to the next owner defined in the approval unit promotional path.

Changing the Status of an Approval Unit

An approval unit changes status each time a reviewer passes the budget to another reviewer. The status of an approval unit is based on what action a reviewer takes to send the budget to another reviewer.

> **Note:**
>
> If the status of a parent approval unit changes, all its children change too, unless they were excluded during the **1st Pass** state or were approved.

To change approval unit status:

1. Click **Approvals**

   on the Home page.

2. Select the approval unit.

   See Selecting Approval Units.

3. From **Action**, select an action, click **Change Status**, and then an **Owner**.

To see the promotion path for the approval unit, click   .

4. Possible **Change Status** actions:

- **Originate**: Changes the ownership of all selected approval units (including all descendants) to the first owner defined for that approval unit in the approval unit hierarchy.

  > ✎ **Note:**
  >
  > The approval unit first owner differs between the Distribute and Bottom Up templates. With the Distribute template, the first owner is the owner at the top of the approval unit hierarchy. With the Bottom Up template, the first owner is an owner at the bottom of the approval unit hierarchy.

- **Start**: Begins the budget process and changes the approval unit status to **First Pass**.

- **Promote**: Passes the approval unit to another person to review. This action assigns ownership of an approval unit the first time, and thereafter transfers ownership of an approval unit from one reviewer to another. **Promote** causes an implicit signoff by the current owner and changes the approval unit status to **Under Review**.

- **Exclude**: Excludes an approval unit from the budget process.

- **Reject**: Indicates the approval unit requires more work from the previous owner. Reject typically requires the previous owner to create another iteration. By default, **Reject** returns approval unit ownership to the previous owner, but you may select the next owner. Reject changes the approval unit status to **Not Signed Off**.

- **Approve**: Approves the approval unit and changes its status to **Approved**. With the Distribute or Bottom Up templates, only the last owner in the promotional path can approve the approval unit. With the Free Form template, a person can approve approval units from any status except **Not Started**. Only the last reviewer in the promotion path can approve from a **Not Signed Off** or **First Pass** status.

  Approving an approval unit is an implicit reviewer signoff. Typically, an approval unit is approved only once. However, an administrator can reopen an approved approval unit.

- **Delegate**: Passes ownership to a person not on the promotional path. Select a person from **Owner** to pass ownership to that person. The specified user selects **Promote** when done to return the budget to the first approver on the promotional path. This action is available with the Bottom Up and Distribute templates.

- **Take Ownership**: Become the owner of the approval unit and any level-0 approval units under a selected parent approval unit. Available to the current user and users above the current approval unit owner in the approval unit hierarchy.

- **Freeze**: Locks all related data in descendant approval units. This action makes all related data read only, but does not change ownership of any approval unit.

- **Distribute**, **Distribute Children**, or **Distribute Owner**: Passes approval unit ownership to multiple people. Distribute actions work differently, depending on the current location of the budget in the approval unit hierarchy. These actions are for an approval unit hierarchy using the Distribute template.

  Distribute assigns ownership to the members at the current level of the approval unit hierarchy. **Distribute Children** assigns approval unit ownership to the children of the

current owner. **Distribute Owner** assigns approval unit ownership to the level-0 owner defined during approval unit hierarchy creation.

- **Sign Off**: Signs off on an approval unit. **Sign Off** does not transfer ownership of the approval unit, but changes its state to **Signed Off**.

- **Submit**: Submits the approval unit to the next level.

- **Submit to Top**: Gives ownership to the top person defined in the hierarchy.

- **Reopen**: Reopens an approved approval unit.

5. Click **Done**.

Adding or Viewing Approval Unit Annotations

Annotations are comments about the data in a started approval unit. Adding annotations helps create an "audit trail" of plan data.

To add an annotation:

1. On the **Approvals** page, click the link to the approval unit.

2. Click **Add Annotation**.

3. Enter an annotation, and then click **Post**.

   The annotation displays under the link. You can respond to an annotation by clicking **Reply**.

> ✎ **Note:**
>
> You can enter a URL that displays as a hyperlink when the annotation is viewed.

Administrators can print annotation reports. See Printing Approval Unit Annotations in *Administering Planning*.

Creating Approval Status Reports

You can view detailed status of the approval process using approval status reports. All users can access this report, however you'll see only the approval units that you have write access to.

Filters allow you to generate more focused reports. You can filter by:

- **Approval Status**
- **Scenario**
- **Version**
- **Approval Unit Hierarchy**
- **Current Location's Generation**
- **Approval Groups**

Approvals status reports provide the following information:

- **Approval Unit**
- **Parent**

- **Status**

- **Sub-Status**

> **Note:**
>
> Sub-status tracks failures that occur while performing actions on the approval unit. Typically failures can include lack of security access, validation rule failures, or other system failures that prevent the action from being completed successfully.

- **Previous Owner**

- **Current Owner**

- **Next Owner**

- **Current Location**

- **Total Value**

- **Last Status Change Date**

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Approval Status Report

Scenario: Plan

Version: Final

Approval Unit	Parent	Status	Sub-Status	Previous Owner	Current Owner	Next Owner	Current Location	Current Location's Generation	Total Value	Last Status Change Date
International Sales	Sales	Not Signed Off	No Additional Approval Required	Ramana Prerepa	Ramana Prerepa	Ramana Prerepa	International Sales	3		11/30/20 10:08 PM
Sales East	Sales	Frozen			Ramana Prerepa	Ramana Prerepa	Ramana Prerepa	Sales East	3		12/1/20 12:17 AM
Sales NorthEast	Sales	Under Review			Ramana Prerepa	Ramana Prerepa	Sales NorthEast	3		11/30/20 10:05 PM
Sales Mid-Atlantic	Sales	Under Review			Ramana Prerepa	Ramana Prerepa	Sales Mid-Atlantic	3		11/30/20 10:05 PM
Sales SouthEast	Sales	Under Review			Ramana Prerepa	Ramana Prerepa	Sales SouthEast	3		11/30/20 10:05 PM
Sales South	Sales	Under Review			Ramana Prerepa	Ramana Prerepa	Sales South	3		11/30/20 10:05 PM
Sales Central	Sales	Under Review		Ramana Prerepa	Ramana Prerepa		Sales	2		12/1/20 12:42 AM
Sales West	Sales	Under Review			Ramana Prerepa	Ramana Prerepa	Sales West	3		11/30/20 10:05 PM

You can generate approval status reports in the following formats:

- XLSX (Excel)

- PDF

- HTML

- XML

To create approval status reports:

1. Click the Navigator icon ▤, and then under **Monitor and Explore**, click **System Reports**.

2. Click **Approval Unit**, and then click **Approval Status**.

3. Make your selections:

   - Under **Select Approval Status**, select the states you'd like to view in the report or select **All**.

- Under **Filters**, select a **Scenario** and then choose the following options:

    – **Version**: Click to open the **Member Selection** dialog and make your selections.

    – **Approval Unit Hierarchy**: This optional filter adds a subset of an approval unit hierarchy.

    – **Current Location's Generation**: This option adds all members of that generation to the report. You can enter generation numbers, generation ranges, or both separated by commas; for example, 1,4,6-9.

    – **Approval Groups**: This option displays the approval groups you select in the report.

- Under **Select Format**, choose a file format (XLSX, PDF, HTML, or XML).

4. Click **Create Report** and select where to save the report.

When You're Out of the Office

If you're out of the office during the budget review process, you can delegate someone else to handle review responsibilities while you are away. You can also include a message.

To delegate review responsibilities, see Setting Approvals Options.

> ✏️ **Note:**
>
> When you return to the office, clear the out of office setting.

17
Working with Reports

Create reports and books to view summaries of key data.

Planning provides two ways to create reports that enable you to summarize your data:

- Reports
- Financial Reporting

Reports

This next-generation cloud-based reporting solution provides a user-friendly, robust report development framework along with an enriched report viewer experience. Reports enables users to insert charts and grids utilizing Oracle Enterprise Performance Management Cloud sources, such as Oracle Essbase as well as ERP Cloud Financials, into a report. This reporting solution works alongside with, and will eventually replace, Financial Reporting.

To work with the Reports functionality, on the Home page click **Reports**, and then click the **Reports** tab on the left side of the page.

See Working with the Reports Reporting Solution.

Financial Reporting

This legacy reporting solution generates highly formatted, book-quality financial and management reports that are GAAP compliant.

To work with the Financial Reporting functionality, on the Home page click **Reports**, and then click the **Financial Reports** tab on the left side of the page.

See Working with Legacy Financial Reports and Books.

Working with the Reports Reporting Solution

Overview of Reports

Reports, which has previously been available as Management Reporting in the Narrative Reporting business process, is now embedded in the Oracle Enterprise Performance Management Cloud Platform business processes and applications alongside, and eventually replacing, Financial Reporting. Reports provides a user-friendly, robust report development framework along with an enriched report viewer experience.

To learn about designing and working with the Reports reporting solution, see the following topics and guides:

- Learning About Reports in *Working with Reports for Oracle Enterprise Performance Management Cloud*

- Learning About Reports in *Designing with Reports for Oracle Enterprise Performance Management Cloud*

Accessing Reports and Viewing the Reports Repository

To view the next-generation Reports, on the Home page, click ![icon], and then click the

Reports tab ![icon] on the left side of the page.

The **Reports** listing page uses the same folder hierarchy as dashboards, infolets, and data entry forms and all artifacts and folders reside under a root folder called **Library**. Reports, books, and bursting definitions are stored in the Reports repository.

> **Note:**
>
> Only administrators can add files (for example, dashboards, infolets, forms, reports, and so on) to the **Library** root folder.

- To search for Reports or a folder, enter search text in the **Search** box at the top of the pane and click ![icon] .

- On the listing page for **Reports**, you can toggle between viewing reports folders in a flat view or a tree view: ![icon] ![icon]

You can also access 3rd party documents used and generated with Books and Bursting under **Documents**. For example, MS Word and PDF documents inserted in Books, and CSV files used in a bursting definition, along with PDF files generated by a bursting definition.

To view the **Documents** repository, on the Home page, click **Reports**, and then click the

Documents tab ![icon] on the left side of the page.

Managing Folders and Reports

Reports are managed on the **Reports** listing page with different view options available. Under **Documents**, you can access and maintain 3rd party documents used and generated with Books and Bursting; for example, MS Word and PDF documents inserted in Books and `.CSV` files used in a bursting definition, along with PDF files generated by a bursting definition.

Reports and Documents are grouped into folders. When viewing the Reports listing you can:

- Search by a report artifact or document

- Filter by a folder. For report artifacts, you can filter by the type (**Report**, **Snapshot**, **Book**, **Bursting Definition**)

- Switch between a folder tree view or a flat list view: ![icon] ![icon]

Report designers can perform the following folder and report management tasks by clicking the ••• icon for folders or for individual reports:

- For folders:
    - **Upload file** (Documents only)
    - **Create Folder**
    - **Delete**
    - **Rename**
    - **Move to**
    - **Assign Permission**

- For reports, books, and bursting definitions:
    - **Open** (reports and books only)
    - **Edit**
    - **Rename**
    - **Copy As**
    - **Delete**
    - **Move To**
    - **Assign Permission**
    - **Copy URL**

- For documents:
    - **Properties**
    - **Copy As**
    - **Delete**
    - **Move to**
    - **Assign Permission**

The **Documents** listing supports the following file types and extensions (the default file size limit is 5mb, except for `.PDF` which supports 100mb):

- Word (`.DOC`, `.DOCX`)
- Excel (`.XLS`, `.XLSX`)
- Comma Separated Values (`.CSV`)
- PDF (`.PDF`)
- Text (`.TXT`)
- PowerPoint (`.PPT`, `.PPTX`)

To upload a 3rd party file in **Documents**:

1. In the **Documents** listing, select a destination folder, then either:
    - Click **Upload** in the top right of the **Documents** panel.
    - Click the ••• icon and select **Upload File**.

2. In **Upload File**, select a file to upload from your local file system, and then click **OK**. The file will be uploaded to the selected folder.

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To download a 3rd party file in **Documents**, in the **Documents** listing, browse to the desired file location and click on the file name to download it.

Reports Books and Bursting

Reports includes books and bursting functionality. Books provide the ability to group together one or more reports, books, and other documents, to generate a single PDF output. Bursting enables you to run a single report or book for more than one member of a single dimension for one data source, and publish a PDF output for each member. You can schedule a bursting definition as a scheduled job. To learn how to work with the books and bursting features in Reports, see the following topics in *Designing with Reports for Oracle Enterprise Performance Management Cloud*:

• Working with Books

• Working with Bursting

To schedule a bursting definition as a scheduled job, see Scheduling Jobs in *Administering Planning*.

Migrating Financial Reporting Reports to Reports

You can migrate Financial Reporting reports to Reports either with in-place migration where you can migrate all or individual reports, or by importing Financial Reporting report files that were exported locally from the Explore Repository. Please note when migrating, the system will convert as many elements of the original report into the Reports equivalent as possible. However, there are differences between the two solutions, and not all elements exist in both solutions. You may have to modify certain elements after the report has been migrated in order to produce a report that is equivalent to the original report.

Financial Reporting will eventually be removed at some future undetermined date, after you have ample time to migrate your content from Financial Reporting to Reports.

See Migrating Reports from Financial Reporting in *Designing with Reports for Oracle Enterprise Performance Management Cloud*.

