Oracle® Fusion Cloud EPM

Administering Profitability and Cost Management

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1
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 Oracle Fusion 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*.

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3

Getting Started with Profitability and Cost Management

Related Topics

- [About Profitability and Cost Management](#)
  To maximize profitability, a business must be able to accurately measure, allocate, and manage costs and revenue.

- [About Profitability and Cost Management Applications](#)
  Profitability and Cost Management supports those with more knowledge of domain analysis than scripting.

- [Creating a Profitability and Cost Management Application](#)

- [Launching Profitability and Cost Management](#)
  You can launch Profitability and Cost Management from the Web browser.

- [Profitability and Cost Management Home Page](#)
  When you log in, you see the Profitability and Cost Management Home page.

- [Common Feature Controls](#)
  Many feature screens in Profitability and Cost Management include the controls discussed in this topic.

- [Activating Accessibility Features](#)
  You can activate accessibility features in Profitability and Cost Management.

- [Using Profitability and Cost Management Library](#)
  The Profitability and Cost Management Library offers a variety of free instructional content developed by Oracle subject-matter experts.

About Profitability and Cost Management

To maximize profitability, a business must be able to accurately measure, allocate, and manage costs and revenue.

Profitability and Cost Management is an analytic software tool that manages the cost and revenue allocations that are necessary to compute profitability for a business segment, such as a product, customer, region, or branch. Profitability and Cost Management enables you to use cost decomposition, consumption-based costing and scenario-playing to measure profitability for effective planning and decision support.

Videos

Your Goal	Watch This Video
Take a tour of Profitability and Cost Management	[Overview Tour Video](#)
Get more information about getting started with Profitability and Cost Management	[Overview: Getting Started in Profitability and Cost Management Cloud](#)

Tutorials

Your Goal	Learn How
Access a set of tutorials that guide you through documentation and videos about getting started with Profitability and Cost Management,	Getting Started Tutorials

User Types and Documentation

Many of the features of Profitability and Cost Management are designed for specialized use, reflected in the accompanying documentation:

Table 3-1   Documentation, Contents, and Target Audience

Title	Contents	Target Audience
Getting Started Guide for Administrators	How to launch and navigate Profitability and Cost Management; how to install client software; how to define users; how to perform other security and setup tasks	Identity Domain Administrators and Service Administrators who will add users to the system and perform other preliminary system administration tasks
Getting Started Guide for Users	How to launch and navigate Profitability and Cost Management; how to install client software	Power Users, Users, and Viewers who will design, create, and use Profitability and Cost Management applications
Administering Profitability and Cost Management	How to administer data access, manage data, create and manage applications for analyzing cost and revenue allocations, and set up analytics tools	Service Administrators and Power Users with design-level security provisioning
Working with Profitability and Cost Management	How to launch and navigate Profitability and Cost Management, and view analytics results, queries, and reports	Users or Viewers who need to enter or view data, and analyze cost and revenue allocations

Table 3-1   (Cont.) Documentation, Contents, and Target Audience

Title	Contents	Target Audience
Operations Guide	Review Troubleshooting Calculation Issues for information on how to troubleshoot calculation issues in Profitability and Cost Management Review Application Design Best Practices for information on managing application scalability, dimension design, and application logic design.	Services administrators who need to troubleshoot calculation issues and review application design best practices in Profitability and Cost Management.

Additional documentation is available for code developers and those requiring accessibility accommodations. See Activating Accessibility Features and Using Profitability and Cost Management Library.

Architecture

Profitability and Cost Management uses an Oracle Essbase cube for data storage and uses other related software to handle and calculate a variety of data.

The application data and calculated results can be output in a variety of reporting and analysis tools, including Oracle Smart View for Office and Financial Reporting.

About Profitability and Cost Management Applications

Profitability and Cost Management supports those with more knowledge of domain analysis than scripting.

Profitability and Cost Management applications are designed for use by analysts who have deep domain experience in the computation and reporting methods of management reporting, but who may not have much experience with Oracle Essbase and scripting syntax or programming languages.

Data for Profitability and Cost Management applications is housed in both Essbase multidimensional databases and relational databases. Users with Service Administrator security provisioning can create and populate an application in the Profitability Application Console. Those with Service Administrator and Power User roles can define the hierarchy of accounts, activities, and operations within the organization using dimensions and dimension members.

Essential Concepts

To model cost and revenue flows with Profitability and Cost Management, you must understand the following essential concepts:

- **Dimensions**—Data categories in an underlying database used to organize data for retrieval and preservation of values. Dimensions usually contain hierarchies of related **members** grouped within them. For example, a Period dimension often includes members for each time period, such as Quarter or Month.

- **Application**—A related set of dimensions and dimension members that is used to meet a specific set of analytical or reporting requirements.

- **Modeling elements**—Application parts used in a Profitability and Cost Management application that apply allocation logic to dimensions and members. Modeling elements include cost allocation rules and analysis definitions that reflect existing or proposed business cases.

  Together these elements organize the allocation points in the application into a logical flow. Careful modeling can capture the actual processes and activities, enabling you to realistically allocate costs and revenues.

A Profitability and Cost Management application is a representation of part or all of an organization, and contains costs and revenue categories that are similar to the organization's chart of accounts and general ledger. Profitability and Cost Management applications enable you to accurately trace the processes and activities that contribute to costs and revenue within the organization.

Guidelines for Working With a Profitability and Cost Management Application

Overview

This topic describes an approach to designing and building applications based on your security role and the tasks it enables you to perform.

For Service Administrators and Power Users

Service Administrators and Power Users of Profitability and Cost Management can perform the following steps to set up an application (only Service Administrators can actually create an application):

1. Define the requirements and the allocation methods required before creating the application.

   You should establish the business requirements for the application and the reporting expectations. Using pencil and paper, discussion among stakeholders, flowcharting, diagramming software and other tools, draft the conception of what the application needs to contain in order to accomplish the goals. In some instances, it may be useful to identify the results you want to achieve first, and then work backwards to formulate the best strategy to meet these goals.

   When designing the dimension outline, carefully define the reporting objectives and requirements. The effort expended in designing the outline is rewarded when generating reports.

2. Define dimensions (such as Rule, Balance, business dimensions, POV dimensions, and so on) using Profitability Application Console to build the main objects within the application.

3. Deploy the Profitability and Cost Management database.

   After an application is deployed, users with appropriate security provisioning can perform modeling tasks to show the flow of funds to specific cost and revenue allocations. Both the source and destination ranges of allocations are defined as allocation and custom calculation rules using the Profitability and Cost Management user interface. Points of view (POVs) represent specific modeling conditions and can be used, for example, to view values for different months or quarters, to compare budget versus actual figures, or to play scenarios to measure the impact of various changes on the bottom line.

4. Populate the underlying Oracle Essbase database with cost and revenue data, through Profitability and Cost Management or directly into the database.

5. Identify drivers to specify how to calculate cost and revenue data. These will be added as you define allocations (rules).

6. Create rule sets and rules.

   All modeling structure is controlled through the organization of rule sets and rules under POVs. For each POV, rules are organized into groups that run against the same or similar region of the database and at the same or similar time. These groups are called rule sets. They determine the order in which rules run. Rules can inherit default member selections from the POV or rule set level so users can define a region of the database once and use it many times without having to specify it each time. These defaults are called "contexts".

7. Validate the Profitability and Cost Management application structure to ensure that the application structure conforms to validation rules.

   The modeling structure of the application is validated after creation to ensure that all allocations are have been accounted for, and calculations are balanced. Following validation, you deploy the database, and then calculate the application, and analyze the results.

8. Set up analysis views and other analytic tools so those with User and Viewer roles can use them.

9. Calculate the application.

For Users and Viewers

All users, including Users and Viewers, can do most of the following:

- Analyze the calculated results. You can use the trace allocation feature to visually follow the flow of funds throughout the entire application, either forward or backward.

- Use the analytics features to track and report on revenue and cost allocations.

> ✅ **Tip**
>
> Descriptions are an important way to document the allocation process and are used in the Program Documentation report. They are also guides to Users and Viewers when selecting analysis views and other analytic tools. For easy of use, include a meaningful and complete description whenever you can.

Videos

Your Goal	Watch This Video
Learn how to model data in Profitability and Cost Management	▶ [Overview: Modeling Data in Oracle Profitability and Cost Management Cloud](#)
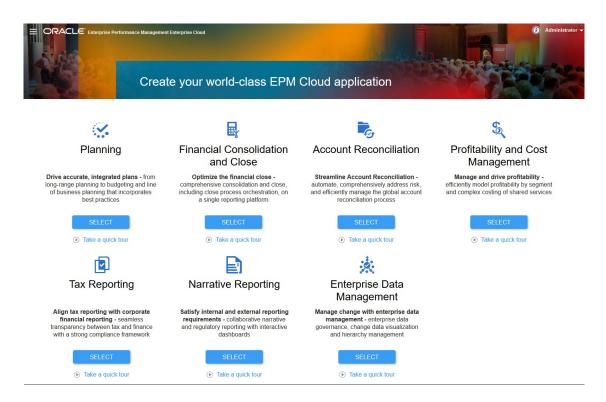
Creating a Profitability and Cost Management Application

EPM Enterprise Cloud Service Landing Page

If you have a Oracle Fusion Cloud EPM application, the landing page is your starting point for creating a Profitability and Cost Management application and for viewing an overview video to help you get started.

> ⓘ **Note**
>
> If you do not have a Cloud EPM application, disregard this section, and go directly to the steps under "Steps to Create an Application" below.

Each subscription to the Cloud EPM service allows you to create one application. Click **SELECT** under **Profitability and Cost Management** to pre-configure your environment. This process takes approximately 20 minutes. Click **OK** to initiate the pre-configuration process. The environment is not available during the pre-configuration process.
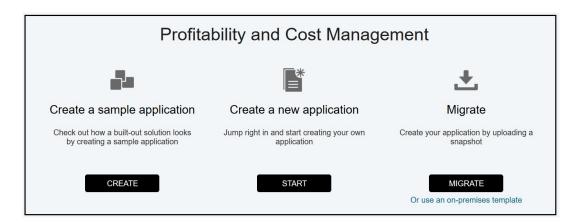
> ⓘ **Note**
>
> After you initiate the creation of an application, you cannot return to the landing page. If wish to return to the landing page to create a different application, you must first reset your environment to its original state. See Switching to a Different Cloud EPM Business Process.

Steps to Create an Application

To create a Profitability and Cost Management application.

1. Sign in to your Cloud EPM Service environment as a Service Administrator. See [Accessing Cloud EPM](#).

   You have three options to create a Profitability and Cost Management application:

2. Select an option to create the application.

   • **Create a sample application:** Click **CREATE** to create a sample business process with data and artifacts. You can use this ready-to-use business process for testing and exploration of functional areas. You can also use it as a template to model your own business process. See [Accessing the Sample Application](#).

   • **Create a new application:** Click **START** to create a container business process. See [Creating Applications with Dimensions from Flat Files](#) in *Administering Profitability and Cost Management*.

   • **Migrate:** Click **MIGRATE** to import a business process from a snapshot that you previously uploaded to the environment. See [What Applications Can I Migrate to EPM Standard Cloud Service and EPM Enterprise Cloud Service](#) for prerequisites and snapshot compatibility.

     See [Building Applications by Importing Template Files](#) and [Creating and Migrating Profitability and Cost Management Applications](#) in this guide and the following topics in *Administering Migration for Oracle Enterprise Performance Management Cloud*:

     – [Backing Up Artifacts and Application](#)

     – [Uploading Archives to the Service](#)

     – [Importing Artifacts and Application from a Snapshot](#)

Launching Profitability and Cost Management

You can launch Profitability and Cost Management from the Web browser.

To open Profitability and Cost Management:

1. In the Web browser, click the link provided by Oracle.

2. Enter your user name and password.

   If requested, select an application.

   > ⓘ **Note**
   >
   > The password is case-sensitive.

3. Click **Sign In**.

   The Profitability and Cost Management Home Page opens.

Profitability and Cost Management Home Page

When you log in, you see the Profitability and Cost Management Home page.

Your security level, role, and theme selection determine the exact appearance of Profitability and Cost Management. The following figure shows the current default **Sky Blue** background and icons. Your screen may look slightly different depending on selections available through **Tools**, **Appearance**.

Figure 3-1 Profitability and Cost Management

The Home page contains these main areas:

- The Navigator Screen, accessed with ☰

- The Announcements Area, with space for messages, favorite links, recent files opened, and other information

- The Home Page Cluster Icons

Other Home page contents include:

- 🏠, Home Page icon (jumps to the Home page from other locations)

- ⊗, Accessibility icon (displays accessibility settings), see Activating Accessibility Features

- The **Settings and Actions** menu with your user name in the header (Administrator ▾). Click it to view online help and other information. You can also download client software, such as Oracle Smart View for Office, from this menu. Click **Downloads** and select from available software.

For more information about help and learning assistance, see Using Profitability and Cost Management Library.

> ⓘ **Note**
>
> What you see and the features you can use are determined by your security provisioning, so your Home page may look different from what is described and shown here. To change its appearance, select Tools, and then Appearance.

Navigator Screen

Click ▤ to display the **Navigator** screen. This screen serves as a sitemap of the application features and displays links to all of the pages you can access. Use the **Navigator** screen to navigate among the processes required to build, validate, and calculate the application, and to report results. You can also use **Navigator** to install client applications such as Smart View or Financial Reporting.

Announcements Area

The Announcements area displays any posted announcements. You can upload a photo (Setting User Preferences), view recently-accessed files (**Recent** tab), and add favorite links to analytics charts or views (**Favorites** tab). You can also run a Tour video about key features.

To add items to **Favorites**:

1. Select a dashboard, an analysis view, a scatter analysis graph, or a profit curve.

2. Click **Actions**, ⚙, and then select **Add as Favorite**.

> ⓘ **Note**
>
> For information about the items you can select as Favorites, see the Analytics chapter of *Administering Profitability and Cost Management* or *Working with Profitability and Cost Management*.

Home Page Cluster Icons

Use the icons to view and analyze data and related information for each cluster of features. Depending on the theme you have selected, icons appear somewhat different from those shown here, but the main sysmbols are similar.

Figure 3-2 Profitability and Cost Management Home Page Icons

[Table 1](#) shows the Home page icons and their uses.

Table 3-2 Home Page Icons

Icon Name	Icon	Uses
Dashboards		Create, modify, or view dashboards
Intelligence		Create, modify, or view analysis views, scatter analysis graphs, profit curves, allocation traces, queries, and key performance indicators
Reports		Create, modify, or view financial reports

Table 3-2   (Cont.) Home Page Icons

Icon Name	Icon	Uses
Application		Create and modify an application, import and export artifacts
Models		Run calculations; work with points of view (POVs), create and modify applications
Tools		Customize Home page background and logos, set daily maintenance time, control application access
Academy		View documentation and videos

Common Feature Controls

Many feature screens in Profitability and Cost Management include the controls discussed in this topic.

Table 3-3   Common Controls on the Profitability and Cost Management Feature Screens

Control	Name	Action
Search	**Search** box	Searches for the entered text
	Create button	Creates a new item of the displayed type
	Delete button	Removes the selected item from the list
	Edit button	Opens the selected item for editing
	Copy button	Copies the selected item for pasting with another name
	Inspect button	Displays information about the selected item, such as a job in the **Job Library**
	Refresh button	Updates displayed items with the latest data

Table 3-3   (Cont.) Common Controls on the Profitability and Cost Management Feature Screens

Control	Name	Action
Start Date ▲ ▼	**Sort** box	Sorts the displayed table according to your selection; for example, in the Job Library, you can sort these columns: **Start Date**, **End Date**, **User**, or **Job Type**; the upward-pointing triangle sorts in ascending order and the downward-pointing triangle sorts in descending order
⋯	**Actions** button	Offers a menu of actions for the selected item
👤	**Help** button	Offers access to general online help, help on the current window, access to Cloud Customer Connect, an opportunity to provide feedback, and Oracle Support

Activating Accessibility Features

You can activate accessibility features in Profitability and Cost Management.

To activate visual accessibility features:

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

2. In the **Accessibility Settings** window, select from the following:

    - **Screen Reader Mode**, to enable a screen reader to read the text on the screen

    - **High Contrast**, to sharpen screen contrast

To learn more about about Profitability and Cost Management accessibility features, see the *Accessibility Guide for Profitability and Cost Management*.

Using Profitability and Cost Management Library

The Profitability and Cost Management Library offers a variety of free instructional content developed by Oracle subject-matter experts.

To access the Library, on the Profitability and Cost Management Home page, click the **Settings and Actions** menu with your user name, such as , in the screen header.

On most screens, you can click **Help on this topic** to view online help related to that screen. Otherwise, click **Help** to open the Learning Library for Oracle Profitability and Cost Management Cloud, and then click one of the following links on the navigation pane:

- **Books**, to view and download complete Profitability and Cost Management documentation in HTML and PDFformats, including other relevant documents

- **Videos**, to view overview and tutorial videos

- **Tutorials**, for step by step assistance with Profitability and Cost Management tasks

4

Overview of Administration and Security

Related Topics

- **About Managing Access and Data Security**
  Profitability and Cost Management has two levels of security that control access to the service, its data, and its functionality.