Managing Fonts in Reports

Oracle recommends that the report designer upload any TrueType fonts that your company uses to produce reports. You can upload individual font files or zipped files containing multiple TrueType fonts to the **Fonts** folder using **Application Settings**.

The font file must be a TrueType font and cannot already exist in the font folder structure. If you do upload a duplicate font, you will receive an error message indicating the duplicate (or invalid) font file. If you uploaded multiple fonts in a zip file, all other valid files are loaded.

When uploading a font, you must ensure whether that font has any variants such as **Regular**, **Italic**, **Bold**, and **Bold Italic** fonts which are part of the font family itself. In this case, you may want to upload the complete font family as a zip file instead of uploading the regular font file that will be used within the system. For more details about font family and its variants, see Microsoft Font library.

To upload fonts in EPM Cloud deployments:

1. From an EPM Cloud service, click **Application**, and then click **Settings**.

   For more information, see What Application and System Settings Can I Specify? in *Administering Planning*.

2. To specify the reporting options, click **Report Settings**.

3. From the Settings page, click **Manage Fonts**.

4. From the Fonts page, click ✚, and then select **Upload File**.

5. Click **Browse** in the Upload File dialog to navigate to the TrueType fonts that you want to upload, and then click **OK**.

> ✎ **Note:**
>
> If you need to upload more than one font, create a zip file. Be aware that it might take some time to perform the upload depending on the size of the font file.

Considerations

The backslash character (\ ) is restricted in Reports.

Working with Legacy Financial Reports and Books

On the Home page, click **Reports**, and then click the Financial Reports tab 📑 on the left side of the page.

An example of a report:

Vision Operations
Account Detail Report

Entity
Forecast
Report Run Date: 18-Jun-19 2:09:56 PM by fin_superuser

	▶Q3	Jul	Aug	Sep	▲Q4	▲Q1	▲Q2	4 Quarter
		FY14			FY14	FY15	FY15	Total
5800: Salaries	474,826	161,175	168,376	145,275	488,306	542,989	540,961	2,047,082
6100: Miscellaneous Employee Expenses	125,072	42,382	44,281	38,410	128,406	144,408	145,198	543,085
6000: Total Employee Expenses	599,899	203,556	212,657	183,685	616,712	687,397	686,159	2,590,167
7110: Advertising	524,574	165,379	178,341	180,854	498,034	819,649	863,798	2,706,055
7120: Public Relations	330,797	107,448	111,205	112,145	329,719	1,320,641	1,156,839	3,137,996
7410: Utilities	885,131	299,470	293,434	292,227	879,095	1,345,518	1,406,329	4,516,072
7420: Rent Expense	1,095,357	370,988	362,738	361,631	1,087,711	1,664,904	1,743,499	5,591,471
7440: Cleaning and Maintenance	863,690	505,049	179,321	179,321	1,786,715	5,400,722	2,235,284	10,286,412
7450: Telephone Expenses	562,368	189,233	188,429	184,706	555,828	845,574	886,612	2,850,382
7460: Office Supplies	324	108	108	108	324	1,205	758	2,611
7510: Postage	224,632	76,351	74,141	74,141	223,427	331,502	345,966	1,125,527
7530: Equipment Expense	273,938	104,865	123,070	46,003	352,926	1,759,339	1,047,733	3,433,937
7003: Total Office Expenses	4,760,811	1,818,891	1,510,785	1,431,135	5,713,779	13,489,055	9,686,818	33,650,464
7620: Legal Services	72,419	39,086	16,667	16,667	136,127	878,777	376,300	1,463,623
7004: Total Facility Services Expenses	72,419	39,086	16,667	16,667	136,127	878,777	376,300	1,463,623
7640: Airfare	116,572	39,468	38,623	38,481	116,290	153,507	173,779	560,147
7650: Car Rental	31,297	10,432	10,432	10,432	31,396	33,423	34,295	130,410
7660: Shipping	1,648,718	707,293	728,858	212,566	616,844	2,080,164	2,624,543	6,970,268
7670: Accommodation	26,459	8,820	8,820	8,820	26,764	36,040	38,950	128,213
7690: Meals	6,312	2,104	2,104	2,104	6,312	9,259	9,805	31,688
7695: Entertainment	5,817	1,939	1,939	1,939	5,817	13,224	13,761	38,619

You can also create report books, which are collections of related reports. See Creating Dynamic Books.

Tutorials

Tutorials provide instructions with sequenced videos and documentation to help you learn a topic.

Your Goal	Learn How
Learn how to run reports and create reports from Ad hoc grids.	Reporting Solutions Overview for Planning

Related Topics

- Types of Financial Reports

- Creating Snapshot Reports and Books

- Fine-Tuning Reports and Books

- Exporting Formatted Reports to Excel

- Creating Dynamic Reports

- Viewing and Updating Dynamic Reports

- Creating Dynamic Books

- Viewing and Updating Dynamic Books

- Displaying the POV Member Selector for a Report

- Using Financial Reporting Reports and Annotations

Types of Financial Reports

Snapshot reports and books display a view of data when the financial report or book was saved, so they show data at a point in time. With dynamic financial reports and books, you view the latest data and can change which data to view.

The icons on the **Financial Reports** page describe their type:

- : Dynamic report, one that you can preview on-the-fly as you create or change it.

- : Snapshot report, which you create in Financial Reporting from a dynamic report. See Creating Snapshot Reports and Books.

- : Dynamic book, a collection of reports that you create in Financial Reporting.

- : Snapshot book, which you create in Financial Reporting from a dynamic book. See Creating Snapshot Reports and Books.

> 💡 **Tip:**
>
> See Exporting Formatted Reports to Excel.

See also *Working with Financial Reporting for Oracle Enterprise Performance Management Cloud*.

Creating Snapshot Reports and Books

You generate snapshot reports and books in several ways.

You can generate a snapshot report either by saving a report in Financial Reporting as a snapshot report, or by scheduling the report in a batch to output as a snapshot. You can generate a snapshot book either by running a book in Financial Reporting and then saving the book as a snapshot book, or by scheduling the book in a batch to output as a snapshot.

> **Note:**
>
> You can open snapshot books only in PDF format.

Fine-Tuning Reports and Books

With dynamic reports and books, you can preview and change them on-the-fly as you create and view them.

For reports and books that have a POV, you can select different POV members to change the context of the presented data. You can create reports of Planning data using ad hoc grids. You can publish related reports as report books in Financial Reporting.

Exporting Formatted Reports to Excel

You can export formatted reports to Microsoft Excel.

1. On the Home page, click **Reports**

   .

2. Select a report to export to Excel.

3. Under **Actions**, click the Excel icon .

4. If the report is dynamic, you can click to display different members in the POV.

5. Click **Continue**, open or save the file, and view the formatted report in Excel.

> **Note:**
>
> You can also export reports to Excel while viewing the report. See Viewing and Updating Dynamic Reports.

Creating Dynamic Reports

You can generate reports of data in ad hoc grids.

For information about working with ad hoc grids, see Using Ad Hoc for Data Entry and Analysis.

> **✏ Note:**
>
> If the ad hoc grid displays collapsed members, the report you create from it also displays as collapsed. So if you want the report to display as expanded, expand the ad hoc grid before you create the report.

1. From an ad hoc grid, click **Save Ad Hoc Grid**, and then **Report**.

   See Creating an Ad Hoc Grid and Accessing an Ad Hoc Grid.

2. Specify a name, and optionally click **Replace** to replace a previous report.

3. To view the report, click **Reports**, then **Refresh**, and then the report or book.

Viewing and Updating Dynamic Reports

You can view a dynamic report in HTML or PDF format. You can update the report by selecting different POV members or by expanding members.

1. On the Home page, click **Reports**

   , and then click the report you want to see.
   You may need to expand a folder containing the report. You can toggle between viewing reports by a flat view or a tree view:

   > **💡 Tip:**
   >
   > Click **Refresh** to see recently-saved reports.

2. Click **HTML**, **PDF**, or **XLS** for the report.

   The POV on the top defaults to the last selected members. See Displaying the POV Member Selector for a Report. If there is no pre-defined member, see Step 4 for selecting POV members.

   For information on the **XLS** option, see Exporting Formatted Reports to Excel.

   Click **Continue**.

3. **Optional**: Select the members you want to display from the Page drop-down list.

4. **Optional**: If you view the report in HTML, you can expand members (for example, expand Q1 to display Jan, Feb, and Mar). Using the **HTML Preview** or **PDF Preview** toggle on the top left of the page, you can then switch to PDF with the expanded report displayed.

5. **Optional**: If you view the report in HTML, you can select different POV members.

   • To search for a member, enter all or part of the name in the text box.

- To change the member data displayed, click .

  See Working with Members in *Administering Planning*.

  > **Note:**
  >
  > To report on sandbox data, select the ConsolidatedData member for the HSP_View dimension. To report on base view data, select the BaseData member of HSP_View. To learn more about sandboxes, see Building a Plan Privately.

- **Optional**: In **HTML Preview**, click **Export in Query-Ready Mode** to export the report to Excel, reflecting the preferences that you set. See Setting Your Report Preferences.

  > **Note:**
  >
  > Clicking **XLS** on the **Reports** page produces a fully-formatted Excel copy of the report, which is not dynamically linked to the source data.

- **Optional**: You can export the report as fully-formatted to Excel. For example, if you've expanded rows and columns, use the **Export to Excel** toggle on the top left of the page.

Creating Dynamic Books

Create books of related Planning reports in Financial Reporting.

> **Note:**
>
> You can open dynamic books in PDF format only.

Viewing and Updating Dynamic Books

You can preview and select different members in a dynamic book that was created in Financial Reporting. If you select different book POV members, the new members replace the POV of reports in the book that used the original POV selection.

For example, if three reports use 2019 as the Year member, and you change the book POV to 2020, the reports display data for 2020.

1. Click **Reports**, and then .

2. To the right of the report you want to work with, under **Actions**, click **HTML** or **PDF**.

   To expand dimensions to the level of detail you want, click **HTML Preview**, and make your changes.

> **⬤ Note:**
>
> To export a formatted report to Microsoft Excel, see Exporting Formatted Reports to Excel.

3. To select different POV members, click ⬚ .

    •   To search for a member, enter all or part of the name in the text box.

    •   To change the member data displayed, click ✏ .

        See Displaying the POV Member Selector for a Report.

4. Click **Continue**.

    The book is generated and displays in a separate window. For example, a PDF book displays in Adobe Acrobat

Displaying the POV Member Selector for a Report

Selecting the **Show POV Options** option on the **Reports** page enables you to select different members in reports that have a POV.

When you click **Reports**

on the Home page, the **Reports** page displays, where you select the report to display. If you select the **Show POV Options** check box on the page and select a report that has a POV, a POV member selector window is displayed.

See Working with Members in *Administering Planning*.

Your selection for this check box applies to all reports in the list that have a POV and persists for the current session, until you log out.

If you clear the **Show POV Options** check box (it's selected by default), the report launches directly, without displaying the POV member selector window. The POV members in the report are the most recently used members on the form, or the dimension's root if there are no most recently used members.

Even if you launch a report directly and bypass the POV member selector window, when the report is displayed, you can still change the members in the POV by clicking a link in the POV and selecting different members.

Using Financial Reporting Reports and Annotations

To view report annotations, enable the corresponding option in Financial Reporting.

Financial Reporting options:

•   Perform an advanced search to find reports

•   Attach repository artifacts to annotations

•   Open annotation attachments

•   Specify annotation access permissions

You can access Financial Reporting by clicking the Navigator's **Manage Reporting** link.

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Using Business Rules

Like formulas in Microsoft Excel, business rules launch specific calculations.

For example, you might launch a business rule to calculate the updated employee expenses for your department. Your administrator sets rules up for you. Your administrator may schedule business rules to run at a set time or at a regular interval. Administrators can also set business rules to automatically launch when you open a form or when you save the data in a form.

Launching Business Rules

You can also run a business rule from within a form or from a task list if your administrator set them up that way.

1. On the Home page, click **Rules**

   .

   Optional: Filter the business rules by cube or type of business rule.

2. To the right of the business rule to run, click **Launch**.

3. If presented with a runtime prompt, enter or select the required information, and then click **Launch**.

   See About Runtime Prompts.

If the rule runs successfully, a message displays and data is updated. The **Jobs** page lists business rules that have recently run or have errors. See Checking Job Status.

About Runtime Prompts

Some business rules prompt you to enter or select information, called a *runtime prompt*.

About runtime prompts:

- The type of information you're prompted for can vary. Examples:
  - One or more members or a range of members. For a range of members, you select from each dimension the designer set (for example: IDescendants("Marketing"),FY19).
  - A number
  - Text
  - An item in a list
  - A dimension or cross-dimension, which is a member combination that includes only one member from each dimension the designer has set (for example: Sales -> Actual -> Jan, which refers to the member intersection of Sales, Actual, and January).
- Your administrator can set up forms to launch business rules when you open or save the form.

- If your administrator enabled the parent member for adding dynamic children, you can create new members by entering their name in the runtime prompt.

  See About Dynamic Members in *Administering Planning*.

- If a business rule has a runtime prompt and the administrator selected **Use Members on Forms**, the default member on the runtime prompt window matches the current member in the page or POV axes of the open form.

- If multiple business rules having runtime prompts are launched when you save the data, enter values for each one, and then click **Launch**.

Runtime Prompts and Approvals

Depending on how your administrator has designed a business rule, for you to run a business rule, you must have write permission to all members selected in runtime prompts and own the affected approval units members.