- **Administrative Tasks and Predefined Roles**
  Basic access to Profitability and Cost Management instances is granted by assigning users to predefined functional roles.

- **Controlling Application Access**
  Basic access to service components is controlled by assigning users to predefined roles in the identity domain.

- **Granting Access to Data**
  Data grants are security features for Profitability and Cost Management.

- **Customizing Home Page Appearance**
  In place of those provided by Oracle, you can include your own logo and background image on the Profitability and Cost Management Home page.

- **Setting Maintenance Time**
  A service instance requires one hour every day to perform routine maintenance.

- **Viewing Performance Activity Reports**
  You can display activity logs with information about performance of various Profitability and Cost Management tasks.

About Managing Access and Data Security

Profitability and Cost Management has two levels of security that control access to the service, its data, and its functionality.

For the first level of security, service level, Identity Domain Administrators create and manage accounts for environment users within an identity domain. To do this, they use the My Services application. Then, they assign predefined roles to these users to control the business activities that they can perform and the general areas of data that they can access. For more information about the service level of security, see About User and Role Management in *Getting Started Guide for Administrators* to set up Single Sign-On (SSO) and role-based access.

The second level of security, application level, determines the data that users with various roles can view or work with. The second level of security is defined with access groups and data grants. There are predefined access groups, such as Users and Viewers, and **native** groups, created by Service Administrators (Granting Access to Data).

After Identity Domain Administrators create users and assign them to predefined roles, Service Administrators can further limit application access as follows:

1. Service Administrators use **Access Control** to create native groups, also called Native Directory groups (Controlling Application Access).

2. Service Administrators create data grants to restrict access for those with User and Viewer roles (Creating Data Grants).

---

3. Service Administrators assign those with User and Viewer roles to native groups (Controlling Application Access).

4. Service Administrators assign data grants to native groups. They can also assign data grants to individuals in special cases, but must not assign data grants to predefined groups (Assigning Data Grants to Individuals and Groups).

Administrative Tasks and Predefined Roles summarizes the functional user roles and the types of tasks they can perform.

See *Getting Started Guide for Administrators* for information about setting up service-level security.

Videos

Your Goal	Watch This Video
Understand how security works in Profitability and Cost Management	▶ Overview: Understanding Security in Profitability and Cost Management Cloud
Learn how to manage users and assign roles in Profitability and Cost Management	▶ Managing Users and Assigning Roles in Profitability and Cost Management

Administrative Tasks and Predefined Roles

Basic access to Profitability and Cost Management instances is granted by assigning users to predefined functional roles.

For example, to permit users to view reports belonging to a test instance, they should be assigned to the Viewer role for the instance.

Profitability and Cost Management roles are cumulative. For example, Service Administrators can perform the same tasks as those with Power User and Viewer roles, plus their own exclusive tasks.

> ⓘ **Note**
>
> Identity Domain Administrator is not a functional role; it does not inherit access privileges granted through functional roles. To access service features, the Identity Domain Administrator must be granted one of the four functional roles outlined in Table 1.
>
> See Identity Domain Administrator role in *Getting Started with Oracle Cloud* for a detailed description of this role.

Application-level Security and setup tasks are managed as follows, after Identity Domain Administrators perform initial setup and service access tasks:

• Service Administrators perform the following application-level security tasks and application setup tasks:

– Create and manage applications and their dimensions and members using the Profitability Application Console.

– Migrate application artifacts from on-premise to Cloud environments, test to production environments, and perform backup and restore tasks..

- – Perform any actions available to the other three functional roles
- In addition, Power Users and Service Administrators can perform the following tasks:
  - – Create, update, and delete modeling rules and points of view (POVs).
  - – Set up a variety of modeling analyses, including analysis views, dashboards, scatter analysis charts, profit curves, key performance indicators, and reports.
  - – Load data.
  - – Calculate and re-calculate the application.
  - – View and modify modeled data.
  - – Trace allocations.

The following table summarizes these tasks.

Table 4-1   Profitability and Cost Management Roles

Role	Description
Service Administrator	Performs all functional activities in Profitability and Cost Management.
	This role should be granted to Profitability and Cost Management experts who need to create and administer application and service components.
Power User	Views and interacts with data. This role grants high-level access to several Profitability and Cost Management functional areas and should be granted to senior financial analysts among others.
	Like Service Administrators, Power Users can create and administer service components such as rule sets, rules, analysis views, dashboards, scatter analysis charts, profit curves, key performance indicators, and reports.
User	Enters data and runs analyses for dimension members to which they have access. Designs reports and other analytic outputs.
	Note: Data grants can affect write access for those with the User role. See the notes in Data Grant Group Considerations.
Viewer	Views and analyzes data using various analytic features.
	Note: Users with the Viewer role are never granted Write Access.

> ⓘ **Note**
>
> - These roles are cumulative, so only one role is needed for each user. You should only assign one of these four roles to each user at any one time.
>
> - For a detailed description of setting up security and assigning roles, see *Getting Started Guide for Administrators*.

Videos

Your Goal	Watch This Video
Get an overview of security in Profitability and Cost Management	▶ Security Overview Video

Controlling Application Access

Basic access to service components is controlled by assigning users to predefined roles in the identity domain.

About Managing Access and Data Security summarizes the Profitability and Cost Management security model.

Additionally, Service Administrators can, from Access Control, create groups made up of identity domain users or other groups. Assigning roles to such groups enables Service Administrators to grant roles to many users at once, thereby reducing administrative overheads.

Assigning roles at the application level can only enhance the access rights of users; none of the privileges granted by a predefined role can be reduced by roles assigned at the application level.

To display the access control features of Profitability and Cost Management, on the Home page, click **Tools**, , and then **Access Control**,).

For information about assigning users to roles and creating groups, see *Getting Started Guide for Administrators* and *Administering Access Control*.

The following section, Granting Access to Data, describes how to enable users to access data slices.

Granting Access to Data

Data grants are security features for Profitability and Cost Management.

Related Topics

- About Data Grants
- Data Grant Group Considerations
- Creating Data Grants
- Assigning Data Grants to Individuals and Groups
- Repairing Data Grants

About Data Grants

About Managing Access and Data Security summarizes security features for Profitability and Cost Management.

Those with Service Administrator or Power User roles must have access to all data. However, Service Administrators can restrict those with User and Viewer roles to specific data slices, such as regions, departments, and products. This is done by creating and then assigning data grants -- sets of data slices that can be assigned to users or groups to limit their access only to granted data within a dimension.

- **Access groups** are of two types:
    - Predefined groups, such as the **User** and **Viewer** groups.

– **Native** groups, created by Identity Domain Administrators to group certain users for a variety of business purposes. The native groups should have meaningful names related to their purpose.

- **Data grants** define data slices that can be assigned to users or groups to enable them to access the data in the defined data slice.

> ⚠ **Caution**
>
> Service Administrators now can create and assign data grants to control data access of Users and Viewers to a certain slice of the cube. By default, users in these groups have no data grants and can see no data. With a data grant assigned, they can see the slice of data defined by the data grant. Those with the predefined **User** role can edit the data in their assigned data slice.
>
> Data grants should include all dimensions where you want to restrict the members for which Users and Viewers can see data. Any dimension not included in the data grant will allow complete access for that dimension. The final view of the data for a User or Viewer is limited based on the dimensions selected in the data grant definition.
>
> Also see Data Grant Group Considerations.

These topics define data grant management tasks:

- Creating Data Grants
- Assigning Data Grants to Individuals and Groups
- Repairing Data Grants

Data Grant Group Considerations

As described in About Data Grants, there are two kinds of access groups within Profitability and Cost Management, predefined groups and native groups.

> ⓘ **Note**
>
> The following concepts are very important, particularly with respect to one-way inheritance of rights and privileges.

When creating native groups and associating them with predefined groups to assign privilege levels, the privileges must be inherited. Inheritance goes in only one direction, from parent to child.

Service Administrators can only assign predefined groups to native groups.

Native groups only offer Read access. It is not possible to provide Write access through native groups.

Service Administrators can continue assigning data grants to the predefined User role for Write access but all users assigned to the User role will receive Write access to the assigned data grant.

Creating Data Grants

Data grants are sets of dimensions and members that define what can be seen by assigned users for those dimensions. After a data grant is created, it can be assigned individually to those with User and Viewer roles or, most often, native groups containing those with User and Viewer roles. Data grants cannot be assigned to Service Administrators or Power Users.

To create a data grant:

1. On the Home page, click **Application**, , **Application** again, and then click **Data Grants**,).

2. Click **Create**.

3. In **Create Data Grant**, enter a unique **Data Grant Name** and an optional **Description**.

4. Click **Add Dimension** and do the following:

   a. Select a dimension to add, such as Department.

   b. Click **Select a Member**.

   c. In the **Member Selector**, select a member and drill down to select the specific member to include.

   d. **Optional:** Click f_x to define a Member Function (Using Member Functions).

   As you work, you can click ⚙ next to **Selections** to remove one or more selected members, or click ⚙ at the other side of the screen to filter, show alias or member count, or to refresh the data.

5. When member selection is complete for that dimension, click **OK**.

   The Create Data Grant screen is displayed again.

6. **Optional:** Click **Add Dimension** to add another dimension to the data grant.

7. When the data grant definition is complete, click **Save** or **Save and Close**.

Now the definition is ready to assign to one or more users with User or Viewer roles. For instructions, see Assigning Data Grants to Individuals and Groups.

> ⓘ **Note**
>
> If you select a parent member but none of its children, users who are assigned that data grant can see only aggregate data for the parent and not the individual children.

Assigning Data Grants to Individuals and Groups

Roles define what users can do with application data – create, edit, or view it, for example, as described in Controlling Application Access. Data grants define the data that users can access. You can assign data grants to individual users or native groups of users, defined through Access Control features.

To assign data grants:

1. On the Home page, click **Application**, 🗊, **Application** again, and then click **Data Grant Assignments**, 👥 .

2. In Data Grant Assignments, select the group or user you want to assign to a data grant, and then click ▬▬▬ (**Actions**).

> ⓘ **Note**
>
> You may need to scroll to the right to see the ▬▬▬ icon.

3. Click **Add Data Grant**.

4. In Add Data Grant select the data grant to add, and then click **OK**.

   You can use the drop-down list and the search box to find the data grant.

> ⚠ **Caution**
>
> You must assign data grants only to native groups and not the predefined Viewers or Users groups originally provided with Profitability and Cost Management.

Removing Data Grant Assignments

To remove a data grant assignment, follow steps 1 and 2 in the previous list. For step 3, click **Remove Data Grant**.

Repairing Data Grants

Data grants are applied as Oracle Essbase filters. Should an error occur, you can repair the data grants as follows:

1. Select **Application**, and then **Application** again to display the Profitability Application Console.

2. In the Application tab, click **Actions**.

3. Click **Repair Data Grants**.

Customizing Home Page Appearance

In place of those provided by Oracle, you can include your own logo and background image on the Profitability and Cost Management Home page.

You can also choose a background color theme and upload a photo to the Welcome area.

To upload a photo, see Setting User Preferences.

To customize the logo, background image, and background color:

1. Log in to Profitability and Cost Management.

2. On the Home page, click **Tools**, 🛠, and then click **Appearance**, 🖊 .

3. **Optional:** Enter the location of a logo file and background image file, and then click **Apply**.

4. **Optional:** Select a background color from the menu.

> ⓘ **Note**
>
> You can click **Discard Changes** to cancel the operation, or **Reset Defaults** to restore the original Oracle images.

Setting Maintenance Time

A service instance requires one hour every day to perform routine maintenance.

Administrators can select the most convenient time to start the hour-long maintenance window. In addition to routine maintenance, Oracle applies required patches to the service instance during this maintenance window.

Because the service instance is not available to users during the maintenance window, the Service Administrator should identify a one-hour period when no one uses the service. Any connected user will be logged off and will lose unsaved data.

To manage the maintenance window:

1. Access a service instance (log in to Profitability and Cost Management).
2. On the Home page, click **Tools**, and then click **Daily Maintenance**.
3. To configure the backup schedule for this service instance, complete these steps:

    a. In **Start Time**, select the time for maintenance to begin, using a 24-hour clock.

    b. In the next field, select the time zone to use for the service maintenance schedule.
4. Click **Apply**.

Viewing Performance Activity Reports

You can display activity logs with information about performance of various Profitability and Cost Management tasks.

To view an activity report:

1. In the **Settings and Actions** menu, Administrator ▼, in the screen header, click **Provide Feedback**.
2. Enter a brief description, such as "`Generating activity report.`", and then click **Submit**.
3. Wait about 20 minutes, and then, in an open Profitability and Cost Management application, click **Application**, .
4. Be sure **Application** is selected, , and then click **Performance**, .

    Select a report to view.

5

Dimensions in Profitability and Cost Management Applications

Related Topics

- [About Profitability and Cost Management Dimensions](#)
  Profitability and Cost Management uses dimensions and members created in Oracle Essbase.

- [Dimension Requirements](#)
  The database outline provides the data structure for the application, and includes calculation instructions and formulas.

- [Dimension Types](#)
  Dimensions types include system dimensions as well as Profitability and Cost Management business dimensions, POV dimensions, attribute dimensions, and alias dimensions.

About Profitability and Cost Management Dimensions

Profitability and Cost Management uses dimensions and members created in Oracle Essbase.

The dimensions are imported into Profitability and Cost Management using flat files. The dimensions and members are used to represent many of the structural elements of business applications:

- System dimensions that are reserved for use by Profitability and Cost Management for system requirements ([System Dimensions](#))

- Business dimensions that reflect the business-specific elements of the application, such as departments, accounts, activities, customers, or products ([Profitability and Cost Management Business Dimensions](#))

- Point of View (POV) dimensions that identify a specific point of view or version of the application, such as year, scenario, period, and version; version dimensions enable you to maintain multiple versions of a application and can be used to create alternate, or what-if, scenarios of the application, or different perspectives ([Profitability and Cost Management POV Dimensions](#))

- Attribute dimensions that enable analysis based on the attributes or qualities of dimension members. Attributes describe characteristics of data, such as the size or color of products

- Alias dimensions (optional), used to assign alternate names, descriptions, languages, or other items that help to define dimensions ([Profitability and Cost Management Alias Dimensions](#))

See [Dimension Requirements](#) for information about dimensions that must be included in valid Profitability and Cost Management applications.

> ⓘ **Note**
>
> You can use Dimension Management to view the dimension-member structure of most types of dimensions within Profitability and Cost Management (Viewing, Creating, and Editing Dimensions with Dimension Management).

> ⓘ **Note**
>
> Profitability and Cost Management does not support the loading of metadata by way of a file using Data Management.

Dimension Requirements

The database outline provides the data structure for the application, and includes calculation instructions and formulas.

Dimensions in the Oracle Essbase outline are hierarchical. Data is stored at dimension intersections The following are Profitability and Cost Management dimension requirements:

- Applications must contain at least one POV dimension and can have up to four POV dimensions.
- Applications must contain one and only one system dimension named **Rule**.
- Applications must contain one and only one system dimension named **Balance**.

  System dimension members in the Balance dimension cannot be edited.
- There must be at least one business dimension.

> ⚠ **Caution**
>
> Members must not be repeated within the same dimension. However, members can be repeated across several dimensions.

Dimension Types

Dimensions types include system dimensions as well as Profitability and Cost Management business dimensions, POV dimensions, attribute dimensions, and alias dimensions.

Related Topics

- System Dimensions
- Profitability and Cost Management Business Dimensions
- Profitability and Cost Management POV Dimensions
- Profitability and Cost Management Attribute Dimensions
- Profitability and Cost Management Alias Dimensions

System Dimensions

Profitability and Cost Management applications must contain two system dimensions: Rule and Balance. These system dimensions are populated from Oracle Essbase into Profitability and Cost Management. For additional information about the Rule and Balance dimensions, see the following topics:

- [Rule Dimension](#)

- [Balance Dimension](#)

For more information about creating and maintaining the dimensions and members, see [Creating, Importing, and Exporting Applications in the Profitability Application Console](#).

Rule Dimension

The Rule dimension contains definitions of rules for Profitability and Cost Management applications. Users can import data to the NoRule member of this dimension, but the remaining members are reserved for the system.

Balance Dimension

Users can add data to the Input member of the Net Balance member of this dimension. The remainder of the members reflect outputs determined by rule sets and rules. Adjustments are the result of driver calculations, allocations are the result of rule allocations, and offsets result from rule offset definitions. See [Working with Profitability and Cost Management Rules](#), for information about rule sets, rules, and their definitions. Also see [About Profitability and Cost Management Calculations](#).

Data held in intersections with these members is visible in the Rule Balancing screen ([Viewing the Rule Balancing Screen](#)). The Rule Balancing topics also describe the Balance dimension members more fully.

Profitability and Cost Management Business Dimensions

The business dimensions in the application contain members that store information that is specifically related to the requirements of the business or organization, such as product types, sales regions, manufacturing processes, general ledger, payroll, departments, cost centers, and so on.

At least one Business Dimension type must be defined by the user for the application. Business dimensions are created to describe elements within the application, such as business-specific departments, general ledger accounts, activities, locations, customers, and products.