For example, a business rule can be designed such that, if you have already promoted an approval unit containing entity ABC, you can't change the data for ABC using a runtime prompt. Runtime prompts display only members that you have access to.

Checking Job Status

You can monitor many activities on the **Jobs** page. For example, you can check on the execution status of such jobs as Publish Sandbox, Smart Push, and Refresh.

Notes:

- You can be notified by email when a launched job is in a state such as completed, in error, or if it involves violation errors or warnings. To set up email notifications, see Setting Up Email for Notifications.

- You can't cancel or start a job from the **Jobs** page.

- Administrators can view all jobs and their status. All other users can view only their own jobs and their status.

- You can't delete jobs that are processing.

To check the execution status of jobs:

1. Click **Application**, and then **Jobs**.

2. To filter which jobs display, select any of the following: **Job Type**, **Status**, **Job Name**, **Start Time**, and **End Time**, and then click **Apply**.

3. **Optional: For administrators only**: To remove selected jobs from the list and to remove their job records from the database, click **Delete**.

19
Building a Plan Privately

Related Topics

- [Keeping Your Work Private with Sandboxes](#)
  As you build a plan or create an analysis, you may want to keep your work private as you experiment with various outcomes. Doing this work in a *sandbox* keeps your work private until you're ready to make your numbers public to other users.

- [Using a Sandbox Examples](#)
  Here are some scenarios where sandboxes can help you build plans.

- [Creating and Using Sandboxes](#)

- [Comparing Sandbox Data to Other Data](#)
  You can compare sandbox data against the base view data or the data in other sandboxes in several ways.

- [Publishing Data in a Sandbox](#)
  When you're ready to make your sandbox data public to others who have access to it, you publish the data in it.

- [Sandboxes and Smart View](#)
  You work with sandboxes in Oracle Smart View for Office much like you do in Planning, but you can publish sandbox data only from within Planning.

Keeping Your Work Private with Sandboxes

As you build a plan or create an analysis, you may want to keep your work private as you experiment with various outcomes. Doing this work in a *sandbox* keeps your work private until you're ready to make your numbers public to other users.

For example, you want to see how changing the volume sold for a particular product in January can affect the product revenue for the year and the Total Revenue for the company. Working in a *sandbox*, you can immediately see the effect of your private analyses. You can experiment with numbers, and when they're ready, you *publish* the data in the sandbox. Publishing the data in the sandbox enables other to see the data.

Some basics about sandboxes:

- An administrator must enable cubes and Version members for sandboxes. (See About Sandboxes in *Administering Planning*.)

- Calculations and totals occur instantly as you work.

- When you're working in a sandbox, you're in *sandbox view*. When you're working in a form but not in a sandbox, you're in *basic view* (the default).

- In a single form, you can see the data you modified and the original base data.

- You create a sandbox from within a form or an ad hoc grid. You can have multiple sandboxes and switch among them.

- If you don't want to publish a sandbox, you can delete it. (An administrator can also delete your sandbox.)

Videos

Your Goal	Watch This Video
Learn about analyzing data using sandboxes.	▶ Analyzing Data with Sandboxes in Oracle Planning and Budgeting Cloud

Using a Sandbox Examples

Here are some scenarios where sandboxes can help you build plans.

- You're creating a hiring plan, updating contract versus permanent employee headcount, and assessing the effect of various combinations on expenses and revenues. By analyzing and saving your analyses in a sandbox, your data is available only to you, not to everyone who has access to the affected Entity and Accounts. When you're ready, you make your plan available to others.

- You're planning a project and have finished your expense planning, but you haven't yet planned for the project's revenue. By building this plan in a sandbox, your expense data is exclusive to you until you've also planned the revenue. When you've completed your project's plan, you publish the data in the sandbox.

- You want to privately test different project dates to see their effect on the financials. When you decide on the optimal project dates, you publish the data.

Creating and Using Sandboxes

To create a sandbox:

1. From within a form, click ➕ on the far right.

    Note:

    - When you open a form, the form displays the Version-enabled members in the POV.

    - The names of the sandboxes that you created display in boxes in the POV. To switch to another sandbox, click its name.

    - Only you (and administrators) can see the data that you add or change in a sandbox until you publish it.

2. Enter a unique name.

    The sandbox name displays in bold in the POV.

3. In the sandbox, build your plan or perform your analyses.

    - If you change the data in a cell and then click out of that cell, the cell background turns pale yellow. When you click **Save** to save the data in the sandbox, the yellow background turns pale pink.

    - Clicking **Refresh** loads data from the last saved state. If other people are simultaneously changing data that displays in the current form, you can get the latest data from the base view by clicking **Refresh**.

    - You can switch to other forms or ad hoc grids from the same sandbox.

    - You can compare sandbox data against the base view data or the data in another sandbox. See Comparing Sandbox Data to Other Data.

- You can launch the Calculate Form and Calculate Currencies business rules.

4. To leave the sandbox without publishing its data and return to the base view of the form, click the base version, for example, Working.

   You can also switch to another sandbox by clicking its name in the POV at the top of the form.

5. When you're ready to include your plan in all calculations, and to have others see it, publish its data.

   See Publishing Data in a Sandbox.

> **Note:**
>
> You can delete a sandbox if you don't need it anymore and don't intend to publish its data. To do so, click **x** to the right of the sandbox name.

Comparing Sandbox Data to Other Data

You can compare sandbox data against the base view data or the data in other sandboxes in several ways.

For example:

- Create an ad hoc grid where you put the versions adjacent to each other in the ad hoc grid. For example, to compare the product revenue for Oct, FY15 in MySandbox1 and MySandbox2 against the base data, you could put these dimension members in the columns and rows:

		Dimension Members in Columns		
		HSP_View (BaseData)	HSP_View (ConsolidatedData)	HSP_View (ConsolidatedData)
		Version (Working)	Version (MySandbox1)	Version (MySandbox2)
		FY15	FY15	FY15
		Oct	Oct	Oct
	Volume	100	150	100
Dimension Members in Rows	Unit Price	50	50	80
	Product Revenue	5000	7500	8000

> **Note:**
>
> When you compare data in an ad hoc grid, and version members are on rows or columns, you can change only the base version data. You can't change the data in sandbox versions. To learn more about ad hoc grids, see Using Ad Hoc for Data Entry and Analysis.

- View a side-by-side comparison of sandbox data and base data in a dashboard. Just drag the same form into the dashboard multiple times, and then select to show sandbox data or base data for each instance.

Publishing Data in a Sandbox

When you're ready to make your sandbox data public to others who have access to it, you publish the data in it.

After publishing the data, the sandbox is deleted, and the form changes to base view. The data for members that you updated and published then displays in all forms that display the updated members.

To publish data in a sandbox:

1. From the sandbox, click **Actions**, then **Sandbox**, and then **Publish**.

   The sandbox data is saved to the base form, and the sandbox is deleted.

2. Update calculations by launching the appropriate business rules.

   For example, launch business rules that calculate totals on higher-level members or business rules that are launched when you open or save the form.

Sandboxes and Smart View

You work with sandboxes in Oracle Smart View for Office much like you do in Planning, but you can publish sandbox data only from within Planning.

To work with your sandbox data in Smart View:

1. From your sandbox in Planning, click **Refresh**.

2. In Smart View, select the sandbox from the Page drop-down list, and then click **Refresh**.

   The data from your sandbox displays in Smart View.

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Working with Currencies

You can plan and analyze your data in one currency or in multiple currencies if multicurrencies is supported.

To enable users to enter data using their own currency in a multi-national company, your administrator sets up multiple currencies by creating a Currency member for each currency. For example, the administrator can add two currencies, USD and EUR, and set EUR as the input currency and USD as the reporting currency. The administrator enters the exchange rates by month between each currency and the base currency. The administrator typically designs forms with the Currency dimension on the Page axis, but can put currencies on the row or another axis.

The **Calculate Currency** rule converts the input values from the current currency to the reporting currencies. Forms can be set up to automatically run the **Calculate Currency** rule when you save the data in a form. If this isn't the case, manually launch the rule to convert data from one currency to the reporting currencies. After the **Calculate Currency** rule is run, view the converted values by selecting that currency's member from the Currency dimension.

> **Note:**
>
> You can't enter data into a reporting currency. You can enter data only into a local, or input, currency.

Your administrator can set up either multicurrency option:

- Simplified Multicurrency, in which you enter data into the input currency.
- Standard Multicurrency, in which you enter data into the local currency.

In both multicurrency models, you view or report on data in another currency by selecting the reporting currency.

For more information, see Setting up Currencies.

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Setting Your Preferences

Related Topics

- **Setting Your Preferences**
  You can set preferences to control many aspects of function and display, including how reports and forms are printed.

- **Setting General Preferences**
  On the General tab, you can set your preferred time zone, language, profile picture, out-of-office assistant, and so on.

- **Setting Your Display Preferences**
  You can set how you want numbers formatted, how many members to display on the Page drop-down list, how the members are indented, how dates are formatted, and whether consolidation operators display.

- **Setting Up Email for Notifications**
  You can set which activities you want to be notified of by email when there's a change in task lists, approvals, and the jobs.

- **Setting Ad Hoc Options**
  Control the display and behavior of ad hoc grids by setting your preferences.

- **Setting User Variables**
  User variables act as filters in forms, enabling you to focus only on certain members, such as your department. Before you can open a form, you must set your preferences for the user variables that your administrator has set up.

- **Setting Your Report Preferences**
  You can set preferences for how you want to print and export next-generation Reports and Financial Reporting reports.

- **Setting Your Printing Preferences**
  You can set your preferences for how forms and their data are printed as PDF files.

- **Setting Your Strategic Modeling Preferences**
  You can set your calculation-related preferences for Strategic Modeling.

Setting Your Preferences

You can set preferences to control many aspects of function and display, including how reports and forms are printed.

Videos

Your Goal	Watch This Video
Learn about setting user preferences.	
	Overview: Setting User Preferences in Planning

> **Note:**
>
> The preferences that you set take precedence over the preferences that your administrator set, but you can restore the administrator's setting by clicking **Use Administrator's Settings**.

To set your preferences:

1. On the Home page, click **Tools**

   , and then **User Preferences**

   .

2. Click the tabs on the left to set your preferences.

   - **General**: Set your profile photo, your preferences for time zone, language, which alias table to use, approvals options, including an out of office message, and the display of member names and aliases. See Setting General Preferences.

   - **Display**: Set your preferences for how numbers are formatted, how members are displayed on Page drop-down lists, whether consolidation operators are displayed, and the date format. See Setting Your Display Preferences.

   - **Notifications**: Set your email address and select which activities you want to be notified about: **Task Lists**, **Approvals**, and the **Jobs**. See Setting Up Email for Notifications.

   - **Ad Hoc Options**: Set options for working with ad hoc grids. See Setting Ad Hoc Options.

   - **User Variables**: Select members for user variables that your administrator set up. See Setting User Variables.

   - **Reports**: Set preferences for displaying reports. See Setting Your Report Preferences.

   - **Form Printing**: Set your preferences for how to print data in forms as PDF files. See Setting Your Printing Preferences.

   - **Strategic Modeling**: If Strategic Modeling is enabled, set your calculation-related preferences for Strategic Modeling calculations. See Setting Your Strategic Modeling Preferences.

Setting General Preferences

On the General tab, you can set your preferred time zone, language, profile picture, out-of-office assistant, and so on.

1. On the Home page, click **Tools**

   , and then **User Preferences**

.

2. Click **General**.

3. Set your preferences for:

- Your time zone. You can type ahead, for example, type "PT" for Pacific Time. The default time zone for new users is **(UTC) Reykjavik - Greenwich Mean Time**.

- The language used to display labels and buttons. If you don't select a language, then your browser's locale is used.

- Your profile photo. See Setting Your Profile Picture.

- Which alias table to use and how you want members or their aliases displayed. (Your administrator can set up alias tables and assign alternate names, or aliases, to Account, Currency, Entity, Scenario, Period, Version, Years, and user-defined dimension members. The administrator can set up to 30 aliases per dimension member, including the default alias.)

  See Setting the Display of Member Names or Aliases.

- Your preferences for Approvals, including whether to display aliases and whether to show approval units that aren't yet started. You can also set the out-of-office assistant and set Approvals actions to be in effect when you're away. See Setting Approvals Options.

4. Click **Save**.

Setting Your Profile Picture

Upload a profile picture to display on the Home page and elsewhere within the application.

For example:
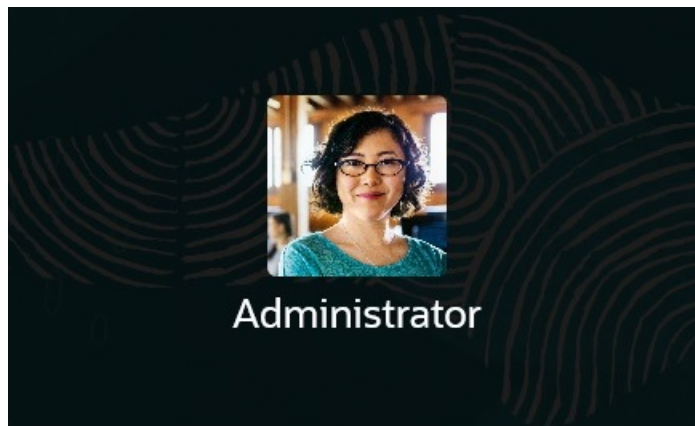
To upload a profile picture:

1. On the Home page, click **Tools**

, and then **User Preferences**

.

2. By **Profile Image**, click **Browse** to find and open the image file.
   The image file can be of type `.png`, `.jpg`, `.jpeg`, or `.gif`.

3. Click **Save**.
   The profile picture displays after you sign out and then sign back in. If the uploaded picture exceeds 100 x 100 pixels, it will automatically be resized.

> **✎ Note:**
>
> Automatic resizing only impacts new profile images that are uploaded in **User Preferences**. Existing profile pictures will not be resized.

Setting the Display of Member Names or Aliases

On the **General** page, you can set which alias table you want to use and how you want the member name or alias displayed.

An *alias* is another, often more descriptive, name for a member. Sets of aliases are stored in *alias tables* that your administrator creates. For example, there may have an alias table for English member names, another alias table for German member names, and so on.

1. On the Home page, click **Tools**

   , and then **User Preferences**

   .

2. Click the **General** tab, and then select an alias table from **Alias Table**.

3. From **Display Member Label as**, select how you want member names to display:

   • **Member Name**

   • **Alias**

   • **Member Name:Alias**

   • **Alias:Member Name**

   • **Default**. If you select **Default**, then the form, grid, or dimension settings determine how member names are displayed.

4. Click **Save**.

Setting Approvals Options

Set your preferences for Approvals, for example, what action to take on approval units when you're out of the office. You can also delegate an alternate reviewer.

To set Approvals options:

1. On the Home page, click **Tools**

   , and then **User Preferences**

   .

2. On the **General** tab, under **Approvals**, select your preferences:

   - **Display Aliases**: Select to display aliases. This option is useful when member names are cryptic.

   - **Show Not Started Approval Units**: Select to display approval units that aren't started with those that are started.

   - **Show Approval Units as Aliases in Approvals Notification**: Select to show approval units as aliases if you've enabled **Approvals** in **Notifications**.

3. If you'll be out of the office, you can select **I am currently out of the office** to set what action to take on approval units while you're out. Doing so keeps the budget review process moving when you're away.

   Set what action to take when you're out:

   - **Promote**: Promote the approval unit.

   - **Reject**: Reject the approval unit.

   - **Submit**: Submit the approval unit.

   - **Delegate**: Select to designate an alternate reviewer to handle your review responsibilities while you're away. You can also include a message for the reviewer in the **Message** text box.

4. Click **Save**.

When you return to the office, clear the out of office setting.

For more information about Approvals, see Getting Plans Approved.

> **✎ Note:**
>
> You can enable notifications so that you'll automatically get an email when you become the owner of an approval unit or you've been delegated an approval unit. See Setting Up Email for Notifications.

Setting Your Display Preferences

You can set how you want numbers formatted, how many members to display on the Page drop-down list, how the members are indented, how dates are formatted, and whether consolidation operators display.

1. On the Home page, click **Tools**
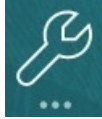
   , and then **User Preferences**

   .

2. Click **Display**, and then set your preferences:

   - Under **Number Formatting**, set how numbers are formatted. Your selections apply to all currencies, in all forms that you have access to. You can't select the same option for the **Thousands Separator** and the **Decimal Separator**.

   - Under **Page Options**, **Indentation of Members**, set how members are indented on the page and how many items you want listed on the Page drop-down list. If you select **Do not indent**, the members are displayed as a flat, sequential list. If the Page drop-down list displays so many items that you have to scroll through the list, you may want to let a lower number of items to display in the **Number of Items on the Page Drop-down** .

   - Under **Other Options**, set whether to show consolidation operators (for example, **Yes**, **No**, or use the **Form Setting**). Also set the **Date Format** (for example, **dd/MM/yyyy**). Selecting **Automatically Detect** sets the date format based on your browser locale. The format you select is used throughout the user interface, including in reports.

     Also, select an option for **Enable User Formulas in Ad Hoc**. Selecting **Yes** allows you to perform calc on the fly without having to submit changes to the database.

   - If your administrator set up multiple currencies, you can set the reporting currency. See Setting the Reporting Currency.

3. Click **Save**.

Setting the Reporting Currency

If your administrator set up multiple currencies and fully defined the approval unit intersection, you can see your total budget's value in the currency you want.

The value is formatted using your preference as described here, or the administrator's settings if the **Use Administrator's Settings** option is selected. The selected reporting currency member determines the precision, scale, and currency symbol settings. If you don't set the reporting currency when there are multiple currencies, the total approval unit value displays in the base currency.

To set the reporting currency:

1. On the Home page, click **Tools**

   , and then **User Preferences**

   .

2. Click **Display**.

3. Under **Other Options**, in the **Currency Code** box, enter the code for the currency.

   For example, enter `YEN`.

4. Click **Save**.

Setting Up Email for Notifications

You can set which activities you want to be notified of by email when there's a change in task lists, approvals, and the jobs.
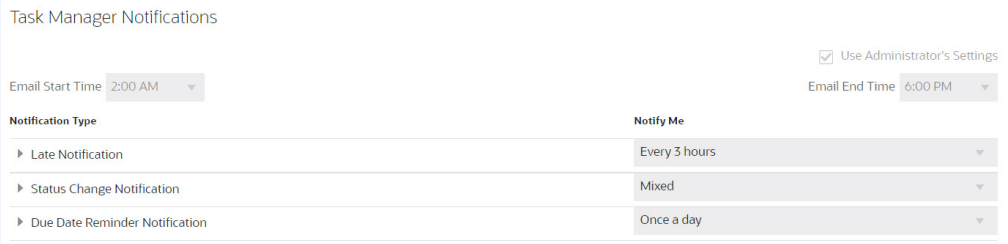
Task Manager notifications are sent to users as a batch the day after the event that triggers the notification. See also, Enabling Email Notifications in Task Manager in *Administering Planning*.

A new user inherits the default email notification settings defined by the Service Administrator. This includes settings for late notifications, status change notifications, and due date reminder notifications. If the Service Administrator has allowed users to define their own email notification settings, any user can do one of the following:

- Continue to use the default settings defined by the Service Administrator by selecting **Use Administrator's Settings**. Any updates that the Service Administrator subsequently makes to email notifications settings will be reflected in the user's settings.

- Customize their email notification settings by using **Notify Me** for one or more settings. If the user does not set a value for one or more settings, those settings will continue to use the default values set by the Service Administrator.

> **Note:**
>
> If the Service Administrator has disallowed users to customize their notification settings, then **Use Administrator's Settings** is disabled.
>
> | Task Manager Notifications | | |
> | --- | --- | --- |
> | | | ☑ Use Administrator's Settings |
> | Email Start Time 2:00 AM ▾ | | Email End Time 6:00 PM ▾ |
> | **Notification Type** | **Notify Me** | |
> | ▸ Late Notification | Every 3 hours | ▾ |
> | ▸ Status Change Notification | Mixed | ▾ |
> | ▸ Due Date Reminder Notification | Once a day | ▾ |

Notifications are sent in these circumstances:

- **Late Notification**: A late notification is sent to users the day after the due date of the task.

- **Status Change Notification**: A notification that the task is ready to be worked on is sent when the task status changes.

- **Due Date Reminder Notification**: A reminder is sent to users a specified number of days before the due date of the task.

To deactivate a notification, clear the **Notifications** check boxes, and under **Notify Me**, select **Never**.

To set up and enable email notifications:

1. On the Home page, click **Tools**, and then **User Preferences**.

2. Click **Notifications**.

3. **Optional:** If you are a Service Administrator, select **Use Administrator's Settings** to prevent any user customizations to the email notification settings. If the Service Administrator selects this checkbox then all the user preference settings will get overwritten by the administrator's settings, that is, the user will inherit the preferences set by the administrator.

4. For **Email Address**, enter your email address.

5. Under **Notifications**, select the application updates for which you want notifications:
   - **Task Lists**
   - **Approvals**
   - **Job Console**

6. Select an **Email Start Time** and **Email End Time**.

7. For a **Notification Type**, select an option for **Notify Me**:
   - **Immediately**

   > ✏ **Note:**
   >
   > If you set **Notify Me** to **Immediately**, the email notifications are sent immediately even when it is outside of the user's email start/end time.

   - **Once a day**
   - **Every 2 hours**
   - **Every 3 hours**
   - **Every 4 hours**
   - **Every 6 hours**
   - **Mixed**
   - **Never**: Select this option to deactivate a notification. Note that this option is only applicable for **Status Change Notification** and **Due Date Reminder Notification**. For **Late Notification**, only the following notification types get this option:
     – **You are the task owner and task assignee is late**
     – **You are the task owner and task approver is late**

8. Click **Save**.

Setting Ad Hoc Options

Control the display and behavior of ad hoc grids by setting your preferences.

1. On the Home page, click **Tools**

, and then **User Preferences**

.

2. Click **Ad Hoc Options**.

3. In the top section, set how members are displayed:

   - **Member inclusion**:

     – **Include selection**: Select to display both the selected member and the members retrieved as a result of the operation. For example, zooming in on the selected member Qtr1 displays data for Qtr1, Jan, Feb, Mar.

     – **Within selected group**: Select to perform an operation such as Zoom only on the selected group of members, leaving unselected cells as is. This setting is meaningful only when there are two or more dimensions down the grid as rows or across the grid as columns. This option pertains to **Zoom**, **Keep Only**, and **Remove Only**.

   - **Zoom in**: Select the level at which to zoom in:

     – **Next level**: Select to get data for the children of the selected members.

     – **All levels**: Select to get data for all descendants of the selected members.

     – **Bottom level** : Select to get data for the lowest level of members in a dimension.

   - **Ancestor Position**: Set how to display ancestors in the hierarchy:

     – **Top**: Select to display member hierarchies in order from highest to lowest level.

     – **Bottom**: Select to display member hierarchies in order from lowest to highest level.

   - **Display Member Label as**: Set whether member names, aliases, or both are displayed.

   - **Alias Table**: Select which alias table to use.

   - **Indentation**: Set how member hierarchy levels are indented:

     – **None**: Select for no indentation.

     – **Subitem**: Select to indent descendants. Ancestors are left-justified in the column.

     – **Totals**: Select to indent ancestors. Descendants are left-justified in the column.

   - **Navigate without refreshing data**: Selecting this option improves performance as you navigate around the grid, for example pivoting and zooming. Just click Refresh when you want to update the data. (If you don't select this option, data is refreshed as you work in ad hoc.)

4. Under **Suppression**, to simplify your view of the data, select options to suppress elements of the grid. For example, you can hide rows or columns with zeros.

- **Zeros**:
  - **Row**: Select to hide rows containing only zeros.
  - **Column**: Select to hide columns containing only zeros.
- **Suppress**:
  - **Repeat members**: Select to hide rows that contain repeated member names, regardless of the grid orientation.
  - **Missing blocks on rows**: Select to hide blocks of cells in rows that have no data.
- **Missing data**: Select to hide rows or columns with zeros or that have no data.
- **No Access**: Select to hide rows or columns that you don't have access to.

> **Note:**
>
> If you get this error when you try to open an ad hoc grid, "Ad hoc grid cannot be opened as there are no valid rows of data", clear the above **Suppression** options.

5. Under **Precision**, set:

- **Use currency member setting**: Select to apply the precision setting of the Currency member.
- Set the minimum and maximum number of decimal positions to display in a cell for currency values, non-currency values, and percentage values. For example, if the cell value is 100, and you select the **Minimum** precision "2", the value displays as "100.00".

6. Under **Replacement**, set labels to display for cells that are missing data, that you don't have access permission to view, or that have invalid data:

- **No Data**: Enter the text that you want displayed for cells that have #Missing or #NoData as their value.
- **No Access**: Enter the text that you want displayed for cells that you don't have access permission to view.
- **Submit Zeros**: Select if you specified #NumericZero as the text for the **No Data** or **No Access** replacement option and you want to submit zeross.

Setting User Variables

User variables act as filters in forms, enabling you to focus only on certain members, such as your department. Before you can open a form, you must set your preferences for the user variables that your administrator has set up.

Administrators can set up user variables to help users focus on those members that they're interested in, such as their department's expenses. For example, your administrator can create a form with entities on the rows and a user variable called Department. You can limit the number of rows displayed on the form by selecting a member for the Department user variable, such as Sales. Later, you can select another member for Department, such as Marketing.

To update user variables:

1. On the Home page, click **Tools**

   , and then **User Preferences**

   .

   The **User Variables** page lists the user variables that the administrator has set up for each dimension and under **Member**, the currently selected member for each variable.

2. Click next to the variable you want to change.

   You can also type a member name directly in the **Member** column for the dimension.

3. Select members by clicking the member or the checkmark in front of it.

4. Click **Save**.

   To learn more, see Selecting User Variables as Members in *Administering Planning*.

Setting Your Report Preferences

You can set preferences for how you want to print and export next-generation Reports and Financial Reporting reports.

1. On the Home page, click **Tools**

   , and then **User Preferences**

   .

2. Click **Reports**.

3. At the top of the page, there are two tabs from which to choose.

   • **Reports** for next-generation Reports

   • **Financial Reports** for Financial Reporting

4. For **Reports**, set these preferences:

Table 21-1   Reports Preferences

Option	Description
Preview POV	When enabled, opening or previewing a report requires you to click ▶ to refresh data.
Unit of Measurement	Select **Inch** or **Centimeter** as the unit of measure.