Profitability and Cost Management POV Dimensions

A Point of View (POV) dimension is used to present a specific version or perspective of the application. Each application requires at least one dimension to be designated as a POV dimension. The POV dimensions can be whatever is required for the particular application. The following list represents some common sample POV dimensions: :

- Period — Enables you to analyze strategies and changes over time. Because a application can be based on any unit of time (quarters, months, annual, years, and so on), you can analyze strategies over time, and monitor inventory or depreciation.

- Year — Identifies the calendar year in which the data has been gathered
- Scenario — Identifies a version of the application for a specific time period and set of conditions

Version Dimension

Using a specific POV, you can create a POV version that enables you to maintain separate versions of the same POV to monitor the impact of changes to the application, or track different versions of the same application.

Use the Version dimension for the following tasks:

- Create multiple iterations of a application, with slight variations
- Model possible outcomes based on assumptions, or "what-if" scenarios to determine best or worst case scenarios
- Facilitate target setting

By modifying different elements within the Version dimension, you can examine results of the changes, without modifying the original application.

Profitability and Cost Management Attribute Dimensions

An attribute dimension is a special type of dimension that is associated with a business dimension. Attributes describe characteristics of data, such as the size and color of products.

You can use the attribute feature to retrieve and analyze data not only from the perspective of dimensions, but also in terms of characteristics, or attributes, of those dimensions. For example, you can analyze product profitability based on size or packaging, and you can make more effective conclusions by incorporating into the analysis market attributes such as the population size of each market region.

User-defined attributes (UDAs) can be associated with members of an outline to describe a characteristic of the members. Users can use UDAs to return lists of members that have the specified UDA associated with them. A UDA is like a text tag and can be added to a member easily, unlike an attribute which requires both creation of the attribute member in the attribute dimension as well as associating the attribute with the member.

Profitability and Cost Management Alias Dimensions

Aliases are alternate names, descriptions, languages, or other items that help to define dimensions. For example, you may refer to a customer number in the system, but you can assign an alias that displays the company name on the screen, to make it easier to identify that client. You can assign one or more aliases to accounts, currencies, entities, scenarios, periods, versions, years, and user-defined dimension members.

> ⓘ **Note**
>
> Duplicate member names or aliases are not allowed.
>
> Avoid naming aliases for dimension members with the same name as the member names of other members. This can cause circular logic in Oracle Smart View for Office that leads to problems executing queries that reference these members.

6
Creating and Migrating Profitability and Cost Management Applications

Related Topics

- [Using the Profitability Application Console and Other Application Features](#)
  The Application features enable you to use the Profitability Application Console and related tools to create, manage, and use an application.

- [Creating, Importing, and Exporting Applications in the Profitability Application Console](#)
  With appropriate security provisioning, you can use the Profitability Application Console to add a Profitability and Cost Management application in several ways.

- [Migrating an Application from On-premises Profitability and Cost Management to Cloud EPM Profitability and Cost Management](#)
  You can migrate a Management Ledger application from on-premise Oracle Hyperion Profitability and Cost Management to Oracle Fusion Cloud EPM Profitability and Cost Management.

- [Migrating from Profitability and Cost Management to Enterprise Profitability and Cost Management](#)

- [Backing Up, Restoring, and Replicating Applications Using the Migration Features](#)
  Profitability and Cost Management offers flexible lifecycle management features to help with a number of maintenance and migration tasks:.

- [Importing Artifacts](#)
  You can enter data definitions and application information directly into Profitability and Cost Management.

- [Working with an Application in the Profitability Application Console](#)
  You can edit an application's description and select the number of calculation threads to use.

- [Viewing, Creating, and Editing Dimensions with Dimension Management](#)
  You can use the Dimension Management feature of Profitability and Cost Management to view members and properties for Business, Attribute, and Point of View dimensions within an application.

- [Viewing Tasks in the Application Job Library](#)
  The Job Library provides a list of all jobs created in Profitability and Cost Management.

- [Transferring Files with the File Explorer](#)
  Use the Profitability and Cost Management File Explorer to view logs and sample files, export and import application files for backup and migration, and update dimensions with flat files.

Using the Profitability Application Console and Other Application Features

The Application features enable you to use the Profitability Application Console and related tools to create, manage, and use an application.

To explore available application features, on the Profitability and Cost Management Home page, click **Application**, .

> ⓘ **Note**
>
> See Application Design Best Practices in the *Operations Guide* for information on best practices when designing an application.

Table 6-1   Application Icon Actions

Icon	Name	Action
	Application	Displays the Profitability Application Console (Creating, Importing, and Exporting Applications in the Profitability Application Console)
	Dimension Management	Displays a list of dimensions within the application and their members (Viewing, Creating, and Editing Dimensions with Dimension Management)
	Calculation Rules	Displays the Rules Express Editing screen for basic edits to one or more rules; current edits include adding, replacing, and removing rule members and more
	Job Library	Displays the Job Library for tracking job progress and success (Viewing Tasks in the Application Job Library)
	Migration	Accesses Migration functionality for handling application artifacts (Backing Up, Restoring, and Replicating Applications Using the Migration Features)
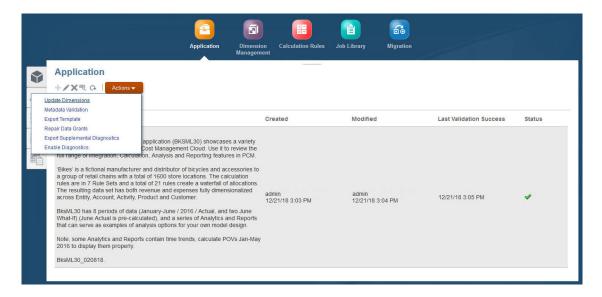
The Profitability Application Console, opened with the **Application** icon, is a frequently used feature. See Profitability Application Console Tabs.

Profitability Application Console Tabs

With appropriate security provisioning, you can use the Profitability Application Console to add and manage an application. The Console displays as follows with the **Actions** menu opened:

Figure 6-1   Profitability Application Console, Application Tab

To open and view the Profitability Application Console:

1. On the Profitability and Cost Management Home page, click **Application**, .
   Additional icons are displayed.

2. Click **Application** again.

   The Profitability Application Console is displayed (Figure 1).

   You see the following tabs, depending on your role:

Table 6-2   Profitability Application Console Tabs

Name	Icon	Action
Application		Describes an existing application, enables application creation if one doesn't exist, indicates whether the application is ready for use with a green check mark (Common Feature Controls)
Data Grant Assignments		Assigning Data Grants to Individuals and Groups
Data Grants		Creating Data Grants
File Explorer		Transferring Files with the File Explorer
Performance		Viewing Performance Activity Reports

The Application tab lists the application, its creation date, and modification date.

The Application tab contains any or all of the controls listed here: the following controls:

3. **Optional:** If no application exists yet, click **Create**, ✚, to create a new application.

   Then, select one of the following:

   - **Application**, to create a new application by creating a new application shell, and then importing specially formatted flat files containing dimension definitions (Creating Applications with Dimensions from Flat Files)

   - **Sample Application**, to import the BksML30 sample application snapshot

   - **Import Template**, to import an application template, often used for migrating from on-premise Oracle Hyperion Profitability and Cost Management (Building Applications by Importing Template Files)

4. **Optional:** Click **Edit**, ✎, to change the application description and preferences (Editing an Application's Description and Default Dimension Settings).

5. **Optional:** Click other available icons to perform additional actions (Common Feature Controls).

6. **Optional:** Click **Actions** to perform a variety of operations on the application: **Update Dimensions**, **Metadata Validation**, **Export Template**, **Repair Data Grants**, **Export Supplemental Diagnostics**, and **Enable Diagnostics**.

   See Creating, Importing, and Exporting Applications in the Profitability Application Console, Working with an Application in the Profitability Application Console, and Viewing Tasks in the Application Job Library.

Creating, Importing, and Exporting Applications in the Profitability Application Console

With appropriate security provisioning, you can use the Profitability Application Console to add a Profitability and Cost Management application in several ways.

To display the Profitability Application Console, see Using the Profitability Application Console and Other Application Features.

See the following for more information:

- Create an application shell. Then, import specially formatted flat files containing dimension definitions (see Creating Applications with Dimensions from Flat Files).

- Add a previously exported application using a template file. Template files contain dimensions, metadata, and other artifacts created by exporting templates from existing Profitability and Cost Management applications (see Building Applications by Importing Template Files and Migrating an Application from On-premises Profitability and Cost Management to Cloud EPM Profitability and Cost Management).

- Import the provided sample application (BksML30). See Accessing the Sample Application.

- Application Design Best Practices in the *Operations Guide*.

> ⓘ **Note**
>
> You can only create an application if one doesn'tt exist yet.

To open and view the Profitability Application Console, see Using the Profitability Application Console and Other Application Features.

For additional actions you can perform in the Profitability Application Console, see Working with an Application in the Profitability Application Console.

Videos

Your Goal	Watch This Video
Get an overview of how to create and work with applications in Profitability and Cost Management	▶ Overview: Getting Started Video

Creating Applications with Dimensions from Flat Files

> ⓘ **Note**
>
> These instructions assume that no application exists in the Profitability and Cost Management instance.

To create an application and add dimensions from flat files:

1. Sign in to your EPM Enterprise Cloud Service environment as a Service Administrator.

2. From the **Landing** page, click **Select** under **Profitability and Cost Management**.

3. On the **Profitability and Cost Management** page, click **Start** under **Create a New Application**.

4. In the **New Application** dialog box, enter the following information and then select **Next:**

   • **Application Name**

   • **Optional: Description**

   • **Rule Dimension Name**

   • **Balance Dimension Name**

5. Click **Finish**.

   When the job starts running, you can view results in the Job Library, (see Viewing Tasks in the Application Job Library).

6. From the Profitability and Cost Management Home page, click **Application**, and then **Dimension Management.**

7. Prepare flat files of the required format (Preparing Flat Files for Each Dimension).

8. Perform the steps in Updating Application Dimensions with Flat Files to add dimension definitions to the application.

9. When dimensions are complete, deploy the application so you can add rules (Deploying Databases).

Building Applications by Importing Template Files

Exporting Template Files describes how to export Profitability and Cost Management applications to template files for application migration and backup purposes. This section

describes how to import those files, mainly to import on-premise Oracle Hyperion Profitability and Cost Management applications into Profitability and Cost Management.

While you can use templates to backup and restore an application in Profitability and Cost Management, it is good practice to use the migration features provided for lifecycle management. See Backing Up, Restoring, and Replicating Applications Using the Migration Features for an overview.

> ⓘ **Note**
>
> The following instructions assume that no application exists in the Profitability and Cost Management instance.
>
> For another way to migrate Profitability and Cost Management artifacts, see Backing Up, Restoring, and Replicating Applications Using the Migration Features.
>
> To migrate files from on-premise Profitability and Cost Management, see Migrating an Application from On-premises Profitability and Cost Management to Cloud EPM Profitability and Cost Management.

To migrate or restore an application with a template file:

1. Export a template file as described in Exporting Template Files.

   If you are migrating an application from on-premise Profitability and Cost Management, follow the instructions in Migrating an Application from On-premises Profitability and Cost Management to Cloud EPM Profitability and Cost Management.

2. Follow the instructions in Transferring Files with the File Explorer to download the template file to your local drive and upload back to the File Explorer **Inbox**.

   If you are migrating an on-premise application, make sure you can browse to the location of the template file on your local computer.

3. Open the Profitability Application Console (Using the Profitability Application Console and Other Application Features).

4. On the Application tab, select **Actions**, and then **Import Template**.

5. Click **Select File**, and then select one of the following as the location of the file: **Sample Templates**, **Server**, or **Client**.

6. Browse to select the file, with .zip extension.

7. Click **OK**.

   If the file is a valid format, the import begins. Otherwise, an error message is displayed.

8. **Optional:** You can click the **Job Library** icon,

   , and then **Refresh** to check import status.

Accessing the Sample Application

A sample application is available in the product installation which is used for testing and self-led exploration of functional areas. The sample application includes a small data set and a fully built out modeling structure that illustrates allocations and other product features. Before

attempting to load the sample application, you must ensure that no other applications are loaded.

To load the sample application:

1. On the Profitability and Cost Management Home page, click **Application**, , and then **Application** again.

2. On the **Application** tab, , click .

3. Select **Sample Application**.

4. **Optional:** Check the status of the import. Click **Migration** ,

, and then click **Reports**, and then **Migration Status**.

Preparing Flat Files and Templates for Application Updates

You can add or update dimensions in an existing application by importing flat files. You also can export template files for application migration and backup/restore operations.

The following topics describe how to prepare flat files and templates:

- [Preparing Flat Files for Each Dimension](#)
- [Exporting Template Files](#)

Preparing Flat Files for Each Dimension

You can use dimension flat files to update an existing or new Profitability and Cost Management application. If existing members are omitted from the file, they are removed during the update. See the following topics for information about creating flat files:

- [About Flat File Properties](#)
- [About Flat File Comments](#)
- [Flat File Sample](#)

To add or replace dimensions in a Profitability and Cost Management application using flat files, prepare the files as follows:

1. In a text editor, create one flat file for each dimension, following the format described in this section. Each flat file most completely define the dimension. To import the files see [Creating Applications with Dimensions from Flat Files](#).

   Dimension flat files are text files that contain the following rows::

   - **First row:** A header record that specifies the order of dimension and member properties
   - **Second row:** A dimension data record with values for the properties
   - **Third through last row:** Individual member data records with values for the properties

> ⓘ **Note**
>
> Because member entries need to be in the same order as the final outline, parent members must be defined before their children. The order of the members in the file will be the same order as the dimension tree is displayed within Profitability and Cost Management (for example, in the Member Selector).

2. Create dimension and member header records following these rules:

   - You can specify the properties in any order, separated by commas.

   - Multi-value properties should be enclosed in double quotes, with the individual values of the multi-value property separated by commas. For example, a user-defined attribute (UDA) property can have multiple values:

     `,"myUDA1, myUDA2, myUDA3",`

   - Commas are not allowed within any single value. Do not use them in member names, do not use them in UDA values, and so on.

   - For other naming conventions, see Essbase Naming Conventions.

   - As explained previously, double quotes are used to delimit multi-value properties in flat files. For this reason, do not use double quotes to delimit member names within an aggregate storage (ASO) formula definition. Instead, you should use square brackets, [ ], to delimit member names where necessary.

   - Property names are not case-sensitive: For example, the following names are all handled the same: `name`, `NAME`, `Name`.

   - Not all properties are required for every row in the flat file. Properties can be ignored or null, indicated by no value between the commas where that property would ordinarily be listed, such as: `,,`

     For example, in a member record, any dimension properties from the header would be ignored.

   - Properties without a value or with an invalid value will be defaulted for required properties.

   - Comments are supported (see About Flat File Comments).

   - You don't need to import a file for the Rule and Balance dimensions; members are created automatically. You cannot specify aliases for any Rule dimension members. The dimension member names for Rule and Balance dimension members are defined programmatically and translated.

   - The dimension sort and solve order precedence is handled as follows: Processing is based on alphabetical order using Dimension Name, except that Attribute dimensions are always last (and ordered alphabetically from there). If the Member Solve Order property is used, it overrides other considerations.

3. Before importing to update dimensions, upload the flat files into the **Inbox** using **File Explorer** (Transferring Files with the File Explorer.

About Flat File Properties

Table 1 describes the format of each property in a dimension flat file. For an example of a flat file, see Flat File Sample.

You can include the Essbase Member Solve Order property for a member, but you must add it to the first line of the flat file to show its position.

> ⓘ **Note**
>
> The dimension name is given in the first row after any comment rows.