5. For **Financial Reports**, set these preferences:

Table 21-2   Financial Reporting Preferences

Option	Description
Default Preview Mode	Select whether to preview reports in PDF or HTML format.
User POV Preview	Select **On** to preview selected POV members.
Annotation Printing Preferences	Define how to print annotations in a report, and then click **OK**: • Select **Details**, and then under **Use Footnote Details**, select options to create a system-defined footnote. Generic formatting is applied and system-defined sizes and fonts are used. For example, you can select **Title**, **Description**, **Category**, **Date**, **Author**, **Attachments**, and **Include Replies**. **Note:** If you select **Include Replies**, select whether to include: **All** replies; the **Top** specified number of replies, starting from the initial reply; or the **Bottom** specified number of replies, which prints the initial annotation and the last number of specified replies. Enter the number of replies to print in the provided space. • Select **Text Object** to select a saved text box in the repository that contains the Financial Reporting text function *Footnote*. In the text box for **Use Footnote Text Object**, enter text to use in the footnote function in the report's text object to print annotations. The report designer creates footnote functions. This option provides more flexibility for formatting and printing annotations. For example, the footnote function may specify to print only grid annotations with different size, font, and color to be applied to the heading and content. • Select **None** to print no annotations.
Merge Equivalent Prompts	Select to respond only once or to respond consecutively to prompts and variables that are repeated.
Show Annotations	Select to include annotations in the report.

Table 21-2   (Cont.) Financial Reporting Preferences

Option	Description

Query-Ready Export	Select how reports are exported to Excel:
	
	• **Export Mode**:
	  – **Smart View**: Exports the report to Oracle Smart View for Office (the default). This option launches a link that opens Smart View. To use this option, you must install Smart View. See Working with Business Process Data in Excel.
	  – **Excel Grid**: Opens the exported report in Microsoft Excel, but without the Smart View connection. Under **Export To**, select:
	    * **New Worksheet**: To open the exported report as a new sheet in an existing Excel workbook.
	    * **New Workbook**: To open the exported report as sheet1 in a new Excel workbook.
	  – **Disabled**: Hides the query-ready link when the report is displayed using HTML Preview.
	• Under **Export As**, select either:
	  – **Image**: To generate a .jpg-based .doc file, where the report content is an image for each page in the Word document. The image format will have the same layout as it does in the PDF, but you can't edit the image.
	  – **Document (.docx)**: To generate a .docx file, where the report content is output to the document as text and tables. Charts are rendered as images, which you can edit in Word. However, report components are lost in the layout information; all the components go to left side in a .docx document. If you have two Financial Reporting objects side-by-side, the right-most object is displayed under the left-most object. Some Financial Reporting functions, such as page (), do not work correctly.
	• Under **Export To**, select either:
	  – **New Worksheet**: To open the exported report as a new sheet in an existing Excel workbook.
	  – **New Workbook**: To open the exported report as sheet1 in a new Excel workbook.

6. Click **Save**.

Setting Your Printing Preferences

You can set your preferences for how forms and their data are printed as PDF files.

When designing a form, your administrator sets the form's printing options, for example, whether to include Supporting Detail. You can accept these default settings or set your own preferences for printing PDF files. To print to a PDF file, you must have Adobe Acrobat Reader installed.

> **Note:**
>
> The Print option is only available with Forms 1.0. If you're using Forms 2.0, you can use the browser's print feature or the Excel Print feature in Oracle Smart View for Office if you require printing.

1. On the Home page, click **Tools**

    , and then **User Preferences**

    .

2. Click **Form Printing**.

3. Under **Page Settings**, set your preferences for paper size, layout, fit, and flow. You can also select whether to print in black and white.

4. Under **Options**, set whether to apply:

    *   Formatting

    *   Precision

    *   Supporting Detail. If you include Supporting Detail, specify how to print it:

        –   **Normal Order**: Print Supporting Detail in the same order as on the **Supporting Detail** page, with the parent on top.

        –   **Reverse Order**: Print Supporting Detail in reverse order, with the parent on the bottom.

    *   Comments (text notes associated with cells)

    *   Attribute members, if they're selected in the form

    *   Currency codes, if the form supports multiple currencies per entity

    *   The form name

    *   Repeated row and column headers across pages

    *   The POV/Page

    *   Grid lines

    *   A footer

5. Click **Save**.

Setting Your Strategic Modeling Preferences

You can set your calculation-related preferences for Strategic Modeling.

1. On the Home page, click **Tools**, and then **User Preferences**.

2. Click **Strategic Modeling**.

3. Specify calculation-related user preferences:

- **Suppress funds flow out of balance warning**: Do not generate "Funds Flow Out of Balance" errors when funds flow accounts do not balance in historical periods.

- **Warn for deprecated functions**: Generate warnings if deprecated functions are encountered during calculations.

- **Auto calculate newly selected scenario**: Enable automatic scenario calculation.

- **Suppress zeros on analyze**: Exclude empty cells from calculation, analysis, and audit trail features.

4. Click **Save**.

To learn more, see Setting Preferences in *Working with Strategic Modeling in Smart View*.

A
Predictive Planning Forecasting and Statistical Descriptions

This section describes the forecasting methods and error measures used in Predictive Planning.

Predictive Planning works with valid forms and ad hoc grids to predict performance based on historical data. It uses sophisticated time-series forecasting techniques to create new predictions or validate existing forecasts that were entered using other forecasting methods.

Predictive Planning is available in Planning and as an Oracle Smart View for Office extension.

Videos

Your Goal	Watch This Video
Learn more about Predictive Planning statistical forecasting methods.	▶ Overview: Statistical Forecasting Methods in Predictive Planning

Forecasting Basics

Most historical or time-based data contains an underlying trend or seasonal pattern. However, most historical data also contains random fluctuations (noise) that make it difficult to detect these trends and patterns without a computer. Predictive Planning uses sophisticated time-series methods to analyze the underlying structure of the data. It then projects the trends and patterns to predict future values.

Time-series forecasting breaks historical data into components: level, trend, seasonality, and error. Predictive Planning analyzes these components and then projects them into the future to predict likely results.

In Predictive Planning, a data series is a set of historical data for a single member. When you run a prediction, it tries each time-series method on each of the selected data series and calculates a mathematical measure of goodness-of-fit. Predictive Planning selects the method with the best goodness-of-fit as the method that will yield the most accurate forecast.

The final forecast shows the most likely continuation of the data. All of these methods assume that some aspects of the historical trend or pattern will continue into the future. However, the farther out you forecast, the greater the likelihood that events will diverge from past behavior, and the less confident you can be of the results. To help you gauge the reliability of the forecast, Predictive Planning provides a prediction interval indicating the degree of uncertainty surrounding the forecast.

Forecasting Method Selection and Technique

Predictive Planning uses the following process for forecasting method selection:

- All of the nonseasonal forecasting methods and the ARIMA method are run against the data.

- If the data is detected as being seasonal, the seasonal forecasting methods are run against the data.

- The forecasting method with the lowest error measure (for example, RMSE) is used to forecast the data.

Predictive Planning uses only standard forecasting for time-series forecasting to select the best method. Standard forecasting uses the error measure between the fit values and the historical data for the same period. (Other methods, such as simple lead, weighted lead, and holdout are not used.)

Forecasting Use Cases

In a planning context, time-series forecasting has several uses. The most common use case is to compare the statistical predictions from Predictive Planning against your own forecast. This generally takes place on a three, six, or twelve month time horizon, and can be performed once at the start of a planning cycle, or on a rolling basis as plans are adjusted based on incoming actuals.

In this example, you can see that the prediction is below the forecast for the coming fiscal year. You can also measure how the forecast lies within the prediction's 95% confidence interval (orange band). Using this information, you can decide to adjust the forecast for the fiscal year, or take other actions that mitigate the forecasting gap.
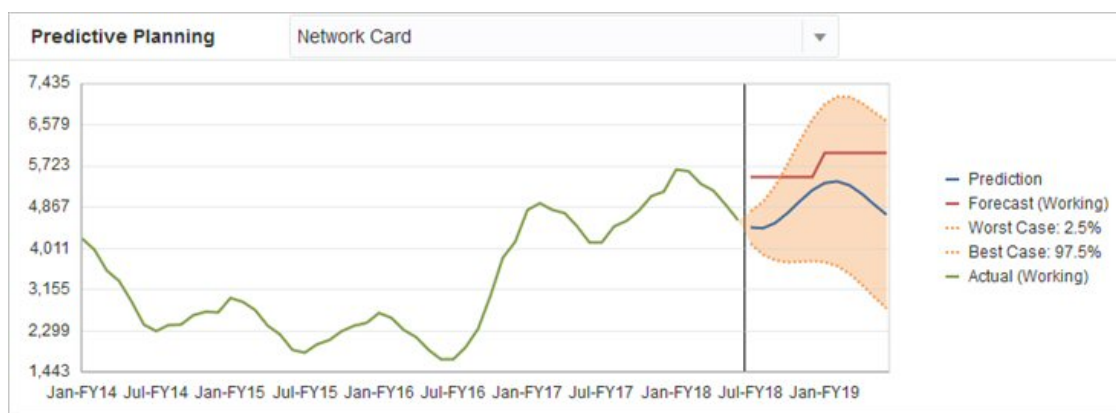
If you haven't supplied a forecast, or can't generate one for the fiscal year, you can decide to use the prediction as your own forecast. You can copy and paste the prediction results into the form and save the results.
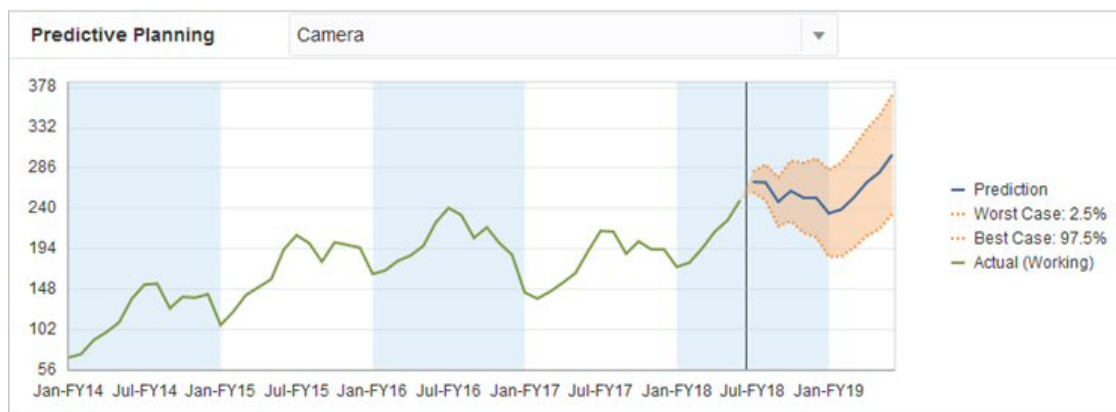
You can also compare the historical predictions against the historical forecasts to determine the accuracy of each, assuming that predictions have been saved in a separate scenario. By

turning on the historical view in the chart, you can gauge how far the forecast (red line) and the predictions (blue line) have diverged from the actuals (green line) in the past. For this member, it appears that the prediction had smaller variance than the forecasts against the actuals.

Classic Time-series Forecasting

Two primary techniques of classic time-series forecasting are used in Predictive Planning:

- Classic Nonseasonal Forecasting Methods: Estimate a trend by removing extreme data and reducing data randomness
- Classic Seasonal Forecasting Methods: Combine forecasting data with an adjustment for seasonal behavior

For information about autoregressive integrated moving average (ARIMA) time-series forecasting, see ARIMA Time-series Forecasting Methods.

Classic Nonseasonal Forecasting Methods

Nonseasonal methods attempt to forecast by removing extreme changes in past data where repeating cycles of data values are not present.

Single Moving Average (SMA)

Smooths historical data by averaging the last several periods and projecting the last average value forward.

This method is best for volatile data with no trend or seasonality. It results in a straight, flat-line forecast.

Figure A-1   Typical Single Moving Average Data, Fit, and Forecast Line
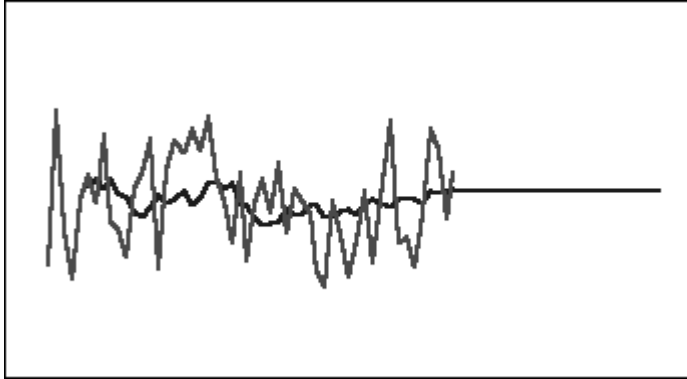
Double Moving Average (DMA)

Applies the moving average technique twice, once to the original data and then to the resulting single moving average data. This method then uses both sets of smoothed data to project forward.

This method is best for historical data with a trend but no seasonality. It results in a straight, sloped-line forecast.