Table 6-3   Properties Defined in a Dimension Flat File

Property Name	Property Type	Dimension Types	Default Value	Description
Dimension Type	Dimension	All	Regular	Identifies the dimension type. Valid examples are: Account, Period, Year, Version, Scenario, POV1, POV2, POV3, POV4, Dimension, Attribute, Rule. If there is no property name from this list the default will be "Regular". This position represents the Dimension Name (if Gen1 row) or Member Name. POV orders are as follows: Year/POV1 = 1, Period/POV2 = 2, Scenario/POV3 = 3, Version/POV4 = 4
Storage Type	Dimension	Regular, Account, Entity, POV	Sparse	Sparse and Dense

Table 6-3   (Cont.) Properties Defined in a Dimension Flat File

Property Name	Property Type	Dimension Types	Default Value	Description
Dimension Name (as Attribute)	Dimension, Member	Regular	none	When you provide an Attribute Dimension Name in the header, that position represents an associated attribute dimension for the dimension being loaded. Any String in that position is treated as an "attribute member". For example, suppose you specify "My Attribute Dimension" in the header. In the data rows of that file, a String in the same position is assumed to be a member of that attribute dimension. So, you could specify "My Attribute Member1" on the data row for "All Products" and the loader would assign that member to "All Products" as an attribute association.
Comment	Dimension, Member	Regular, Account, Entity, Country, POV	none	
Hierarchy Type	Dimension, Member	Regular, Account, Entity, Country, POV	Stored	Enabled, Stored, Dynamic, Disabled
BSO Data Storage	Dimension, Member	Regular, Account, Entity, Country, POV	Never Share	Label Only, Store, Never Share, Shared, Dynamic Calc And Store, Dynamic Calc
ASO Data Storage	Dimension, Member	Regular, Account, Entity, Country, POV	Never Share	Label Only, Store, Never Share, Shared
Two Pass Calculation	Dimension, Member	Regular, Account, Entity, Country, POV	N	True or False are acceptable values (N or Y).
ASO Dimension Formula	Dimension, Member	Regular, Account, Entity, Country, POV	none	

Table 6-3   (Cont.) Properties Defined in a Dimension Flat File

Property Name	Property Type	Dimension Types	Default Value	Description
Member Solve Order	Member	Regular, Account, Entity, Country, POV	none	In Oracle Essbase, the solve order number determines the order by which members are evaluated in the dimension. You can enter a number between 1 and 120. The member with the highest solve order number is evaluated first (for example, a formula with a solve order number of 20 is evaluated before a formula with a solve order number of 5). Members with the same solve order number are evaluated in the order in which their dimensions appear in the database outline. Members with no solve order number are evaluated after all members with solve order members.
Consolidation Type	Member	Regular, Account, Entity, Country	Not Used	Add, Subtract, Multiply, Divide, Percent, Ignore, Not Used
UDA	Dimension, Member	Regular, Account, Entity, Country	none	Single text value or a list of text values (enclosed by comma). When Dimension, the value is a Dimension Name of Type = UDA. When Member, it is a Member of the specified UDA dimension. For example: `myUda1` `"myUda1,myUda2"`
Parent	Member	Regular, Account, Entity, Country, POV, Attribute		Identifies the parent member name. If null it means the member is Generation 2. Order matters; a referenced parent must be defined previously.

Table 6-3   (Cont.) Properties Defined in a Dimension Flat File

Property Name	Property Type	Dimension Types	Default Value	Description
Alias:*Alias table*	Dimension, Member	All		Examples: "Alias: Default", "Alias: T1"
Description	Dimension, Member	All		Optional – no default.

About Flat File Comments

For single line comments, place the hash character as the first character on the line. Blank lines are ignored.

Block comments are delineated by a start comment block indicator (`#!`) and terminated on a separate line with an end block indicator (`#--!`). Intervening lines need not be commented.

For example:

```
#!—start of comment block

Comment within block

Another comment within block

#--!
```

Flat File Sample

[Figure 1](link) shows a sample file for dimension Customers.

Figure 6-2   Customers.txt Flat File Sample

```
Regular,Storage Type,Hierarchy Type,Attributes Header,comment,bso data storage,aso data storage,
     two pass calculation,aso dimension formula,consolidation type,uda,parent,alias:Default,alias:English
Customers,SPARSE,STORED,,,LABELONLY,STOREDATA,N,,,UDA,,alias:Default,alias:English
NoCustomer,SPARSE,Disabled,,,StoreData,StoreData,N,,+,,,No Customer,No Customer
AllCustomers,SPARSE,Disabled,,,StoreData,StoreData,N,,+,,All Customers,All Customers
Big Box,SPARSE,,,,StoreData,StoreData,N,,+,,AllCustomers,,
BB100,SPARSE,,,,StoreData,StoreData,N,,+,,Big Box,Q Mart,Q Mart
BB200,SPARSE,,,,StoreData,StoreData,N,,+,,Big Box,Bike Depot,Bike Depot
BB300,SPARSE,,,,StoreData,StoreData,N,,+,,Big Box,Mountain Adventures,Mountain Adventures
Specialty Retailers,SPARSE,,,,StoreData,StoreData,N,,+,,AllCustomers,,
SR100,SPARSE,,,,StoreData,StoreData,N,,+,,Specialty Retailers,Bobs Bikes,Bobs Bikes
SR200,SPARSE,,,,StoreData,StoreData,N,,+,,Specialty Retailers,Rose Town Bikes,Rose Town Bikes
SR300,SPARSE,,,,StoreData,StoreData,N,,+,,Specialty Retailers,The Cyclery,The Cyclery
Webstore,SPARSE,,,,StoreData,StoreData,N,,+,,AllCustomers,,
```

Exporting Template Files

Template files are created by exporting an entire Profitability and Cost Management application — including application metadata, dimension metadata, and program artifacts — in a single operation to create one application "template" file. Exporting and importing template files can be useful, for updating applications and migrating applications from on-premise to the Cloud. Full backups and restorations are handled best by using the migration features for lifecycle management ([Backing Up, Restoring, and Replicating Applications Using the Migration Features](link)}.

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Chapter 6
Migrating an Application from On-premises Profitability and Cost Management to Cloud EPM Profitability and Cost Management

> **ⓘ Note**
>
> Use **Export Template** to export application input data that is noncalculated and less than 5 million cells.

To export a template file:

1. Open the Profitability Application Console and select the application (Using the Profitability Application Console and Other Application Features).

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

3. Review the file name and change it if you want. Extension .zip is added to exported template files.

4. If POV data is displayed, select whether to export all POV data or clear checkboxes for data that shouldn't be exported.

5. Click **OK** to start the export.

   The file is created in the **Outbox**. You can download it to local storage for future uploading and import. See Transferring Files with the File Explorer. for more information.

6. You can click the Job Library icon, , and then **Refresh** to check export status.

Once created, a template file can be imported to create a new Profitability and Cost Management application as described in Building Applications by Importing Template Files.

Migrating an Application from On-premises Profitability and Cost Management to Cloud EPM Profitability and Cost Management

You can migrate a Management Ledger application from on-premise Oracle Hyperion Profitability and Cost Management to Oracle Fusion Cloud EPM Profitability and Cost Management.

The migration includes the following:

- Dimensions, whether file-based or managed in Oracle Hyperion EPM Architect or an Oracle Essbase cube

- Rules and rule sets

- Queries and model views

- POV settings

- Optionally, input values but not calculated values

No other content outside of the Management Ledger application is included. For example, reports produced using Oracle Hyperion Financial Reporting are not included.

On-premise Profitability and Cost Management must be release 11.1.2.4.110 or more recent.

> **ⓘ Note**
>
> You can also create a custom application.

To migrate a Management Ledger application from on-premise Profitability and Cost Management to Cloud EPM Profitability and Cost Management, begin by exporting the on-premise application template file:

1. Log into Profitability and Cost Management and select the application to migrate.

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

3. In **Export Template**, enter an **Export File Name**, and then indicate whether to **Include Input Data**.

4. Click **OK** to start the export. You can track progress in the **Job Library**.

When the template has been exported, log into Profitability and Cost Management and import the template (Building Applications by Importing Template Files).

Migrating from Profitability and Cost Management to Enterprise Profitability and Cost Management

Enterprise Profitability and Cost Management includes improved versions of all the great modeling and allocation capabilities available in Profitability and Cost Management and integrates them with Oracle Cloud EPM Platform features like data forms, dashboards, reports, Data Exchange, Oracle Smart View for Office dimension management, and more.

If you have an existing Profitability and Cost Management application, you can migrate it to Enterprise Profitability and Cost Management. However, because the basic requirements are different between the two, in-place migration is not possible. You can download a migration template that you customize for your existing application, which you then use to generate an application snapshot and data extracts that are compatible with Enterprise Profitability and Cost Management. You can then either manually upload the snapshot and data to an Enterprise Profitability and Cost Management instance, or allow the system to automatically complete the migration.

To migrate an application from Profitability and Cost Management to Enterprise Profitability and Cost Management:

1. From the Home page in Profitability and Cost Management, select **Application**, and then **Migrate to EPCM**.

2. On the **Migrate to EPCM** page, click **Generate Template**.

   See Customizing the Migration Template for Your Application for information on how to customize the migration template for your application.

3. Click **Validate** to view the migration status and validate the information in the migration template.

   See Validating the Migration Template.

4. On the **Migration Status** page, click **Preview and Validate Report**.

   See Viewing the Preview and Validate Report.

5. After you have validated your migration template, select one of the following options:

   • **Generate Snapshot**: Generates an application snapshot and data extract. These files are saved to your application outbox. You can then download them to your file system and upload them to an Enterprise Profitability and Cost Management instance later.

     See Generating an Application Snapshot and Data Extract.

   • **Migrate to EPCM**: Connects directly to an Enterprise Profitability and Cost Management instance. After generating the application snapshot and data extract, the

process continues and uploads the application and data to your specified instance. If you choose not to download your application snapshot and data export to manually upload to Enterprise Profitability and Cost Management, this step will do it for you.

See [Performing a Full Migration](#).

6. Open Enterprise Profitability and Cost Management and validate your migration results.

See [Validating Migration Results](#).

Tutorial

Your Goal	Learn How
Learn how to migrate an existing Profitability and Cost Management application to a separate instance of Enterprise Profitability and Cost Management.	[Migrating from Profitability and Cost Management to Enterprise Profitability and Cost Management](#)

Backing Up, Restoring, and Replicating Applications Using the Migration Features

Profitability and Cost Management offers flexible lifecycle management features to help with a number of maintenance and migration tasks:.

- Backing up to create a snapshot for cloning an environment, for example, to migrate an application from test to production.

- Exporting to create an incremental backup of specific artifacts in an environment.

- Uploading archive files in ZIP format containing a variety of data, metadata, artifact definitions, and more.

- Downloading snapshots for artifact maintenance and backups.

- Deleting and renaming snapshots and archives.

- Setting import options.

- Importing artifacts and the application from a snapsot.

You can import exported files or backup snapshots for restoration or migration purposes.

- To access migration features within Profitability and Cost Management, on the Home page, click **Application**, [icon], and then **Migration**, [icon].

- To clone a snapshot, on the Home page, click **Application**, [icon], and then **Clone Snapshot**, [icon]. (See [Cloning Snapshots](#) in *Administering Migration*).

Also see [Exporting Template Files](#) and [Loading Data into Essbase](#).

> ⓘ **Note**
>
> You can import an entire snapshot into an empty Profitability and Cost Management service where no application currently exists. In general, artifacts in a Profitability and Cost Management application snapshot can be imported individually/separately into an existing application. The exception to this is the Dimensions artifact. Dimension metadata cannot be re-imported into an existing application using an Application Snapshot. Use the Update Dimension job of the EPM Automate `loaddimdata` command to update the dimension's metadata in an existing application.

> ⓘ **Note**
>
> To migrate an application from on-premise Oracle Hyperion Profitability and Cost Management, see [Migrating an Application from On-premises Profitability and Cost Management to Cloud EPM Profitability and Cost Management](#).

Importing Artifacts

You can enter data definitions and application information directly into Profitability and Cost Management.

To facilitate the population of the application, you can import application definitions (artifacts) directly into Profitability and Cost Management using Migration. This can include POVs with associated rule sets and rules. For more information, see *Administering Migration*.

Working with an Application in the Profitability Application Console

You can edit an application's description and select the number of calculation threads to use.

You can also select default calendar settings to use in analysis views, profit curves, and wherever member functions support the **Current** option.

With sufficient security provisioning, you also can perform the following tasks using the **Actions** menu and **Create** button: **Update Dimensions**, **Metadata Validation**, **Export Template**, **Re-Order Dimensions**, **Repair Data Grants**, **Export Supplemental Diagnostics**, and **Enable Diagnostics**. If no application exiis, you can select **Create Application** or **Import Template**.

For more information, see [Editing an Application's Description and Default Dimension Settings](#) and [Performing Other Application Tasks](#).

Editing an Application's Description and Default Dimension Settings

You can edit an application's Description, select the default number of calculation threads to use, set the numeric rounding precision for allocations, and set the default calendar to use in the member selector for analytic features.

To edit these application settings:

1. Open the Profitability Application Console (Using the Profitability Application Console and Other Application Features).

2. On the **Application** tab, click **Edit**, ✎.

3. View and modify information as required:

   - On the **Definition** tab:

     – **Description**: Enter a description for the application.

     – **Calculation Threads**: Enter the default number of calculation threads to use.

     – **Allocation Precision**: The decimal precision for calculated allocation results. Precision is calculated by rounding, not truncation. The default is 2 decimal places. Values can range from 7 to -6.

     – **Oracle Guided Learning Settings**: If you have implemented Oracle Guided Learning, specify configuration settings.

       * **Application ID**: Enter the Application ID.

       * **Server URL**: Depending on the location of your environment, enter the URL:

         * **NA**: https://guidedlearning.oracle.com

         * **EMEA**: https://guidedlearning-emea.oracle.com

         * **APAC**: https://guidedlearning-apac.oracle.com

   - On the **Dimension Settings** tab:

     – Select a dimension to use at the **Year** and **Period** level whenever **Current** is offered as a dimension member option, and then click the links following **Current Year** and **Current Period** to set those options.

       For example, you can set these as follows: **Year Dimension** to **Year**, **Current Year** to **2016**, **Period Dimension** to **Period**, and **Current Period** to **June**.

     – Following **Fiscal Period Start Member**, type the period that starts the fiscal year, for example, **January** if you use the calendar year for your fiscal year.

     – Select a **Scenario Dimension** and an **Account Dimension** as defaults for those dimension types.

4. Click **Save**.

Performing Other Application Tasks

You can update and order dimensions, validate metadata, export and import templates, and access diagnostics.

To perform these tasks:

1. Open the Profitability Application Console (Using the Profitability Application Console and Other Application Features).

2. **Optional:** To delete the current application, click ✖.

   Ensure no other users require this application before deleting it.

> **ⓘ Note**
>
> If you want to delete an application, delete it using the Service Administrator user that created the application.

3. **Optional:** Click **Actions**, and then select one of the following options:

   - **Update Dimensions**—Add or remove dimension members for the selected application

     For details, see Updating Application Dimensions with Flat Files.

   - **Metadata Validation**—Runs cross-dimension validations on the deployed data for the selected application but does not enable valid applications

     Results are displayed in the Job Library ( ). If a validation error occurred, click the link for details. You can create a file of errors for easier correction.

   - **Export Template**—Create a zip file of an entire application for backup or migration (Exporting Template Files)

   - **Import Template**—Only available if no application exists yet; create a new application by loading an exported template file (Building Applications by Importing Template Files)

   - **Re-Order Dimensions**—Move dimensions up or down the dimension outline

   - **Repair Data Grants**—Push all data grant assignments to Oracle Essbase where they are enforced, in case a synchronization error occurs.

   - **Export Supplemental Diagnostics**—Submit a job that collects various diagnostic information in the form of .csv files, text files, and reports and zips them into a single file. This file is saved in the Profitability and Cost Management File Explorer, where you can download it. When working with Oracle Support to diagnose a problem, you may be requested to provide this file.

     > **ⓘ Note**
     >
     > The general types of information collected are metadata, aggregate, and statistical, related to the structure of the application and its execution characteristics. Information is collected for diagnosis and support. No sensitive information or actual data is collected.

   - **Enable Diagnostics**—Enable diagnostic logging for error debugging.

4. Respond to any confirmation prompts.

   The selected action is performed.

> **✔ Tip**
>
> View and refresh the **Job Library**, , to check the current status of a Profitability Application Console job (Viewing Tasks in the Application Job Library).

Updating Application Dimensions with Flat Files

> ⓘ **Note**
>
> You can use **Dimension Management** to list and view most current dimensions and members in the application (Viewing, Creating, and Editing Dimensions with Dimension Management). You can also edit dimensions directly.
>
> Updating with flat files, described in this section, is most useful for updating in a more automated way when many updates are required.

When you update a dimension with flat files, you import a flat file containing a new definition of that dimension (Preparing Flat Files for Each Dimension). You must upload the flat file to the **Inbox** before beginning the update (Transferring Files with the File Explorer).

You can view this video to learn how to update dimensions with flat files:

▶ Updating Metadata in Oracle Profitability and Cost Management Cloud

To update Profitability and Cost Management dimensions with flat files:

1. Open the Profitability Application Console (Using the Profitability Application Console and Other Application Features).

2. On the Application tab, click **Actions**, and then select **Update Dimensions**.

   Typically, you would perform a **Pre-Update Analysis** and then select **Update Dimensions**.

3. **Optional:** Perform a **Pre-Update Analysis**:

   a. **Optional:** Under **Pre-Update Analysis**, select **Validate Dimensions** to verify that each of the selected changes are valid. This option does not update the dimensions. If all dimensions have been selected, this option also runs the application level dimensions validations.

      Validation errors and the results of the impact analysis are displayed in the Job Library.

   b. Under **Pre Update Analysis**, select **Impact Analysis** to perform a comparison between the application being deployed and the existing application in Profitability and Cost Management. If **Impact Analysis** is selected, the **Validate Dimensions** option is selected automatically.

   c. Click **OK**.

      The modified dimensions are validated but not updated. The following information is displayed:

      • New Members

      • Deleted Members

      • Re-Parented Members

      • Members with Level 0 change

      • Impacts on referencing application artifacts

      Validation errors and the results of the impact analysis are displayed in the Job Library.

4. **Optional:** Check **Update Dimensions** to update the selected dimensions with the changes.

   a. Under **Dimensions**, browse to the **Inbox** and select a flat file for the dimension to update.

   b. Click **OK**.