Figure A-2   Typical Double Moving Average Data, Fit, and Forecast Line
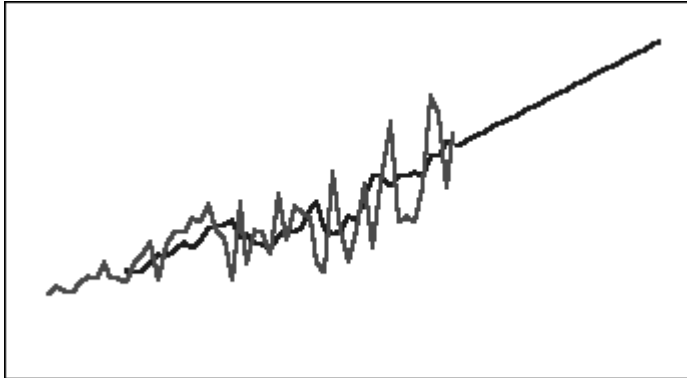
Single Exponential Smoothing (SES)

Weights all of the past data with exponentially decreasing weights going into the past. In other words, usually the more recent data has greater weight. Weighting in this way largely overcomes the limitations of moving averages or percentage change methods.

This method, which results in a straight, flat-line forecast is best for volatile data with no trend or seasonality.

Figure A-3   Typical Single Exponential Smoothing Data, Fit, and Forecast Line
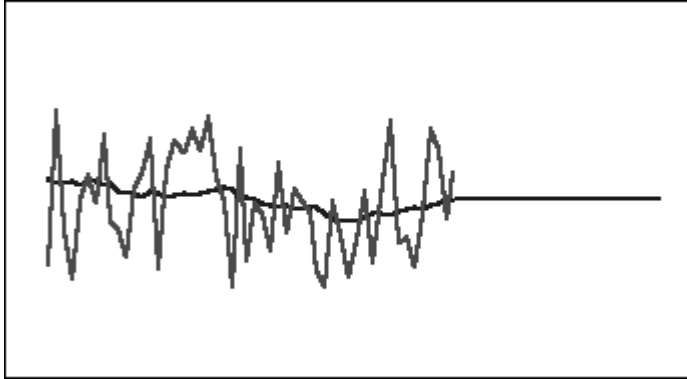
Double Exponential Smoothing (DES)

Applies SES twice, once to the original data and then to the resulting SES data. Predictive Planning uses Holt's method for double exponential smoothing, which can use a different parameter for the second application of the SES equation.

This method is best for data with a trend but no seasonality. It results in a straight, sloped-line forecast.

Figure A-4   Typical Double Exponential Smoothing Data, Fit, and Forecast Line
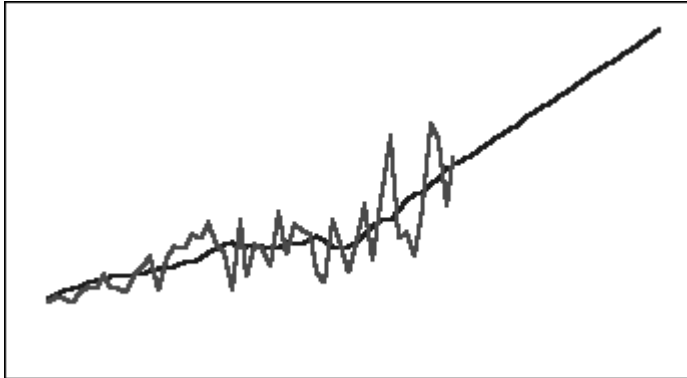
Damped Trend Smoothing (DTS) Nonseasonal Method

Applies exponential smoothing twice, similar to double exponential smoothing. However, the trend component curve is damped (flattens over time) instead of being linear. This method is best for data with a trend but no seasonality.

Figure A-5   Typical Damped Trend Smoothing Data, Fit, and Forecast Line
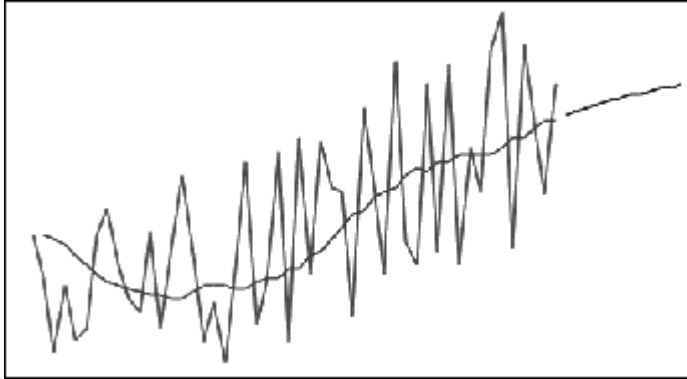
Classic Nonseasonal Forecasting Method Parameters

The classic nonseasonal methods use several forecasting parameters. For the moving average methods, the formulas use one parameter, period. When performing a moving average, Predictive Planning averages over a number of periods. For single moving average, the number of periods can be any whole number between 1 and half the number of data points. For double moving average, the number of periods can be any whole number between 2 and one-third the number of data points.

Single exponential smoothing has one parameter: alpha. Alpha (a) is the smoothing constant. The value of alpha can be any number between 0 and 1, not inclusive.

Double exponential smoothing has two parameters: alpha and beta. Alpha is the same smoothing constant as described above for single exponential smoothing. Beta (b) is also a smoothing constant exactly like alpha except that it is used during second smoothing. The value of beta can be any number between 0 and 1, not inclusive.

Damped trend smoothing has three parameters: alpha, beta, and phi (all between 0 and 1, not inclusive).

Classic Seasonal Forecasting Methods

Seasonal forecasting methods extend the nonseasonal forecasting methods by adding an additional component to capture the seasonal behavior of the data.

Seasonal Additive

Calculates a seasonal index for historical data that does not have a trend. The method produces exponentially smoothed values for the level of the forecast and the seasonal adjustment to the forecast. The seasonal adjustment is added to the forecasted level, producing the seasonal additive forecast.

This method is best for data without trend but with seasonality that does not increase over time. It results in a curved forecast that reproduces the seasonal changes in the data.

Figure A-6   Typical Seasonal Additive Data, Fit, and Forecast Curve without Trend
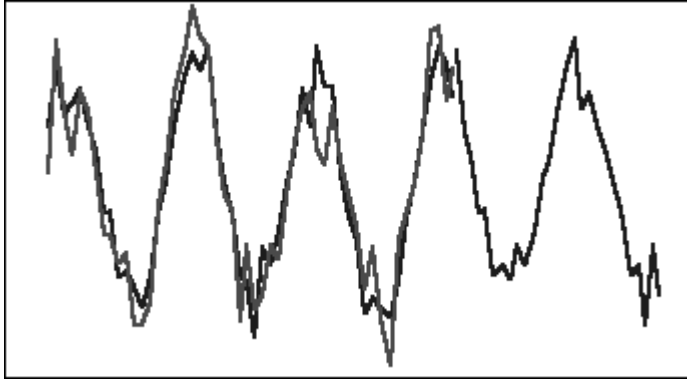
Seasonal Multiplicative

Calculates a seasonal index for historical data that does not have a trend. The method produces exponentially smoothed values for the level of the forecast and the seasonal adjustment to the forecast. The seasonal adjustment is multiplied by the forecasted level, producing the seasonal multiplicative forecast.

This method is best for data without trend but with seasonality that increases or decreases over time. It results in a curved forecast that reproduces the seasonal changes in the data.

Figure A-7   Typical Seasonal Multiplicative Data, Fit, and Forecast Curve without Trend
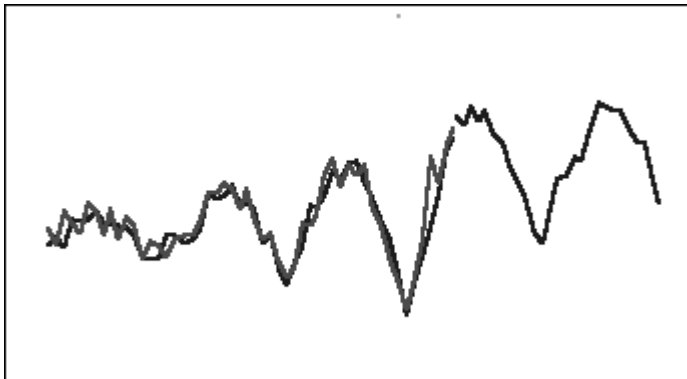
Holt-Winters' Additive

Is an extension of Holt's exponential smoothing that captures seasonality. This method produces exponentially smoothed values for the level of the forecast, the trend of the forecast, and the seasonal adjustment to the forecast. This seasonal additive method adds the seasonality factor to the trended forecast, producing the Holt-Winters' additive forecast.

This method is best for data with trend and seasonality that does not increase over time. It results in a curved forecast that shows the seasonal changes in the data.

Figure A-8   Typical Holt-Winters' Additive Data, Fit, and Forecast Curve
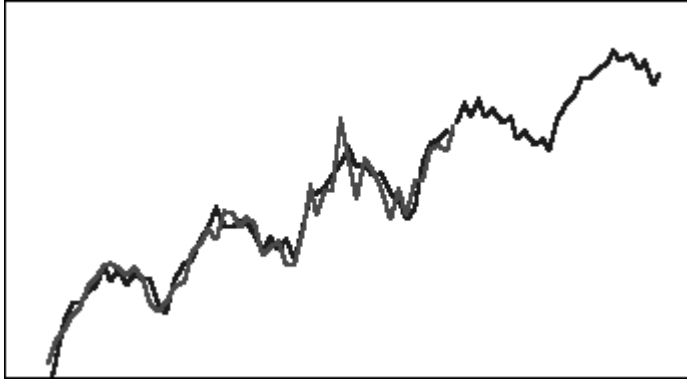
Holt-Winters' Multiplicative

Is similar to the Holt-Winters' additive method. Holt-Winters' Multiplicative method also calculates exponentially smoothed values for level, trend, and seasonal adjustment to the forecast. This seasonal multiplicative method multiplies the trended forecast by the seasonality, producing the Holt-Winters' multiplicative forecast.

This method is best for data with trend and with seasonality that increases over time. It results in a curved forecast that reproduces the seasonal changes in the data.

Figure A-9   Typical Holt-Winters' Multiplicative Data, Fit, and Forecast Curve
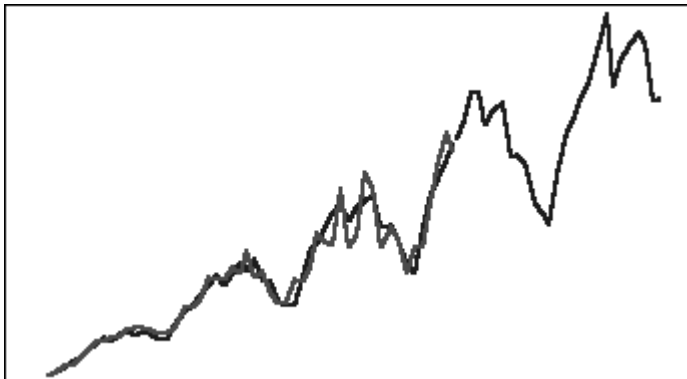
Damped Trend Additive Seasonal Method

Separates a data series into seasonality, damped trend, and level; projects each forward; and reassembles them into a forecast in an additive manner.

This method is best for data with a trend and with seasonality. It results in a curved forecast that flattens over time and reproduces the seasonal cycles.

Figure A-10   Typical Damped Trend Additive Data, Fit, and Forecast Curve
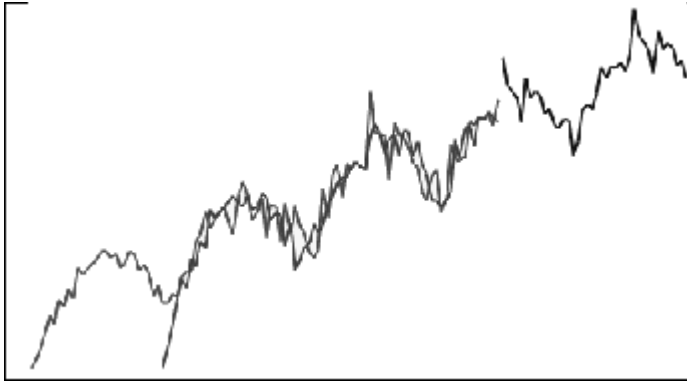
Damped Trend Multiplicative Seasonal Method

Separates a data series into seasonality, damped trend, and level; projects each forward; and reassembles them into a forecast in a multiplicative manner.

This method is best for data with a trend and with seasonality. It results in a curved forecast that flattens over time and reproduces the seasonal cycles.

Figure A-11   Typical Damped Trend Multiplicative Data, Fit, and Forecast Curve
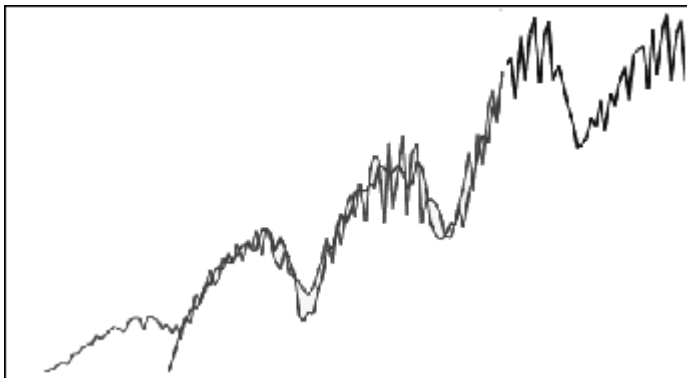
Classic Seasonal Forecasting Method Parameters

The seasonal forecast methods use the following parameters:

- alpha (α): Smoothing parameter for the level component of the forecast. The value of alpha can be any number between 0 and 1, not inclusive.

- beta (β): Smoothing parameter for the trend component of the forecast. The value of beta can be any number between 0 and 1, not inclusive.

- gamma (γ): Smoothing parameter for the seasonality component of the forecast. The value of gamma can be any number between 0 and 1, not inclusive.

- phi (Φ): Damping parameter; any number between 0 and 1, not inclusive.

Each seasonal forecasting method uses some or all of these parameters, depending on the forecasting method. For example, the seasonal additive forecasting method does not account for trend, so it does not use the beta parameter.

The damped trend methods use phi in addition to the other three.

ARIMA Time-series Forecasting Methods

Autoregressive integrated moving average (ARIMA) forecasting methods were popularized by G. E. P. Box and G. M. Jenkins in the 1970s. These techniques, often called the Box-Jenkins forecasting methodology, have the following steps:

1. Model identification and selection

2. Estimation of autoregressive (AR), integration or differencing (I), and moving average (MA) parameters

3. Model checking

ARIMA is a univariate process. Current values of a data series are correlated with past values in the same series to produce the AR component, also known as p. Current values of a random error term are correlated with past values to produce the MA component, q. Mean and variance values of current and past data are assumed to be stationary, unchanged over time. If necessary, an I component (symbolized by d) is added to correct for a lack of stationarity through differencing.

In a nonseasonal ARIMA(p,d,q) model, p indicates the number or order of AR terms, d indicates the number or order of differences, and q indicates the number or order of MA terms. The p, d, and q parameters are integers equal to or greater than 0.

Cyclical or seasonal data values are indicated by a seasonal ARIMA model of the format:

SARIMA(p,d,q)(P,D,Q)(t)

The second group of parameters in parentheses are the seasonal values. Seasonal ARIMA models consider the number of time periods in a cycle. For a year, the number of time periods (t) is 12.

> **Note:**
>
> In Predictive Planning charts, tables, and reports, seasonal ARIMA models do not include the (t) component, although it is still used in calculations.
>
> Predictive Planning ARIMA models do not fit to constant datasets or datasets that can be transformed to constant datasets by nonseasonal or seasonal differencing. Because of that feature, all constant series, or series with absolute regularity such as data representing a straight line or a saw-tooth plot, do not return an ARIMA model fit.

Estimation of ARIMA Model Coefficients

For a given ARIMA model, Predictive Planning uses the unconditional least square method to estimate model coefficients. Instead of using matrix algebra, a simpler iterative scheme is used (Box, G. E. P., Jenkins, G. M., and Reinsel, G. C. Time Series Analysis: Forecasting and Control. 4th ed. Hoboken, NJ: John Wiley & Sons. 2008.).

ARIMA Equations

- Equation for a p-th order autoregressive (AR) model — that is, AR(p) model:

$$y_t = C + \phi_1 y_{t-1} + \phi_2 y_{t-2} + \dots + \phi_p y_{t-p} + \varepsilon_t$$

Where $\{y_t\}$ is the data on which the ARMA model is to be applied. That means, the series is already power-transformed and differenced, in that order. The parameters ϕ_1, ϕ_2 and so on are AR coefficients.

- Equation for a q-th order moving average (MA) model — that is, MA(q) model:

$$y_t = C + \varepsilon_t - \theta_1 \varepsilon_{t-1} - \theta_2 \varepsilon_{t-2} - \dots - \theta_q \varepsilon_{t-q}$$

Where $\{y_t\}$ is as defined previously and θ_1, θ_2 and so on are MA coefficients.

- Equation for an ARMA(p,q) model:

$$y_t = C + \phi_1 y_{t-1} + \phi_2 y_{t-2} + \dots + \phi_p y_{t-p} + \varepsilon_t - \theta_1 \varepsilon_{t-1} - \theta_2 \varepsilon_{t-2} - \dots - \theta_q \varepsilon_{t-q}$$

Where $\{y_t\}$, ϕ_1, ϕ_2..., θ_1, θ_2... are as defined previously.

- Equation for a SARMA(p,q)(P,Q) model (seasonal):

$$y_t = C + \sum_{i=1}^{p} \phi_i y_{t-i} + \sum_{i=1}^{P} \Phi_i y_{t-is} + \varepsilon_t - \sum_{i=1}^{q} \theta_i \varepsilon_{t-i} + \sum_{i=1}^{Q} \Theta_i \varepsilon_{t-is}$$

Where $\{y_t\}$, $\{\phi\}$, and $\{\theta\}$ are as defined previously, and $\{\Phi\}$ and $\{\Theta\}$ are the seasonal counterparts.

ARIMA Constants

The constant term in an ARIMA equation introduces deterministic trend into the model and extends that trend indefinitely into the future. If the model includes a single difference (either nonseasonal or seasonal) and the constant term is present, the trend is linear, where a twice-differenced model has quadratic trend. The AutoSelect setting for ARIMA constants in the Predictor ARIMA Options dialog leaves out the constant term in the model if it contains one or more nonseasonal or seasonal differences.

When the constant term is included in the model, the value of the term is calculated by the following equation:

$$C = \mu \times \left(1 - \sum \phi_i\right)\left(1 - \sum \Phi_i\right)$$

Where ϕ_i are nonseasonal AR coefficients, Φ_i are seasonal AR coefficients, and μ is the mean of the series.

Stationarity

ARIMA time-series forecasting assumes that the time series mean, variance, and autocorrelation are stationary over time. This characteristic is called stationarity. If a time series statistic has nonstationarity, it must be adjusted:

- **Nonstationarity in the mean**: In this case, the mean is not constant but drifts slowly. This can be true for both seasonal and nonseasonal series and is removed by differencing the series. The automatic ARIMA implementation of Predictor determines the amount of nonseasonal differencing required to make a series stationary by using repeated KPSS (Kwiatkowski-Phillips-Schmidt-Shin) tests with appropriate alpha values. For seasonal series, repeated Canova-Hansen tests with appropriate alpha values are used.

- **Nonstationarity in variance**: In this case, the time series is heteroscedastic; the variance of the data around the mean changes over time. This nonstationarity in variance is removed by applying the Box-Cox transformation, a special type of power transformation:

$$z_t = \frac{y_t^{\lambda} - 1}{\lambda}$$

, if lambda is not equal to 0

$$= \mathrm{Ln}(y_t)$$

, if lambda equals 0

Where the original series is $\{x_t\}$, the transformed series is $\{z_t\}$, and the power transformation constant is lambda (λ).

Predictive Planning determines a suitable value of lambda with an algorithm that uses the seasonality information to divide the dataset into groups, and then tries to fina a lambda value that renders the variance stationary across groups.

For users who want more control over the Box-Cox transformation, Predictive Planning provides commonly used power-transformation options, such as log transformation (lambda = 0) or square-root transformation (lambda = 0.5), and even a custom transformation with a user-selected lambda between –5 and +5 (inclusive). However, Predictive Planning prevents the use of custom lambda values that would result in transformed values being too large or too small.

Time-series Forecasting Error Measures

One component of every time-series forecast is the data's random error that is not explained by the forecast formula or by the trend and seasonal patterns. The error is measured by fitting points for the time periods with historical data and then comparing the fitted points to the historical data.

RMSE

RMSE (root mean squared error) is an absolute error measure that squares the deviations to keep the positive and negative deviations from cancelling out one another. This measure also tends to exaggerate large errors, which can help eliminate methods with large errors.

IPM Insights Metrics

Related Topics

- IQR (Interquartile Range)

- MAD (Mean Absolute Deviation)

- MAPE (Mean Absolute Percentage Error)
  MAPE is the mean absolute percentage error, which is a relative measure that essentially scales MAD to be in percentage units instead of the variable's units.

- ME (Mean Error)

- Modified Z-Score

- MPE (Mean Percentage Error)

- RMSE (Root Mean Squared Error)

- RPD (Relative Percentage Difference)

- TOTD (Total Deviation)

- TOTPD (Total Percentage Difference)

- Z-Score

- Risk

- Impact Magnitude Thresholds

IQR (Interquartile Range)

IQR is another robust method for labeling outliers. The IQR (interquartile range) method of outlier detection was developed by John Tukey, the pioneer of exploratory data analysis. This was in the days of calculation and plotting by hand, so the datasets involved were typically small, and the emphasis was on understanding the story the data told.

A box-and-whisker plot uses quartiles (points that divide the data into four groups of equal size) to plot the shape of the data. The box represents the 1st and 3rd quartiles, which are equal to the 25th and 75th percentiles. The line inside the box represents the 2nd quartile, which is the median.

The interquartile range, which gives this method of outlier detection its name, is the range between the first and the third quartiles (the edges of the box). Tukey considered any data point that fell outside of either 1.5 times the IQR below the first – or 1.5 times the IQR above the third – quartile to be outside or far out. In a classic box-and-whisker plot, the whiskers extend up to the last data point that is not outside.

The interquartile range (IQR) is a measure of variability, based on dividing a data set into quartiles. Quartiles divide a rank-ordered data set into four equal parts. Q1, Q2 & Q3. IQR is defined as Q3–Q1, and any data lying outside Q3+1.5*IQR or Q1-1.5*IQR is considered as an outlier.
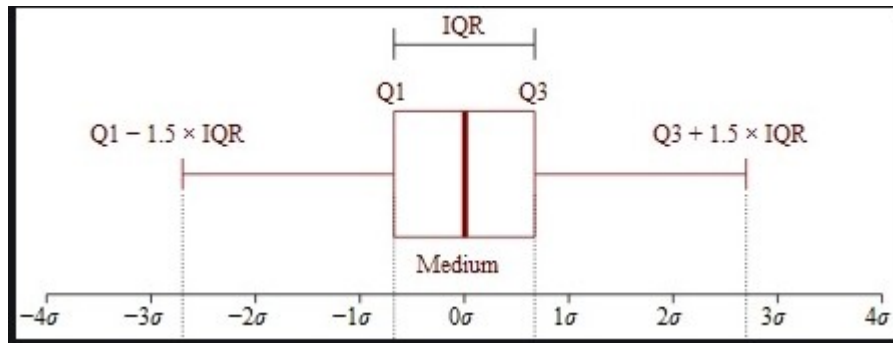
MAD (Mean Absolute Deviation)

Description

Mean Absolute Deviation is a simple extension of the absolute variance. It sums up the absolute variances and divides the result by the number of records. Mean absolute deviation is an error statistic that averages the distance between each pair of actual and fitted data points.

Formula

$$MAD = \frac{\sum |x_i - \bar{x}|}{n}$$

Example

Month	Year	A Actual	F Forecast	A-F Diff	% A-F % Diff	| A-F | Abs Diff
April	2016	49458	44000	5458	11%	5458.3
May	2016	39905	46689	-6784	-17%	6784.3
June	2016	41088	50127	-9040	-22%	9039.8
July	2016	49708	52000	-2292	-5%	2292.1
August	2016	40103	48124	-8020	-20%	8020.5
September	2016	37886	44000	-6114	-16%	6113.7

Mean Absolute Deviation (MAD)	6284.8

MAPE (Mean Absolute Percentage Error)

MAPE is the mean absolute percentage error, which is a relative measure that essentially scales MAD to be in percentage units instead of the variable's units.

Description

Mean absolute percentage error is a relative error measure that uses absolute values to keep the positive and negative errors from canceling one another out and uses relative errors to enable you to compare forecast accuracy between time-series models.

Formula

$$M = \frac{1}{n} \sum_{t=1}^{n} \left| \frac{A_t - F_t}{A_t} \right|$$

MAPE = Average of (abs ((Actual – Forecast)/(Actual)))

Example

		A	F	A-F	% A-F	| A-F |	A-F ^2	| (A-F)/A |
Month	**Year**	**Actual**	**Forecast**	**Diff**	**% Diff**	**Abs Diff**	**Sq of Diff**	**Abs of Error by Actual**
April	2016	49458	44000	5458	11%	5458.3	29792888.7	0.1104
May	2016	39905	46689	-6784	-17%	6784.3	46026936.2	0.1700
June	2016	41088	50127	-9040	-22%	9039.8	81718244.7	0.2200
July	2016	49708	52000	-2292	-5%	2292.1	5253888.9	0.0461
August	2016	40103	48124	-8020	-20%	8020.5	64328075.2	0.2000
September	2016	37886	44000	-6114	-16%	6113.7	37376907.1	0.1614

MAPE	15.1%

ME (Mean Error)

Description

Mean Error (ME) sums up the variances and divides the result by n. An error in this context is an uncertainty in a measurement, or the difference between the measured value and true/correct value.

Formula

Mean Error = Sum of all error values/Number of records

Example

		A	F	A-F
Month	**Year**	**Actual**	**Forecast**	**Diff**
April	2016	49458	44000	5458
May	2016	39905	46689	-6784
June	2016	41088	50127	-9040
July	2016	49708	52000	-2292
August	2016	40103	48124	-8020
September	2016	37886	44000	-6114
			Mean Error	-4465

Modified Z-Score

The Z-score method relies on the mean and standard deviation of a group of data to measure central tendency and dispersion. This is troublesome, because the mean and standard deviation are highly affected by outliers – they are not robust. In fact, the skewing that outliers bring is one of the biggest reasons for finding and removing outliers from a dataset! Another drawback of the Z-score method is that it behaves strangely in small datasets – in fact, the Z-score method will never detect an outlier if the dataset has fewer than 12 items in it.