   Any exceptions are reported in the Job Library. The selected dimension members are added, updated, or deleted according to dimension selections, or the selected flat file is imported.

ⓘ **Note**

Repeat necessary steps until flat files for all updated diimensions have been imported. Then, deploy the application as described in [Deploying Databases](#).

✔ **Tip**

Whenever the Profitability Application Console is used to update dimensions, a Job entry is automatically created in the Job Library to validate and update the application ([Viewing Tasks in the Application Job Library](#)).

Following a dimension update, you must log out of Profitability and Cost Management and then log in again to see the updates in **Dimension Management** or elsewhere in the service.

Viewing, Creating, and Editing Dimensions with Dimension Management

You can use the Dimension Management feature of Profitability and Cost Management to view members and properties for Business, Attribute, and Point of View dimensions within an application.

You can also edit dimension properties, create dimensions, assign members to different parent members, and add alias tables.

ⓘ **Note**

[Updating Application Dimensions with Flat Files](#) describes a way to update dimensions with files when many edits are required. The method described in this section is less automated, more direct, and most useful for a small number of edits.

ⓘ **Note**

Only properties relevant for Oracle Essbase aggregate storage (ASO) cubes are displayed.

For more information and instructions, see:

- [Viewing Application Dimensions](#)

- [Editing Dimensions with Dimension Management](#)

- [Creating Dimensions with Dimension Management](#)

- [Adding Alias Tables](#)

Videos

Your Goal	Video
Learn how to update metadata with the Dimension Editor in Profitability and Cost Management	[Updating Metadata with the Dimension Editor in Profitability and Cost Management](#)

Viewing Application Dimensions

[Viewing, Creating, and Editing Dimensions with Dimension Management](#) describes the **Dimension Management** feature of Profitability and Cost Management. You can use **Dimension Management** to view dimension members and properties. You can also edit dimension properties and assign members to different parent members ([Editing Dimensions with Dimension Management](#)).

See the following video for information about using the Dimension Management editor:

 [Updating Metadata with the Dimension Editor in Profitability and Cost Management](#)

To view a list of Business, Attribute, and Point of View dimensions included in the application:

1. In the Home page, click **Application**, , and then click **Dimension Management**, .

   By default, the **Dimensions** tab of the Dimension Management screen opens.
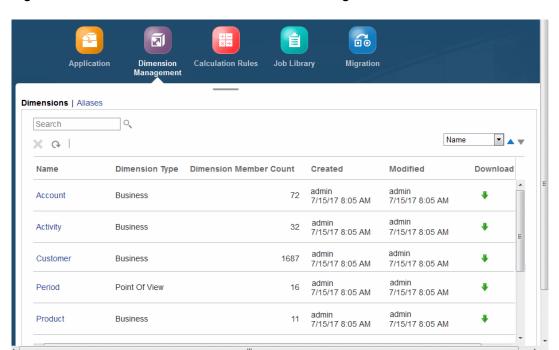
Figure 6-3   Dimensions Tab of the Dimension Management Screen

The Dimensions tab of the Dimension Management screen contains the following controls for viewing the dimension hierarchy. As you point to each control on the screen, its name is displayed.

Table 6-4   Dimensions Tab Controls for Viewing

Control	Name	Action
Search	**Search** box	Searches for the entered text
➕	Create Dimension	Click to create a dimension and set its properties
✖	**Delete Dimension** button	When enabled, deletes the selected dimension

> ⓘ **Note**
>
> This setting is enabled only before any calculation rules or analytic artifacts are created.
>
> If an attribute dimension is deleted, all attribute associations that reference it are also deleted.

Control	Name	Action
↻	**Refresh** button	Updates displayed items with the latest data

Table 6-4   (Cont.) Dimensions Tab Controls for Viewing

Control	Name	Action
	Inspect button	When enabled, displays the selected dimension properties in a **Properties** pane on the right side of the window. To collapse the **Properties** pane, click .
Start Date ▲ ▼	**Sort** box	Sorts the displayed table according to your selection; for example, in the Job Library, you can sort these columns: **Start Date**, **End Date**, **User**, or **Job Type**; the upward-pointing triangle sorts in ascending order and the downward-pointing triangle sorts in descending order
	Download arrow	Saves the dimension definition as a CSV (comma-separated values) file

2. Click a dimension name to view its member structure.

- Click triangles that point to the right to display the next level of members below that level.

- Click triangles that point downward to collapse levels below that level.

- Select members to display member information (properties).

> ⓘ **Note**
>
> Member names in *italics* indicate shared members.
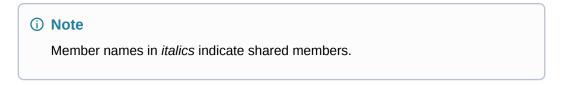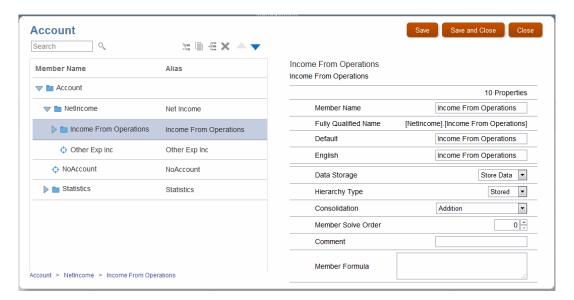
Figure 6-4   The Dimensions Tab, Expanded to Show Member Levels and Properties

> ⓘ **Note**
>
> You can edit any properties within edit boxes, or select a different setting from a drop-down list.
>
> If the application includes more than one alias table, you can edit each alias property separately. For example, in the previous figure, aliases from the Default and English alias tables are displayed. Each table could contain a different alias for the selected member.
>
> To add alias tables, see Adding Alias Tables.

3. **Optional:** Click the arrow at the end of a dimension row to download a comma-separated (CSV) flat file containing the definition of that dimension. You can load it into Microsoft Excel for member analysis or into a text editor to create a new flat file to import and create another dimension or to make mass changes and re-import the file using **Update Dimension**.

> ⓘ **Note**
>
> You can use a text editor to edit dimension CSV files downloaded from **Dimension Management**. Then, you can re-import them using **Update Dimension** (Updating Application Dimensions with Flat Files). Do not edit them using Microsoft Excel. When Excel saves an edited CSV file, it does not retain the formatting that enables **Update Dimension** to parse the file correctly.

Editing Dimensions with Dimension Management

For an overview of **Dimension Management**, see Viewing, Creating, and Editing Dimensions with Dimension Management.

See the following video for information about using the Dimension Management editor:

▶ Updating Metadata with the Dimension Editor in Profitability and Cost Management

> ⚠ **Caution**
>
> For applications created with duplicate member outlines, if you move, rename, or reparent a member, the data associated with the member will be lost even if you deploy the cube with **Preserve Data** selected.

> ✔ **Tip**
>
> Following a dimension update, you must log out of Profitability and Cost Management and then log in again to see the updates in **Dimension Management** or elsewhere in the service.
>
> You also should redeploy the application, which validates it and updates the database.

To edit a dimension in **Dimension Management**, do the following:

1. In the Home page, click **Application**, [icon], and then click **Dimension Management**, [icon].

2. In **Dimensions**, click the name of a dimension to modify.

   You can use the controls listed in Table 1 to display lower levels of the member hierarchy.

   The screen for the selected dimension contains the following controls for editing:

   > ✅ **Tip**
   >
   > Select a member and then click an editing button.

Table 6-5   Dimensions Tab Controls for Editing

Control	Name	Action
[icon]	**Add Child** button	Adds a child member beneath the selected member; enter the name of the new child, and then edit its properties
		> ⓘ **Note** > > If you check the **Shared Member** box, the **Member Name** must already exist. When saving a shared member, set **Data Storage** to **Shared** on the properties pane.
		You can't add a member to a shared member.
[icon]	**Copy Member** button	Copies the selected member after the last member under its parent at the same level as the copied member
[icon]	**Reparent** button	Moves the selected member under another member of that dimension so that it becomes the child of the new parent; enter the name of the new parent dimension for the selected member. You can't reparent shared members.
[icon]	**Delete Member** button	Deletes the selected member
▲ ▼	**Move Up** and **Move Down** buttons	Moves the selected member up or down at the same level under the same parent

3. When edits are complete, follow the steps in Deploying Databases to redeploy the application's metadata to the Oracle Essbase cube. Any validation errors are displayed in the Job Library.

Creating Dimensions with Dimension Management

For an overview of **Dimension Management**, see Viewing, Creating, and Editing Dimensions with Dimension Management.

See the following video for information about using the Dimension Management editor:

▶ Updating Metadata with the Dimension Editor in Profitability and Cost Management

> ✅ **Tip**
>
> After you create new dimensions, you should redeploy the application, which validates the dimensions and updates the database.

To create a dimension in **Dimension Management**:

1. In the Home page, click **Application**, [icon], and then click **Dimension Management**, [icon].

2. In **Dimensions**, click ➕.

3. On the **Create Dimension** page, set the dimension's properties:

Table 6-6   Dimension Properties

Property	Description
Name	See Essbase Naming Conventions.
Dimension Type	Select the type of dimension. See Dimension Types. • **Business** • **Point of View** • **Attribute**
Attribute Dimensions	**Optional**: Select an attribute dimension from the list of existing attribute dimensions that aren't yet associated with another dimension. See Profitability and Cost Management Attribute Dimensions.
POV Dimension Order	**Optional**: Set the display order of the POV dimensions. For example, to set the display order in the POV as Year first, then Period, and then Scenario, set Year as 1, Period as 2, and Scenario as 3.
Comment	**Optional**: Describe the dimension's intended use
Data Storage	For aggregate storage (ASO) cubes, select the type of data storage: • **Store Data**: The default. **Store Data** aggregates the values of its members. • **Label Only**: Label only dimensions are virtual dimensions; they're typically used for navigation and have no associated data. Although a label only dimension has no data associated with it, the dimension displays the value of its first direct child.

Table 6-6   (Cont.) Dimension Properties

Property	Description
Hierarchy Type	For aggregation storage (ASO) cubes, select the type of hierarchy:
	• **Stored**: The default. The stored hierarchy type is the simplest hierarchy and provides the fastest aggregation. The entire dimension is treated as a single hierarchy. This hierarchy type doesn't allow shared members, member formulas, nor alternate consolidation operators (other than +).
	Dynamic: The most customizable hierarchy type, but provides the slowest aggregation performance. The entire dimension is treated as a dynamic hierarchy, which allows shared members, members with formulas, and all consolidation symbols. Use dynamic hierarchies carefully to prevent performance degradation.
	• **Enabled**: In an enabled hierarchy type, the dimension is treated as multiple hierarchies, one for each of the generation 2 children (the children of the root). Each generation 2 child is the top of a unique hierarchy. The first hierarchy must be stored and can't contain shared members or use consolidation operators other than +. The second through the last hierarchies may be Dynamic or Stored. Stored hierarchies other than the first one may contain shared members.
Dimension Sort Order	**Optional**: With the increment counter, set the order of dimensions in the database; the lowest number is sorted first. This option also sets the default evaluation order when **Dimension Sort Order** and **Dimension Solve Order** are the same. Duplicates of numerical sort order values aren't allowed.
Dimension Solve Order	**Optional**: With the increment counter, set the evaluation order of dimensions; the lowest number is evaluated first. Multiple dimensions can have the same solve order value. Zero is the default.
Aliases-`<alias table name>` fields	Enter the alias you want to use for this dimension, for each defined alias table. See Profitability and Cost Management Alias Dimensions.

4. When you make changes to dimensions, you must push those changes to the database by redeploying the application. You can redeploy now or, if you're changing or adding multiple dimensions, you can redeploy the application after making multiple changes. Follow the steps in Deploying Databases to redeploy the application's metadata to the Oracle Essbase cube. Any validation errors are displayed in the Job Library.

Adding Alias Tables

For an overview of **Dimension Management**, see Viewing, Creating, and Editing Dimensions with Dimension Management.

> **✓ Tip**
>
> Following a dimension update, you must log out of Profitability and Cost Management and then log in again to see the updates in **Dimension Management** or elsewhere in the service.
>
> You also should redeploy the application, which validates it and updates the database.

If you use aliases, multiple alias tables can be useful, for example to support different languages.

> **ⓘ Note**
>
> The following steps describe how to add an alias table. To delete an alias table, first remove any alias values that you have assigned to any members of that alias table, and then follow these steps, but select a table and then click ✕.
>
> You can click **Refresh**, ↻ at any time to update displayed information.

To add dimension tables in **Dimension Management**, do the following:

1. In the Home page, click **Application**, 🖼, and then click **Dimension Management**, 🖼.

2. Click **Aliases**.

3. In **Aliases**, click ➕ .

4. Enter the **Name** and optional **Description** of the new alias table.

5. When edits are complete, follow the steps in Deploying Databases to redeploy the application's metadata to the Oracle Essbase cube. Any validation errors are displayed in the Job Library.

> **ⓘ Note**
>
> You can populate new alias tables by adding or editing the alias in the properties pane for a member (Figure 2). You can also import flat files containing alias records (Updating Application Dimensions with Flat Files).

Viewing Tasks in the Application Job Library

The Job Library provides a list of all jobs created in Profitability and Cost Management.

> ⓘ **Note**
>
> - You can select one or more jobs in the Job Library. To select multiple jobs, use ctrl+click.
>
> - As the number of jobs in the list increases, screen refresh speed can slow down. To reduce the list and restore reasonable performance, use the **Export to Excel** button to archive the job list and then delete the old jobs.

To view the Job Library:

1. On the **Home** page, click **Application**, and then, click **Job Library**. (You can also click ☰, **Navigator**, on the **Home** page, and then click **Job Library**.)

Figure 6-5   The Profitability Application Console Job Library Screen

The **Job Library** screen contains the controls in [Table 1](#) plus those in the following table.

Table 6-7   Specific Controls on the Application Job Library Screen

Control	Name	Action
	Stop	Cancels the selected job
		If a job is locked in an iterative process or exceptionally long calculation, a Service Administrator can stop and restart Essbase. For details, see [Restarting Essbase](#). All other work must be stopped first.
	Save Errors to File	Saves the error window text to **error.txt**, a text file
	Export to Excel	Saves the Job Library table to a Microsoft Excel file

Table 6-7   (Cont.) Specific Controls on the Application Job Library Screen

Control	Name	Action
📖	**Run Execution Statistics Report**	Runs the Execution Statistics report with information about the application name and type, number of threads, POV, job ID, job type, job status, start and end time, user ID, rule set name, rule name, iteration number, elapsed time, thread number, potential sources, potential destinations, and potential allocations for the selected job
▪▪▪	**Actions**	Displays actions for the selected job: **Delete** or **Inspect**, described in the text that follows this table **Note:** This button may be hidden when the **Properties** pane is open.
Provide Feedback	**Provide Feedback**	Run a Supplemental Diagnostics job and submit feedback for Oracle Support. In addition to the standard content provided in Supplemental Diagnostics, for each calculation job selected, the Execution Statistics Report for that job is included in the feedback, along with the Program Documentation report for the POV used to calculate the job.

2. View the information for each job:

   - **Job Id** is a sequential identification number assigned by the system.

   - **Job Type** displays the type of task that is being performed, such as Create Application or Update Dimensions.

   - **Status** displays the current state of the job, such as Running, Awaiting Permissions, Success, or Failure.

   - **Elapsed Time** displays the length of time since the job started (until it finishes).

   - **Start Date** displays the date and time on which the job was submitted or is scheduled to be run.

   - **End Date** displays the date and time when the job stopped, successful or not.

   - **Comment** shows a user-entered note or details about a specific job. The Comment is entered when the task is submitted.

3. **Optional:** View job details or properties in the **Properties** pane (Figure 2).

   By default, the **Properties** pane opens when you click on a job. You can close the pane by clicking the **Hide Properties** button (⊞). To show the **Properties** pane again, click 🔍 or click ▪▪▪, and then **Inspect** to review additional summary level detail about the selected job in the **Properties** pane.

   The **Properties** pane includes a job ID, the user name, comments if entered, other information about the job, and may include a hyperlink that you can click to view more detail, such as error or impact analysis information. If a hyperlink is offered, as in Figure 2, you can save the information to a file.
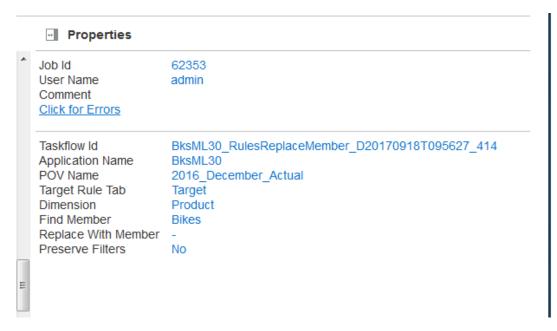
> **ⓘ Note**
>
> **Task Flow ID** is the system-generated task ID for the specific task, displayed in the format *<application name>:<task name><generated taskflow number>.*
>
> For example, the generated taskflow number may be displayed as **AppMgmt_DeployApplication_D20120824T08520_5ed,** where **AppMgmt** is the application name, **DeployApplication** is the task, and **D20120824T08520_5ed** is the generated taskflow instance ID.