This motivated the development of a modified Z-score method, which does not suffer from the same limitation. This method works well for skewed data or data that is not normally distributed & where the number of observations is less. MAD is Median Absolute Deviation. A further benefit of the modified Z-score method is that it uses the median and MAD rather than the mean and standard deviation. The median and MAD are robust measures of central tendency and dispersion, respectively.

$$Z = \frac{x - \mu}{\sigma} \qquad M_i = \frac{0.6745(x_i - \widetilde{x_i})}{MAD}$$

MPE (Mean Percentage Error)

Description

MPE is the mean percentage error (or deviation). It is a relative measure that essentially scales ME to be in percentage units instead of the variable's units. The main advantage of MPE is that it lets you compare variances between differently scaled data.

Formula

$$\text{MPE} = \frac{100\%}{n} \sum_{t=1}^{n} \frac{a_t - f_t}{a_t}$$

where at is the actual value of the quantity being forecast, ft is the forecast, and n is the number of different times for which the variable is forecast.

Example

		A	F	A-F	% A-F
Month	**Year**	**Actual**	**Forecast**	**Diff**	**% Diff**
April	2016	49458	44000	5458	11%
May	2016	39905	46689	-6784	-17%
June	2016	41088	50127	-9040	-22%
July	2016	49708	52000	-2292	-5%
August	2016	40103	48124	-8020	-20%
September	2016	37886	44000	-6114	-16%

MPE	**-11.5%**

RMSE (Root Mean Squared Error)

Description

Root Mean Square Error (RMSE) is the standard deviation of the residuals (prediction errors). Residuals are a measure of how far from the regression line data points are; RMSE is a measure of how spread out these residuals are. In other words, it tells you how concentrated the data is around the line of best fit.

Formula

$$RMSE = \sqrt{\sum_{i=1}^{n} \frac{(\hat{y}_i - y_i)^2}{n}}$$

$\hat{y}_1, \hat{y}_2, \ldots, \hat{y}_n$ are predicted values

$y_1, y_2, \ldots, y_n$ are observed values

n is the number of observations

Where f = forecasts (expected values or unknown results) and o = observed values (known results).

Example

Month	Year	Actual	Forecast	Abs Diff	Sq of Diff
April	2016	49458	44000	5458	29789764
May	2016	39905	46689	6784	46022656
June	2016	41088	50127	9039	81703521
July	2016	49708	52000	2292	5253264
August	2016	40103	48124	8021	64336441
September	2016	37886	44000	6114	37380996
				Sum of Sq of Diff	264486642
				RMSE (SQRT(Sum of Sq of Diff)/No of rows))	6639.360436

RPD (Relative Percentage Difference)

Description

The relative percentage difference between two points is calculated by first finding the relative difference between two quantities across different measurements or samples. Subtract one measurement from the other and take the absolute value of this difference.

Formula

$$RPD = \frac{|R1 - R2|}{\left(\frac{R1 + R2}{2}\right)} \times 100,$$

where

$R1$ is sample 1, and

$R2$ is sample 2.

Example

		A	F	(A+F)/2	(A-F)/AVG	
Month	**Year**	**Actual**	**Forecast**	**Average**	**RPD**	**% RPD**
April	2016	49458	44000	46729	0.11681	12%
May	2016	39905	46689	43297	-0.1567	-16%
June	2016	41088	50127	45607	-0.1982	-20%
July	2016	49708	52000	50854	-0.0451	-5%
August	2016	40103	48124	44113	-0.1818	-18%
September	2016	37886	44000	40943	-0.1493	-15%

TOTD (Total Deviation)

Description

It is the total deviation across all the time periods. It is the sum of the first series minus the sum of the second series.

Formula

Difference = A - F

Where F = forecasts (expected values or unknown results) and A = observed values (known results).

Example

Month	Year	Actual	Forecast	Diff
Jan	FY19	174,957	216,947	-41990
Feb	FY19	141,884	153,234	-11351
Mar	FY19	147,111	126,515	20596
Apr	FY19	97,549	89,745	7804
May	FY19	123,094	91,090	32004
Jun	FY19	137,830	124,047	13783
		Total Deviation		**20846**

TOTPD (Total Percentage Difference)

Description

It is the total deviation across all the time periods. It is the total percentage difference between the first series minus the second series.

Formula

% Difference = (SUM(A) – SUM(F))/SUM(A)

Where F = forecasts (expected values or unknown results) and A = observed values (known results).

Example

Month	Year	Actual	Forecast	Diff
Jan	FY19	174,957	216,947	-41990
Feb	FY19	141,884	153,234	-11351
Mar	FY19	147,111	126,515	20596
Apr	FY19	97,549	89,745	7804
May	FY19	123,094	91,090	32004
Jun	FY19	137,830	124,047	13783
		822,425	801,579	2.6%

Z-Score

Description

The Z-score, or standard score, is a way of describing a data point in terms of its relationship to the mean and standard deviation of a group of points. Taking a Z-score is simply mapping the data onto a distribution whose mean is defined as 0 and whose standard deviation is defined as 1.

The goal of taking Z-scores is to remove the effects of the location and scale of the data, allowing different datasets to be compared directly. The intuition behind the Z-score method of outlier detection is that, once we have centered and rescaled the data, anything that is too far from zero (the threshold is usually a Z-score of 3 or -3) should be considered an outlier.

Assuming data is distributed normally (bell shaped curve), Mean + 3*SD (Standard Deviation) will capture 99.7% of the observations. Statistically, any value, which is falling outside this range, is considered as an anomaly.
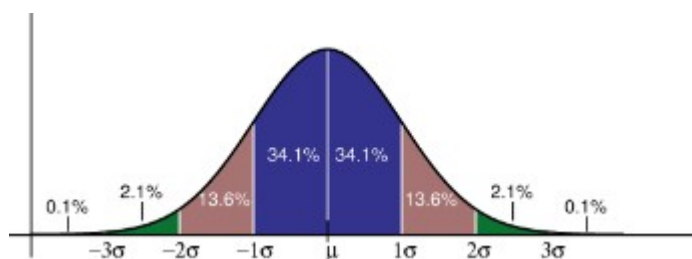
Risk

Description

Measure of risk is the percentile where the aggregated forecast values for the given time horizon fall within the aggregated prediction interval. The risk metric measures how far the forecast values are from the base prediction.

The risk metric measures how far the forecast values are from the base prediction. If the forecast values are closer to the base prediction, it is low risk.

Impact Magnitude Thresholds

Description

When insights are displayed on the Insights dashboard, the **Impact Magnitude Thresholds** setting categorizes insights into High, Medium, and Low groups based on the percentage or absolute value impact calculated for each insight. This helps planners focus attention on the insights that have more extreme variations.

- Anything less than the low value is in the Low category.

- Anything higher than the high value is in the High category.

- Anything between the low and high value is in the Medium category.

For example, if you specify 30% as the Low threshold and 60% as the High threshold, any insight with a percentage impact less than 30% is in the Low category; any insight with a percentage impact greater than 60% is in the High category. Any insight with a percentage impact between 30% and 60% is in the Medium category.

B

Probability Distribution Descriptions for Strategic Modeling Simulations

This appendix explains probability and probability distributions to help you select the most appropriate probability distribution for your Strategic Modeling simulation.

For each uncertain input in a simulation, you define the possible values with a probability distribution. The type of distribution you select depends on the conditions surrounding the input. A simulation calculates numerous scenarios of a model by repeatedly picking values from the probability distribution for the uncertain inputs and using those values to calculate the model.

To select the correct probability distribution:

1. Evaluate the input in question. List everything you know about the conditions surrounding this input. For example, you can gather valuable information about the uncertain input from historical data.

2. Review the descriptions of the probability distributions. This appendix describes each distribution in detail, outlining the conditions underlying the distribution. As you review the descriptions, look for a distribution that features the conditions you have listed for this input.

3. Select the distribution that characterizes this input, where the conditions of the distribution match those of the input.

Normal

Normal

The Normal distribution describes many phenomena such as returns on equity or assets, inflation rates, or currency fluctuations.

Decision-makers can use the normal distribution to describe uncertain inputs such as the inflation rate or periodic returns on assets.

Parameters

- Mean
- Standard Deviation

> **✎ Note:**
>
> Of the values of a normal distribution, approximately 68% are within 1 standard deviation on either side of the mean. The standard deviation is the square root of the average squared distance of values from the mean.

Conditions

Use the normal distribution under these conditions:

- Mean value is most likely.
- It is symmetrical about the mean.
- It is more likely to be close to the mean than far away.

Triangular

Triangular

The Triangular distribution describes situations where you know the minimum, maximum, and most likely values. In the simulation, the minimum and maximum values will never actually occur because their probability is zero.

It is useful with limited data in situations such as sales estimates, inventory numbers, and marketing costs. For example, you could describe the number of cars sold per week when past sales show the minimum, maximum, and usual number of cars sold.

Parameters

- Minimum
- Likeliest
- Maximum

Conditions

Use the triangular distribution under these conditions:

- Minimum and maximum are fixed.
- It has a most likely value in this range, which forms a triangle with the minimum and maximum.

Uniform

Uniform

The Uniform distribution describes situations where you know the minimum and maximum values and all values are equally likely to occur.
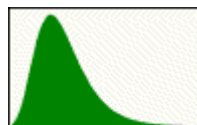
Parameters

- Minimum
- Maximum

Conditions

Use the uniform distribution under these conditions:

- Minimum is fixed.
- Maximum is fixed.
- All values in range are equally likely to occur.

Lognormal

Lognormal

The Lognormal distribution describes many situations where values are positively skewed (where most of the values occur near the minimum value) such as asset and security prices. Such quantities exhibit this trend because values cannot fall below zero but can increase without limit.

Parameters

- Location
- Mean
- Standard Deviation

> **Note:**
>
> If you have historical data available with which to define a lognormal distribution, it is important to calculate the mean and standard deviation of the logarithms of the data and then enter these log parameters. Calculating the mean and standard deviation directly on the raw data does not give you the correct lognormal distribution.

Conditions

Use the lognormal distribution under these conditions:

- Upper and lower limits are unlimited, but the uncertain input cannot fall below the value of the location parameter.
- Distribution is positively skewed, with most values near the lower limit.
- Natural logarithm of the distribution is a normal distribution.

BetaPERT

BetaPERT

The BetaPERT distribution describes situations commonly used in project risk analysis for assigning probabilities to task durations and costs. It is also sometimes used as a smoother alternative to the triangular distribution.

It describes a situation where you know the minimum, maximum, and most likely values to occur. It is useful with limited data. For example, you could describe the number of cars sold per week when past sales show the minimum, maximum, and usual number of cars sold.
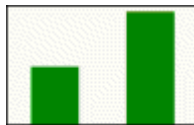
Parameters

• Minimum

• Likeliest

• Maximum

Conditions

Use the betaPERT distribution under these conditions:

• Minimum and maximum are fixed.

• It has a most likely value in this range, which forms a triangle with the minimum and maximum; betaPERT forms a smoothed curve on the underlying triangle.

Yes-No

Yes-No

The Yes-No distribution describes situations that can have only one of two values: for example, yes or no, success or failure, or true or false.

Parameters—Probability of Yes

Conditions

Use the yes no distribution under these conditions:

• For each trial, only 2 outcomes are possible, such as success or failure; the random input can have only one of two values, for example, 0 and 1.

• The mean is p, or probability ($0 < p < 1$).

• Trials are independent. Probability is the same from trial to trial.

Simulation Sampling Methods

During each trial of a simulation, the sampling method selects a random value for each assumption in your model.

Strategic Modeling simulations use one of these sampling methods:

- Monte Carlo—Randomly selects any value from the defined distribution of each assumption.

- Latin Hypercube—Randomly selects values and spreads them evenly over the defined distribution of each assumption.

Monte Carlo Sampling

Monte Carlo simulation randomly and repeatedly generates values for uncertain variables to simulate a model. The values for each assumption's probability distribution are random and totally independent. In other words, the random value selected for one trial has no effect on the next random value generated.

Monte Carlo simulation was named for Monte Carlo, Monaco, whose casinos feature games of chance such as roulette, dice, and slot machines, all of which exhibit random behavior.

Such random behavior is similar to how Monte Carlo simulation selects variable values at random to simulate a model. When you roll a die, you know that a 1, 2, 3, 4, 5, or 6 will come up, but you do not know which for any particular trial. It's the same with the variables that have a known range of values and an uncertain value for any particular time or event (for example, interest rates, staffing needs, stock prices, inventory, phone calls per minute).

Using Monte Carlo sampling to approximate the true shape of the distribution requires more trials than Latin Hypercube.

Use Monte Carlo sampling to simulate real world what-if scenarios for your model.

Latin Hypercube Sampling

Latin Hypercube sampling divides each assumption's probability distribution into non-overlapping segments, each having equal probability.

While a simulation runs, Latin Hypercube selects a random assumption value for each segment according to the segment's probability distribution. This collection of values forms the Latin Hypercube sample. After has sampled each segment exactly once, the process repeats until the simulation stops.

Latin Hypercube sampling is generally more precise when calculating simulation statistics than is conventional Monte Carlo sampling, because the entire range of the distribution is sampled more evenly and consistently. Latin Hypercube sampling requires fewer trials to achieve the same level of statistical accuracy as Monte Carlo sampling. The added expense of this method is the extra memory required to track which segments have been sampled while the simulation runs. (Compared to most simulation results, this extra overhead is minor.)

Use Latin Hypercube sampling when you are concerned primarily with the accuracy of the simulation statistics.