Figure 6-6   Job Properties for Status of Success with Warnings

4. **Optional:** If required, click **Stop** to end the selected task in Running state.

> **⚠ Caution**
>
> While the task flow stops quickly after the button is pressed, activities that affect results may require additional time to ensure that the state of the data is consistent.

5. **Optional:** Click ✕, or click ▪▪▪, and then **Delete** to remove the selected job from the list.

Transferring Files with the File Explorer

Use the Profitability and Cost Management File Explorer to view logs and sample files, export and import application files for backup and migration, and update dimensions with flat files.

To open the File Explorer, open the Profitability Application Console (Using the Profitability Application Console and Other Application Features). Then, click 📁.

Figure 6-7   The File Explorer Tab
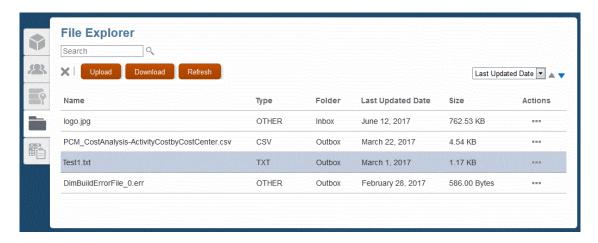
[Figure 1](#) shows the File Explorer with four files, one in the **Inbox** and the others in the **Outbox**.

The **Inbox** holds files that have been uploaded from local folders (your computer or mapped drives). The **Outbox** holds files that are generated by the system (log files), created by export (template files), or uploaded from your computer or mapped drives.

Typically, you upload files in the **Inbox** for import, such as flat files for updating dimensions or template files to create an application. When you perform an import task and select server, you can select from the contents of the **Inbox**. When you perform an export, or need to view a log file, the File Explorer shows that it is contained in the **Outbox**.

You can use the following buttons to work with files in the File Explorer:button to load a file into either the Inbox or Outbox from your computer or mapped drives. Use **Refresh** to ensure that the list of files is current.

- **Upload** -- Enables you to browse for a file and load it into either the **Inbox** or **Outbox**

- **Download** -- Enables you to either open or save the selected file

- **Refresh** -- Ensures that the list of files is current

For other controls, see the following table:

Table 6-8   File Explorer Controls

Control	Name	Action
Search	**Search** box	Searches for the entered text
✕	**Delete** button	Deletes the selected file **Note:** To delete more than one file at once, select them with **Ctrl+Click** and then click ✕
Last Updated Date ▲▼	**Sort** box	Sorts the displayed table according to your selection You can sort by **Name**, **Type**, **Folder**, **Last Updated Date**, or **Size**. The upward-pointing triangle sorts in ascending order and the downward-pointing triangle sorts in descending order.

7

Working with Application Points of View (POVs)

Related Topics

- [Introducing Points of View](#)
  Points of view (POVs) for an application are sets of dimensions that display a particular version of an application for a selected snapshot, such as year, period, and scenario. Rules control the calculations that you run against one or more POVs.

- [About POVs](#)
  A POV displays a particular version of an application for a selected snapshot, such as year, period, and scenario.

- [POV Dimensions](#)
  A Point of View (POV) dimension is used to present a specific version or perspective of the application.

- [Managing POVs](#)
  The POV dimension defined for an application determines the potential POVs available for an application, but all POVs are not automatically available for assignment or data input.

Introducing Points of View

Points of view (POVs) for an application are sets of dimensions that display a particular version of an application for a selected snapshot, such as year, period, and scenario. Rules control the calculations that you run against one or more POVs.

Members for POV dimensions are user-defined, and can provide a rich array of POV combinations for modeling and what-if analysis.

You can use points of view (POVs) to create various versions of an application; for example, to hold budget versus actual figures, or to play scenarios to measure the impact of various changes on the bottom line.

You specify POVs for each application. See the following sections for detailed information about POVs:

- [About POVs](#)
- [Types of POVs](#)
- [POV Dimensions](#)
- [Managing POVs](#)

About POVs

A POV displays a particular version of an application for a selected snapshot, such as year, period, and scenario.

You must have at least one POV dimension, and you can have up to four. You define the POV dimensions and their names. Calculations are performed using the specific data and rules for that POV for different months or situations.

A typical POV includes the Year, Period, and Scenario. The first step for almost every activity in Profitability and Cost Management is the selection of a POV.

> ⓘ **Note**
>
> Rules in Profitability and Cost Management applications are POV-specific. For a rule or rule set or global context definition to exist within a POV, there must be a unique definition of that artifact within the POV.

An application can be edited only if the POV is set to "Draft" status (Modifying the POV State). You can modify the POV to reflect new drivers, criteria, or members, enabling you to create alternative scenarios. By comparing these scenarios, you can evaluate how changes affect the processes or bottom line.

You can also create separate versions of the same POV to monitor the impact of changes to the application, or track different versions of the same application.

Related topics:

* POV Dimensions
* Types of POVs
* Managing POVs

Types of POVs

There are two categories of POVs: data POVs and model POVs.

By definition, POVs define a slice of data. Their dimensions, such as time, date, and data status (Actuals, Forecast, and so on) define the data set to be calculated, displayed, or otherwise operated on. So, all POVs are data POVs, although the data set may be empty.

Some POVs are also associated with calculation rules. When you create a rule set and associated rules, you specify a POV. Those rules apply only to it. POVs associated with rules are called "model POVs". They have a check in the **Model Exists** box on the Execution Control screen.

POV Dimensions

A Point of View (POV) dimension is used to present a specific version or perspective of the application.

Each application requires at least one dimension to be designated as a POV dimension. The POV dimensions can be whatever is required for the particular application. The following list represents some common sample POV dimensions: :

- **Period** — Enables you to analyze strategies and changes over time. Because an application can be based on any unit of time (quarters, months, annual, years, and so on), you can analyze strategies over time, and monitor inventory or depreciation.

- **Year** — Identifies the calendar year in which the data has been gathered

- **Scenario** — Identifies a version of the application for a specific time period and set of conditions

Version Dimension

Using a specific POV, you can create a POV version that enables you to maintain separate versions of the same POV to monitor the impact of changes to the application, or track different versions of the same application.

Use the Version dimension for the following tasks:

- Create multiple iterations of an application, with slight versions

- Model possible outcomes based on assumptions, or "what-if" scenarios to determine best or worst case scenarios

- Facilitate target setting

By modifying different elements within the Version dimension, you can examine results of changes, without modifying a original application.

Managing POVs

The POV dimension defined for an application determines the potential POVs available for an application, but all POVs are not automatically available for assignment or data input.

Considerations

Be aware of the following:

- You must add a POV to the application before you can assign drivers or load data for a POV.

- You can copy a POV for a new reporting period or a different scenario. See Copying POVs.

- When a new POV is added, the status is automatically set to "Draft" so the POV can be edited.

To create, modify, and delete POVs, display one of the screens described in these topics:

- Opening the Points of View Screen

- Opening the Execution Control Screen

Use the following procedures to work with POVs:

- Creating POVs

- Modifying the POV State

- Copying POVs

- Clearing Selected Artifacts from POVs

- Deleting POVs and All Artifacts
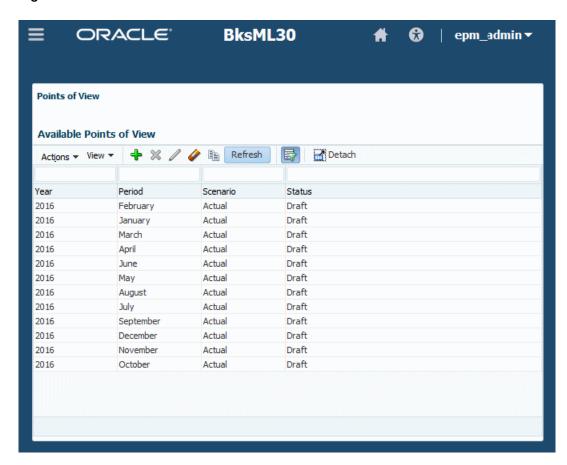
Opening the Points of View Screen

The Points of View screen enables you to create, modify, and delete POVs.

To display the **Points of View** screen using the Navigator menu:

1. On the Home page, click ![menu icon], and then select **Points of View**.

   The **Points of View** screen lists all available POVs.

Figure 7-1   Points of View Screen

2. Use the **Actions** menu and buttons to perform the following actions:

Table 7-1   POV Management Actions

Actions Menu Option	Button	Details
Create Point of View	➕	Creating POVs
Delete Point of View	✖	Deleting POVs and All Artifacts
Change Point of View State	✏	Modifying the POV State
Clear Point of View	✐	Clearing Selected Artifacts from POVs

Table 7-1   (Cont.) POV Management Actions

Actions Menu Option	Button	Details
Copy Point of View		[Copying POVs](#)

> ⓘ **Note**
>
> You can perform similar actions on the Execution Control screen. To display it, on the Home page, click **Models**, and then **Execution Control**.

3. **Optional:** Use the **View** menu and buttons to perform the following tasks:

   - **Columns**—Show all or selected dimension columns

   - **Detach** and **Attach** the table of POVs,

   - **Reorder Columns**—Use the arrow controls to move the selected dimension column toward the beginning or end of the POV table

   - **Query By Example**—Select to filter data using Query by Example (QBE), :

     – Click Query By Example, .

     – Enter the first few letters of the target value in one or more QBE fields that appear above each data column.

     – Click again.

       Only matching members are displayed. To show all members again, follow these steps and clear all fields.

Creating POVs

You can create a POV to view the information and calculations for an application for a selected snapshot of the application, such as a year, period, scenario and status.

> ⓘ **Note**
>
> You cannot access a POV from other task windows until the POV has been added.

To add POVs:

1. Display the Points of View screen ([Opening the Points of View Screen](#)) or Execution Control screen ([Opening the Execution Control Screen](#)).

2. Click or select **Actions** and then **Create Point of View**.

   The **Create Point of View** dialog box opens.

3. Select the parameters in the application to identify the new POV.

   Because this is a new POV, the **Year** and **Period** parameters are offered and **State** is set automatically to **Draft** to enable you to build and edit the application.

4. Click **OK**.

The POV is added to the list.

Modifying the POV State

When an application is created, its status (**State**) is set to **Draft**. This indicates that the application can be viewed and edited. When the application is final, change the POV state to ensure it cannot be modified. The status is not an Oracle Essbase dimension.

The POV state can be set to one of the following: **Draft**, **Published**, or **Archived**.

Only the POV status can be changed. To modify any other parameters, you must create a new POV.

To change the POV state:

1. Display the Points of View screen (Opening the Points of View Screen) or Execution Control screen (Opening the Execution Control Screen).

2. Select a POV to modify.

3. Select **Actions**, and then **Change Point of View State**, .

4. Under **Status**, select the new state:

    *   **Draft** — Build or edit the application, and generate dynamic reports.

    *   **Published** — View the application, and generate dynamic reports

    *   **Archived**— View the application and generate dynamic reports.

    You can change the state back to **Draft** at any time to edit the application.

    > ⓘ **Note**
    >
    > If you modify the POV, only the state is changed. You are no longer be able to calculate the application if the status has been set to "Published" or "Archived".

5. Click **OK**.

Copying POVs

If the database has been deployed, you can copy a POV to provide a starting point for a new period or scenario, or to create what-if scenarios for an existing application.

For example, you can begin a period by copying rules and input data from the previous period, or you can create seed data for a forecast scenario by copying data from an actual scenario.

There are two places in Profitability and Cost Management from which you can copy POVs. Review these topics for an explanation of each option.

Copying POVs from the Available Points of View Screen

Copying POVs from the Execution Control Screen

> ⓘ **Note**
>
> Depending on the size and complexity of the application, copying POVs may take a significant amount of time.

Copying POVs from the Available Points of View Screen

> ⓘ **Note**
>
> When you copy POVs from the **Available Points of View** screen, if the POV you are copying has over five million cells of input data, you may have to perform multiple copy POV operations using different model views to cover the full set of input data you want to copy. In addition, only the input data is copied. To copy both the input data and the driver data, and to avoid the five million cell limitation, copy your POVs from the **Execution Control** screen. See [Copying POVs from the Execution Control Screen](#).

To copy POVs from the **Available Points of View** screen:

1. On the Home page, click ▤.
2. Under **Administer**, select **Points of View**.
3. On the **Available Points of View** screen, select the POV you want to copy.
4. Click 🗋, or select **Actions**, and then **Copy Point of View**.
5. In the **Copy Point of View** dialog box, select the members for the POV dimensions that will be used in the copied point of view (for example, Year, Period, Scenario) .
6. In the **Copy Configuration** section, enter the following information:
   - **Model**: Select **Manage Rules** to copy all the rules that belong to the source POV.
   - **Data**: Select **Input Data** to copy all of the input data.

   > ⓘ **Note**
   >
   > If the outline for the application is too large, you are prompted to select a model view to define a subset of the POV input data to be copied. If necessary, you can perform multiple copy POV operations using different model views to cover the full set of input data you need to copy.

7. Click **OK**.
8. **Optional:** Go to the **Job Library** to check the status of the copy.

   > ⓘ **Note**
   >
   > When you copy a POV from the **Available Points of View** screen, the properties for the job display **MDX** as the **Copy Algorithm**.

Copying POVs from the Execution Control Screen

> ⓘ **Note**
>
> When you copy POVs from the **Execution Control** screen, you can copy all the input data in one operation regardless of the amount of data that you want to copy. In addition, you have the option to copy both the input data and the driver data.

To copy POVs from the **Execution Control** screen:

1. On the Home page, click **Models**, , and then **Execution Control**, .

2. On the **Execution Control** screen, select the POV you want to copy.

3. Click , or select **Actions**, and then **Copy**.

4. In the **Copy Point of View** dialog box, select the members for the POV dimensions that will be used in the copied point of view (for example, Year, Period, Scenario).

5. In the **Copy Configuration** section, enter the following information:

   • **Model**: Select **Manage Rules** to copy all the rules that belong to the source POV.

   • **Data**: Select an option:

     – **None**: Do not copy any data.

     – **All Input Data**: Copies all of the input data, including driver data.

     – **All Data**: Copies all POV data.

6. Click **OK**.

7. **Optional:** Go to the **Job Library** to check the status of the copy.

> ⓘ **Note**
>
> When you copy a POV from the **Execution Control** screen, the properties for the job display **Level 0 Export** as the **Copy Algorithm**.

Clearing Selected Artifacts from POVs

You can clear or delete selected objects (artifacts) from a POV, described in this section. You can also create a query and clear a specific slice of input data from a POV (Clearing Selected Input Data from POVs).

To delete an entire POV, including its associated assignments and driver selections, see Deleting POVs and All Artifacts.
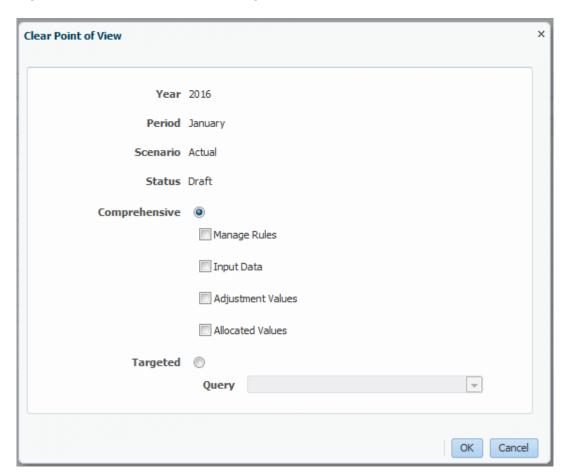
To clear (delete) selected artifacts from a POV:

1. Ensure that no other users require the POV and its contents.

2. Display the Points of View screen (Opening the Points of View Screen) or Execution Control screen (Opening the Execution Control Screen).
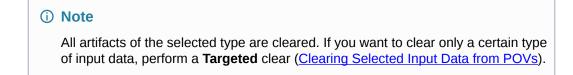
3. Select the POV that contains the artifacts to clear.

4. Select **Actions**, and then **Clear Point of View**, ![pencil icon] .

Figure 7-2   Clear Point of View Dialog Box

5. Click **Comprehensive**.

6. Select the artifacts to clear.

> ⓘ **Note**
>
> All artifacts of the selected type are cleared. If you want to clear only a certain type of input data, perform a **Targeted** clear (Clearing Selected Input Data from POVs).

7. Click **OK** to clear the selected artifacts.

   See the Job Library to view a record of the operation.

Clearing Selected Input Data from POVs

You can clear or delete selected objects (artifacts) from a POV. This is called a **Comprehensive** clear and deletes all artifacts of the selected type (Clearing Selected Artifacts from POVs). You can also create a query and perform a **Targeted** clear, described in this section, which deletes a specific slice of input data. This is useful, for example, when you want to delete other input data without deleting drivers.

To delete an entire POV, including its associated assignments and driver selections, see Deleting POVs and All Artifacts.

To clear specific input data from a POV:

1. Ensure that no other users require the POV and its current data.

2. Create a query that returns the data you want to clear (Managing Queries).

   Since only input data is cleared, the Rule dimension must be set to **NoRule**. For the Balance dimension, selected members must be only **Input**, identifed by the member name.

3. Display the Points of View screen (Opening the Points of View Screen) or Execution Control screen (Opening the Execution Control Screen).

4. Select the POV that contains the data to clear.

5. Select **Actions**, and then **Clear Point of View**, .

6. In the **Clear Point of View** screen, click **Targeted**.

7. Select the **Query** to locate the data you want to clear.

8. Click **OK** to clear the data returned by the query.

   See the Job Library to view a record of the operation.

Deleting POVs and All Artifacts

To erase data in Oracle Essbase, before deleting the POV, perform the "Clear All" function for the selected POV. See Clearing Selected Artifacts from POVs.

To delete POVs and their associated artifacts (such as rules and rule sets):

1. Ensure that no other users require the POV and its contents.

2. **Optional:** To erase data in Essbase, select **Clear All** data as described in Clearing Selected Artifacts from POVs.

3. Display the Points of View screen (Opening the Points of View Screen) or Execution Control screen (Opening the Execution Control Screen).

4. Select the POV to delete.

5. Select **Actions**, and then **Delete Point of View**, .

   The **Delete Point of View** dialog box displays POV dimensions for the selected POV.

6. Click **OK** to delete the POV.

   The POV is removed from the list and is no longer available for selection.

8

Working with Profitability and Cost Management Rules

Related Topics

- **About Rules**
  In Profitability and Cost Management, rules control how costs and revenues are distributed throughout the application to specified accounts or elements.

- **Creating and Managing Rules with the Manage Rules Screen**
  Options available through the Navigator menu allow you to create and manage rule sets and rules in a Profitability and Cost Management application.

- **Express Editing for Rules with the Calculation Rules Screen**
  You can use the Rules Express Editing page to manage models more efficiently.

About Rules

In Profitability and Cost Management, rules control how costs and revenues are distributed throughout the application to specified accounts or elements.

A driver can used to determine how the funds are allocated. The calculated results are assigned from a source to a destination as the funds flow through the application.

You set up distribution allocations for a single POV by creating rule sets and rules:

- **Rule sets** are groups of Profitability and Cost Management rules that help to organize calculation logic definitions, to calculate similar rules together, and to simplify the definition of manay rules that share common dimension members. Rule sets run in a set order, determined by the rule set sequence number, and may also contain options specific to the execution of rules within that rule set.

- **Rules** define the calculation logic of Profitability and Cost Management applications and enable them to reflect the cost assignments within the modeled situations. Rules within rule sets are executed in the order of their sequence numbers within that rule set. You can define allocation source, destination, Driver, and offset for each allocation rule in a rule set. (Creating Custom Calculation Rules).

> ### ⓘ Note
>
> See Creating and Managing Rules with the Manage Rules Screen and Creating and Managing Rules with the Designer Features for rule management details.
>
> See Troubleshooting Calculation Issues to review the tools available to monitor and review calculation results.

Types of Rules

In a Profitability and Cost Management application, there are two types of rules:

- **Allocation rules**, which determine the source and destination of allocated data, which drivers are applied to that data, and where offsets are placed to balance accounts (Creating Allocation Rules with the Manage Rules Screen)

- **Custom calculation rules**, which contain formulas in MDX format and are primarily used for adjusting data or creating Driver values used in subsequent allocation rules (Creating Custom Calculation Rules).

Both types of rules are organized under rule sets. Rule sets run in their sequence number order, and then the rules within a set run in the order of their sequence numbers. Rules with the same sequence number can run at the same time, provided the computer hardware allows for parallel execution of processes. Rules can be copied within rule sets.

You can use contexts to define dimension and member defaults for both types of rules, either for all rules in a POV or for all rules in a rule set.

Dimension Member Defaults, or Contexts

You can set up defaults, called *contexts*, for each level of allocations for a POV in Profitability and Cost Management applications:

- The **Global context** enables you to define default definitions for dimensions that will be used in all rule definitions for that POV.

- **Rule Set contexts** enable you to define default dimension definitions for all rules in a given rule set.

Ways to Create and Manage Rules

The following are the main topics that describe how to work with Profitability and Cost Management rules:

- Creating Allocation Rules with the Manage Rules Screen

- Creating Allocation Rules with the Designer Screen

Both the Express Editing and Designer features support mass editing, but only the Designer features offer complete rule creation and management options. If you're new to Profitability and Cost Management, you may find it convenient to begin working with the Designer features.

Creating and Managing Rules with the Manage Rules Screen

Options available through the Navigator menu allow you to create and manage rule sets and rules in a Profitability and Cost Management application.

These rules pull the flow of data, such as revenue and expenses, from a source location in Oracle Essbase and assigned it to an allocation destination according to an optional applied driver. The following topics describe these procedures:

- About the Manage Rules Screen

- Defining Global Contexts for Rules

- Working with Rule Sets

- Creating Allocation Rules with the Manage Rules Screen

- Creating Custom Calculation Rules

- Managing Rules with the Manage Rules Screen

About the Manage Rules Screen

You define allocation logic for applications in the **Manage Rules** screen. You can define global and rule set contexts (dimension defaults), define rule sets, and define rules that access data sources, data destinations, drivers, and offsets.

For tutorials about managing rules and rule sets with the Manage Rules screen, see these videos:

 [Managing Rules in Profitability and Cost Management](#)

 [Managing Rule Sets in Oracle Profitability and Cost Management Cloud](#)

Each group of rule sets and rules applies to a single POV.

> ⓘ **Note**
>
> There are allocation rules and custom calculation rules. The same context and rule set information applies to both rule types.

To define allocations for a Profitability and Cost Management application:

1. On the **Home** page of an application with data, click ▤ .
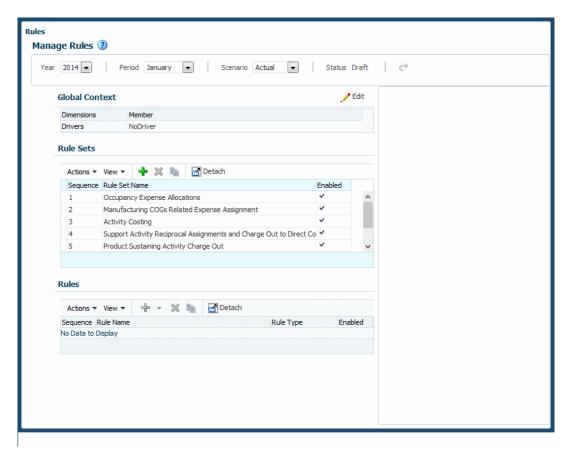
2. Click **Rules** .

   The **Manage Rules** screen opens, similar to [Figure 1](#).

Figure 8-1   The Manage Rules Screen

See the following sections for information about defining and managing allocations in a Profitability and Cost Management application:

- [Defining Global Contexts for Rules](#)

- [Working with Rule Sets](#)

See [Performing Single-POV Calculations Using the Navigator](#) for information about running calculations and performing allocations.

Defining Global Contexts for Rules

Setting a **global context** enables you to define default definitions for dimensions that will be used in all rule definitions for the selected POV.

> ⓘ **Note**
>
> Define a global context before defining rule sets for the selected POV.

To define a global context for one POV of a Profitability and Cost Management application:

1. On the Home page, click ☰, and then select **Rules** ([About the Manage Rules Screen](#)).
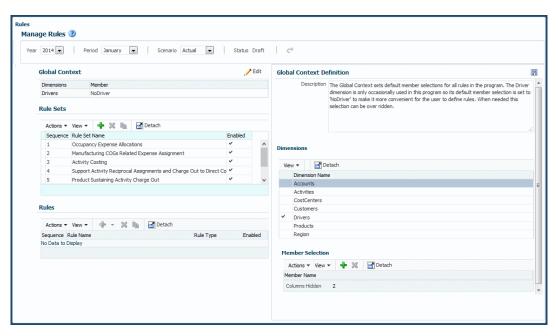
2. In the **Manage Rules** screen, enter the year and period for a valid POV, and then click **Refresh** , ↻.

3. Click **Edit**, 🖍, in the **Global Context** area to display the Global Context Definition area.

Figure 8-2   Defining a Global Context

4. **Optional:** In the **Global Context Definition** box, enter a description of the global context default.

5. The **Dimensions** area displays all dimensions for the selected application that are not required system dimensions. Select one to apply to all rules as a default and then click ➕ or select **Actions**, and then select **Add Member** in the **Member Selection** area.

6. Select one member to include in the global context default for that POV, and then click **OK**.

7. **Optional:** Repeat steps 5 and 6 for other dimensions.

8. When the global context definition is complete, click 💾 (Save).

Now, all selected dimension-member combinations will be applied to new rules created for the selected POV.

Figure 1 shows a global context definition that applies the **NoDriver** member to the **Drivers** dimension for all rules created for that POV. The global context was defined before any rule sets and rules were created.

The next step is to define and manage rule sets (Working with Rule Sets).

Working with Rule Sets

Rule sets enable users to group related rules together to better organize the definition of calculation logic, to execute similar rules together, and to simplify the definition of rules that share common dimension members. Rule sets have a set order, determined by the rule set sequence number, and may also contain options specific to the execution of rules within that rule set. Rule sets apply to the specified POV.

Setting a **rule set context** enables you to define default definitions for dimensions that will be used in all rules included in the selected rule set for the selected POV.

The following topics describe how to create and manage rule sets and rule set contexts:

- • [Defining Rule Sets](#)

- • [Managing Rule Sets](#)

- • [Defining and Managing Rule Set Contexts](#)

For a tutorial about rule sets, see this video:

▶ [Managing Rule Sets in Oracle Profitability and Cost Management Cloud](#)

Defining Rule Sets

Rule sets help organize allocation and calculation rules in several ways ([Working with Rule Sets](#)).

For a tutorial about rule sets, see this video:
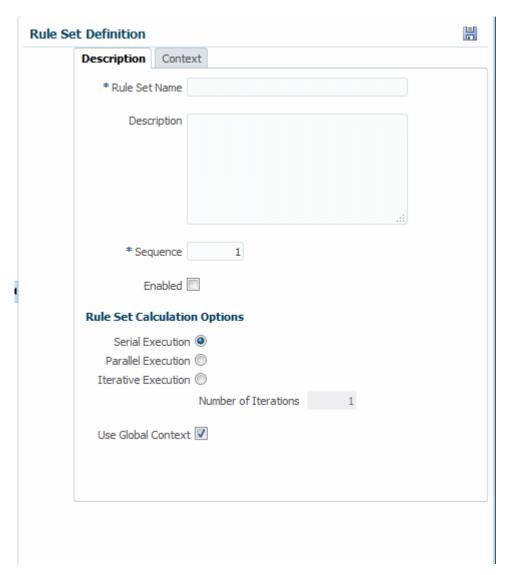
▶ [Managing Rule Sets in Oracle Profitability and Cost Management Cloud](#)

To define a rule set for one POV of an application:

1. In the **Manage Rules** screen ([Figure 1](#), enter the year and period for a valid POV, and then click the **Refresh** button, ↻

2. In the **Rule Sets** area, click ✚ or select **Actions** and then select **Create Rule Set** ([Figure 1](#)).

Figure 8-3   Rule Set Definition Area

3. Enter a name for the rule set.

4. **Optional:** In the **Description** box, enter a description of the rule set. Using clear descriptions is highly recommended.

5. Enter a **Sequence** number to determine the order in which the rule set runs.

6. **Optional:** Select **Enabled** to indicate that the rule set is active when the calculation is performed.

7. Select an execution type to indicate how the rule set calculations should run:

   • **Serial Execution**, the default, runs all rules in the rule set sequentially, depending on their sequence number.

   • **Parallel Execution** runs rules with the same sequence number at the same time if computer hardware supports that.

   • **Iterative Execution** runs the rule set multiple times in sequence; **Number of Iterations** indicates the number of iterations to run.

   These settings support reciprocal allocations.

8. If selected, **Use Global Context** indicates that the global context should be applied to the current rule set, if one has been defined.

9. **Optional:** Define a rule set context to apply dimension defaults to all rules in the rule set (Defining and Managing Rule Set Contexts).

10. When the rule set definition is complete, click 💾 (Save).

- To edit and delete rule sets, see Managing Rule Sets.

- To define a rule set context and set defaults for all rules in the rule set, see Defining and Managing Rule Set Contexts.

Managing Rule Sets

Defining Rule Sets describes how to create a rule set. You can also delete and copy rule sets.

To delete a rule set:

1. Open a application and display the **Manage Rules** screen (About the Manage Rules Screen).

2. Enter a POV and select a rule set.

3. Click ❌ or select **Actions** and then **Delete Rule Set**.

4. Confirm that you want to delete the rule set and all its rules.

5. Click 💾.

To copy a rule set:

1. In the **Rules** content area, enter a POV and select a rule set.

2. Click 🗐 or select **Actions** and then **Copy Rule Set**.

3. Enter a name for the new rule set. Optionally, select **Copy rules** to add existing rules to the new rule set.

4. Click **OK**, and then click 💾 (Save).

Defining and Managing Rule Set Contexts
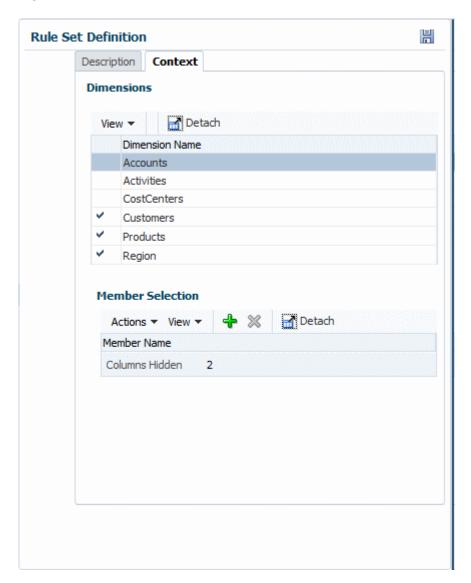
You can define a **rule set context** to specify default dimensions and members for use in all rules included in the selected rule set for the selected POV.

To define a rule set for one POV of an application:

1. On the Home page, display the **Rules** screen (Figure 1), enter the year and period for a valid POV, and then click ↪ (Refresh).

2. In the **Rule Sets** area, select a rule set and then click the **Context** tab (Figure 1).

Figure 8-4   Rule Set Context Definition Area
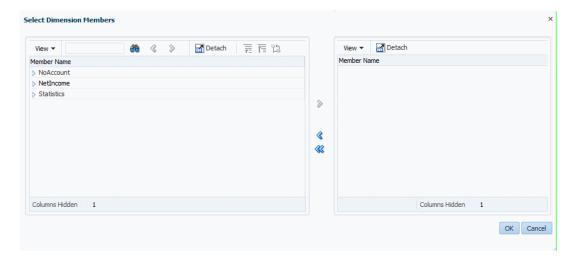
3. On the **Context** tab ([Figure 1](#)), select a dimension that applies to all rules in that rule set.

> ⓘ **Note**
>
> POV dimensions and any dimensions defined in the global context are not available for selection.

4. In the **Member Selection** area, click ➕ or select **Actions**, and then select **Add Member** ([Figure 2](#)).

Figure 8-5   Select Dimension Members Dialog Box
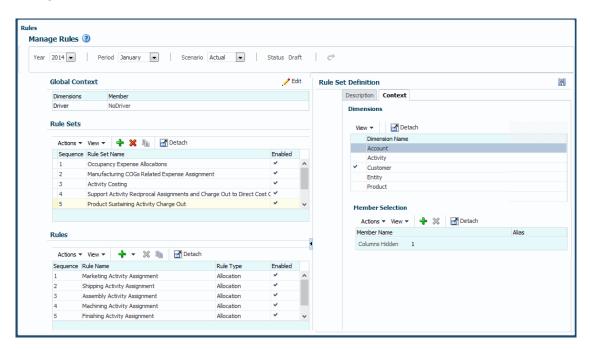
5. In the **Select Dimension Members** dialog box, click the symbol in front of listed members to open them to their lowest level.

6. Select members to apply to all rules and use the shuttle control arrows to move them into the selected list on the right side of the **Select Dimension Members** dialog box.

7. When the rule set context definition is complete, click **OK** and then click 🖫 (Save).

Now, all selected dimension-member combinations will be applied to new rules created for the selected POV.

[Figure 3](#) shows that the Customer dimensions has been enabled as rule set context for the Product Sustaining Activity Charge Out rule set, sequence number 5.

Figure 8-6   An Example Rule Set Context Defined for the Product Sustaining Activity Charge Out Rule Set

Managing Rule Set Contexts

You can add members to and delete them from dimensions already added to a rule set context.

To add members to a rule set context:

1. Open the **Rules** content area for a selected POV.

2. Select a rule set and display its **Context** tab.

3. Follow steps 4 through 7 in the previous instructions for adding a member (Defining and Managing Rule Set Contexts).

To delete members from a rule set context:

1. Select a rule set and open its **Context** tab.

2. Select a dimension and member, and then click ✖ or select **Actions** and then select **Delete Member**.

   The member is deleted without confirmation.

3. Click 🖫 (Save).

Creating Allocation Rules with the Manage Rules Screen

Allocation rules form the core of a Profitability and Cost Management application. They determine how allocated data flows and how drivers determine allocation amounts:

- For an overview of rules in Profitability and Cost Management, see About Rules

- For a tutorial about creating and managing rules, see this video:
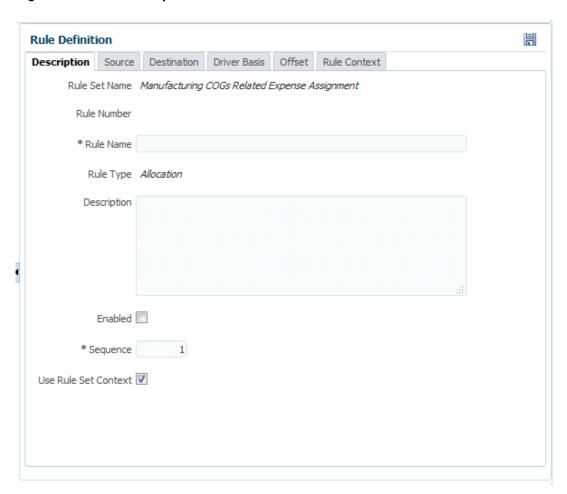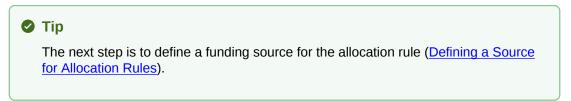
  ▶️ Managing Rules in Oracle Profitability and Cost Management Cloud

To define allocation rules for one POV in an application:

1. On the Home page, click ▤, and then select **Rules**. (About the Manage Rules Screen).

2. In the **Manage Rules** screen (Figure 1), enter the year and period for a valid POV, and then click ↪ (Refresh).

3. In the **Rule Sets** area, select a rule set.

4. Do one of the following.

   - In the **Rules** area, click ➕, and then select **Allocation**, or

   - Select **Actions**, then select **Create Rule**, and then select **Create Allocation Rule** (Figure 1)

Figure 8-7   The Description Tab of the Rule Definition Area

5.   Enter a name for the rule.

6.   **Optional:** In the **Description** box, enter a description of the rule set.

7.   **Optional:** Select **Enabled** to indicate that the rule is active when the calculation is performed.

8.   Enter a **Sequence** number to determine the order in which the rule runs within the rule set.

     Rules with the same sequence number will run at the same time if parallel calculation is enabled for the rule set and the computer hardware supports it.

9.   If selected, **Use Rule Set Context** indicates that the rule set context is applied to the current rule, if one was defined.

     If a global context has been enabled for the rule set, it will also be applied.

10. When the rule set definition is complete, click **Save**, 💾.

> **✅ Tip**
>
> The next step is to define a funding source for the allocation rule (Defining a Source for Allocation Rules).

•   To edit and delete rules, see Managing Rules with the Manage Rules Screen.

- To create a custom calculation rule, see Creating Custom Calculation Rules.

Defining a Source for Allocation Rules

Creating Allocation Rules with the Manage Rules Screen describes how to create and describe a new allocation rule. The next step is to define an allocation source, the dimensions with the expense or other data you are assigning to an allocation destination.

To define the source from which the rule will retrieve data to be allocated:

1. In an open allocation rule, click the **Source** tab (Figure 1).

Figure 8-8   The Source Tab of the Allocation Rule Definition Area

2. Select the dimension and member that holds the data to be allocated. If you select a parent member, all of its descendants are selected also.

3. **Optional:** Filter the members in the **Member Selection** area. See Filtering Dimension Members.

> ⓘ **Note**
>
> You can enter dimension-member combinations as text. This could be useful if you had them in a spreadsheet, for example. See Adding Dimension-Member Combinations by Pasting Text.

4. **Optional:** Click **Options** to select a **Calculation Segmentation Method** for use if very large models cause scalability issues (Using Calculation Segmentation).
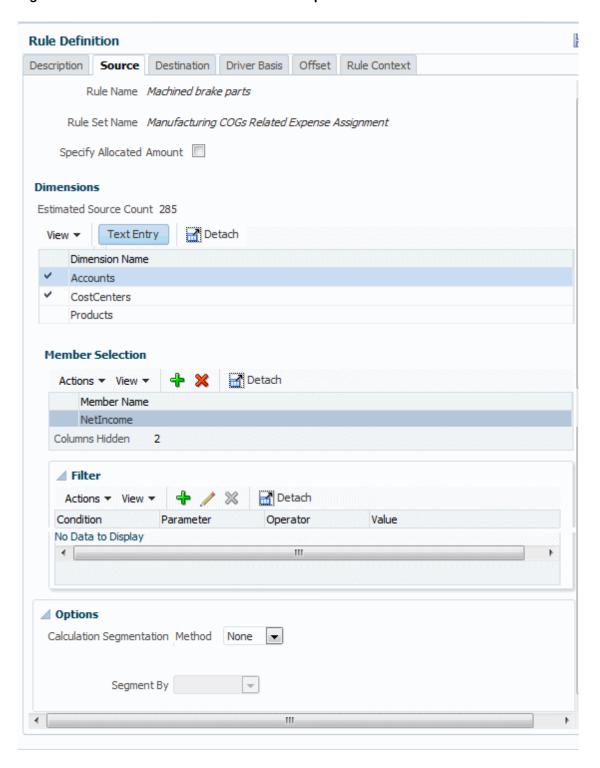
   If Oracle recommends that you use this feature, click one of the following:

   • **Auto**, to have the system decide the dimension and level to use

   • **Manual**, to decide the dimension and level to use yourself

   None (the default), to not use segmentation

5. When the rule source information is complete, click 🖫 (Save).

6. The next step is to enter a **Destination** for the allocated data.

Figure 2 shows that **Machined brake parts** in the **Manufacturing COGs Related Expense Assignment** rule set will pull data from the Net Income member of the Accounts dimension plus some members of the CostCenters dimension.

Figure 8-9   Allocation Source Definition Example

> **✓ Tip**
>
> The next step is to define a destination for the allocation rule that describes where funds are being assigned (Defining a Destination for Allocation Rules).

To edit and delete rules, see Managing Rules with the Manage Rules Screen.

Filtering Dimension Members

> ⓘ **Note**
>
> Filtering selects a subset of dimension members to work with. Members not selected by the filter are not available for that operation. Filtering is useful only if the filtered member is a parent. The filter is based on its descendants.

Follow these steps to filter members in the **Member Selection** area of the **Rule Definition** screen:

1. At the bottom of the **Rule Definition** area, click the arrow in front of **Filter** to expand the **Filter** area.

2. To add a filter, click ➕ or select **Actions** and then select **Add Filter**.

   Select a parameter such as **Name** or **Attribute** or **UDA**, an **Operator** such as = or <>, and then enter a **Value** to match. Click **OK** to display members that match **Value** and add the filter to the table.

3. To edit a filter, select it and click 🖉 . Change the filter as you want and then click OK.

4. To delete a filter, select it and click ✖. The filter is deleted.

Adding Dimension-Member Combinations by Pasting Text

You can now paste dimension-member combinations from Microsoft Excel into the **Dimensions** area of the following Rule Definition screen tabs: Source, Destination, and Driver Basis. This feature reduces the keystrokes needed to create new rules or modify existing rules. It is helpful for cases where users manually generate rules, for example, by using a spreadsheet or downloading dimension files through **Dimension Management** (Viewing, Creating, and Editing Dimensions with Dimension Management).

To use this feature, click **Text Entry** in the **Dimensions** area. Then, copy and paste dimension-member combinations for that tab into the **Dimension Member Editor** box using the following format:

```
"DimensionName", "MemberName"
```

Use one row per member. You can include combinations for multiple dimensions in the same box. When entries are complete, click **OK**.

If you try to input a dimension or member that does not exist or one that is not available for that tab, an error message is displayed.

> ⓘ **Note**
>
> You must use the Member Selection area to remove dimension-member combinations created by pasting.

Using Calculation Segmentation

A rule's source range is the combination of all member selections at level 0. For very large models, source ranges can exceed the Essbase limits on query ranges. In those cases, the rule fails unless segmentation is used to break the rule into smaller pieces that can fit within the Essbase limitation.

Profitability and Cost Management Cloud performs segmentation by taking one dimension's member selections and creating a separate script for each member at a lower level of that dimension. For example, if a member has ten immediate children, the segmentation method would create a separate script for each of the ten children. The results of the calculation are the same.

To use this feature, generally when recommended by Oracle, see instructions for defining an allocation rule source.

Defining a Destination for Allocation Rules

Defining a Source for Allocation Rules describes how to enter the source member selections for an allocation. The next step is to define an allocation destination, the dimension member selections to receive the expense or other data you are distributing from the allocation source.
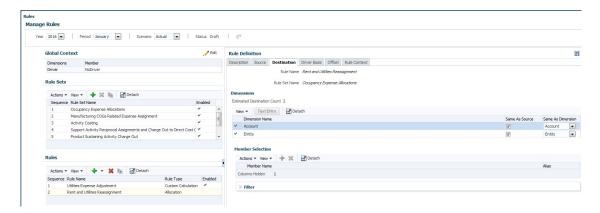
To define the destination to which the allocation rule will assign data:

1. In an open rule, click the **Destination** tab.

2. For each dimension, select the members that are to receive the allocated data. If you select a parent member, the allocation will go to its level 0 descendants.

3. **Optional:** Instead of specifying an explicit member selection, you can select **Same As Source** if you want to define the destination member set for a destination to be the same as the source member set for that dimension. In this case, when the rule runs, members in the destination dimension are selected for allocation by matching to the member selection in the source. Members in the source selection that are not level 0 are resolved to level 0 members and then are matched with level 0 members in the destination.

   When setting a dimension to **Same As Source** in the **Destination** tab, you can select up to two different source dimension to match it to. In this case, when the rule runs, members in the destination dimension are selected for allocation by matching to the member selection in the selected source dimensions.

4. **Optional:** Select a dimension from the **Same As Dimension** drop down, to select a different source dimension than the destination dimension.

   If you select a dimension from **Same As Dimension**, the source and destination must have at least one dimension in common. When the rule is executed, members in the destination dimension are selected for allocation by matching to the member selection in the selected source dimension.

5. **Optional:** For up to two Same-As-Source dimensions, you can select a different source dimension from the **Same As Dimension** list to match the destination dimension to a different source dimension. When the rule runs, members in the destination dimension are selected for allocation by matching to the member selection in the selected source dimension. Note that for this to work, the destination dimension must also contain the members from the source dimension's member selection so that they can match.

6. **Optional:** Filter the data as described in Defining a Source for Allocation Rules, step 3.

7. When the rule destination information is complete, click ▦ (Save).

Figure 1 shows one of the destinations of allocated data for the **Machined brake parts** rule—the **Products** dimension and various members named B followed by a number.

Figure 8-10   Allocation Destination Definition Example

> ✅ **Tip**
>
> The next step is to enter a driver basis for the rule, the location of information that controls the cost being allocated (Defining a Driver Basis for Allocation Rules).

To edit and delete rules, see Managing Rules with the Manage Rules Screen.

Defining a Driver Basis for Allocation Rules

Defining a Destination for Allocation Rules describes how to enter the data destination for an allocation. The next step is to define an allocation driver basis, the member where driver values are found.

> ⓘ **Note**
>
> Profitability and Cost Management assumes a focus on the destination. The dimension and member selection on the **Driver Basis** tab represents a change to the destination that defines where the driver is located.
>
> For example, if the allocation destination is the intersection of the Sales department and Salaries account, the Driver Basis definition is the Headcount account member.

By default, data is allocated to the destination proportionally, using the ratio of the driver value for that member divided by the sum of all driver values. You can choose to allocate data evenly, which is the same as if the driver ratio was 1.

Typically, systems are set up so that one member from one dimension, usually the Accounts dimension, contains the statistical members associated with any intersection. Only one member can be selected for each dimension.
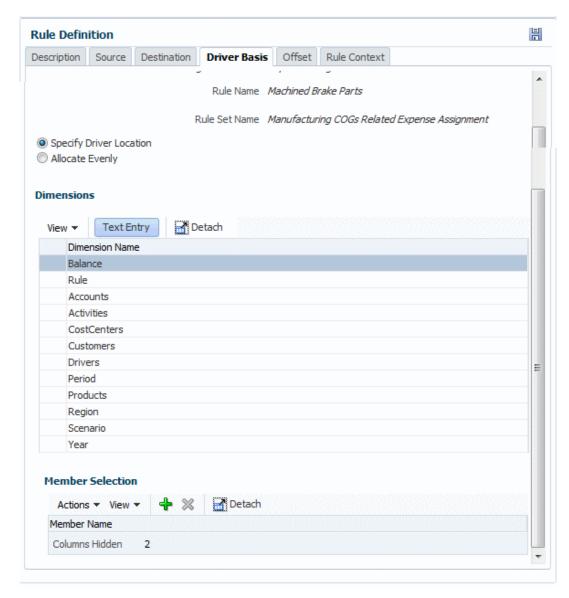
To define the driver basis for an allocation rule:

1. In an open rule, click the **Driver Basis** tab.

Figure 8-11   The Driver Basis Tab of the Allocation Rule Definition Area

2. Select whether data should be allocated by ratio (**Specify Driver Location**) or allocated evenly (**Allocate Evenly**).

3. If you selected **Specify Driver Location**, select the dimension and member that holds the driver data, for example Headcount.

4. **Optional:** Filter the data as described in Defining a Source for Allocation Rules, step 3.

5. When the rule source information is complete, click 🖫 (Save).

The following figure shows the location of a driver to be applied when allocating data for the **Machined brake parts** rule, the DRIV1001 member of the Drivers dimension.
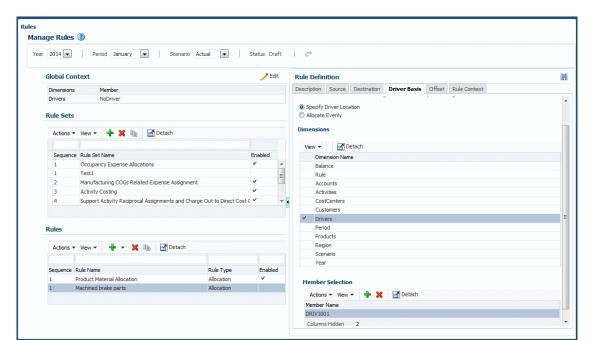
Figure 8-12   Driver Location Selection Example

> ✅ **Tip**
>
> The next **optional** step is to enter an offset for the rule, the member to hold an increase to balance a corresponding decrease in the allocation source (Defining an Allocation Offset for Allocation Rules (Navigator)).

Defining an Allocation Offset for Allocation Rules (Navigator)

Defining a Driver Basis for Allocation Rules describes how to select drivers that determine allocation amounts. The next step is to define an allocation offset location, the member to hold an increase to balance a corresponding decrease in the allocation source. This step is optional.

> ℹ️ **Note**
>
> By default, offsets are written to the source but you can specify another location.
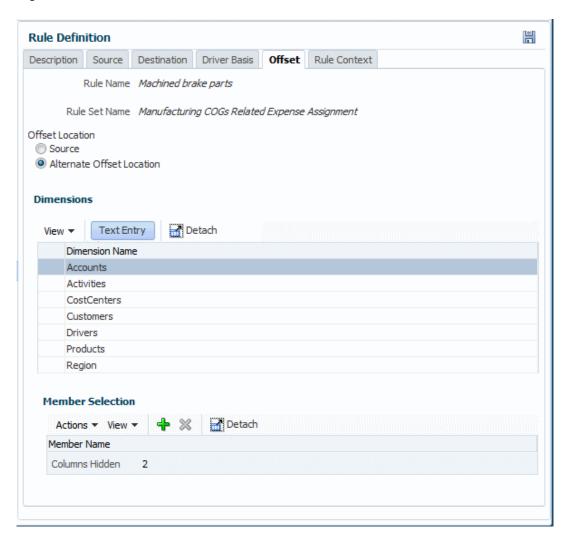
The offset location definition assumes a focus on the source with the option to select an alternate location. For example, suppose the allocation source is the Sales department intersecting the Salaries account. The default location for the offset would be the intersection of Salaries and Sales. However, you could specify Outbound Allocations of the Sales department instead. By specifying that single change, you are instructing the system to write the offset entry at the source, except you are changing the target location so the offset is written to the intersection of Outbound Allocations and Sales dimension instead of the source.

To define the offset for an allocation rule:

1. In an open allocation rule, click the **Offset** tab (Figure 1).

Figure 8-13   The Offset Tab of the Allocation Rule Definition Area

2. Select whether offset data should be written to the **Source** intersection, or to an **Alternate Offset Location**.

3. If you selected **Alternate Offset Location**, select the dimension and member to hold the driver data.

> ⓘ **Note**
>
> For all dimensions where a member selection is NOT made, the same member as the source is used. Enter members to show how the offset location should DIFFER from the source.

4. When the rule source information is complete, click (Save).

To view any context definitions for a rule, see Viewing Contexts for Rules.

To edit and delete rules, see Managing Rules with the Manage Rules Screen.

Viewing Contexts for Rules

Defining Global Contexts for Rules and Defining and Managing Rule Set Contexts describe how to select default dimensions and members to be applied to rules for a given POV.

To view contexts applied to a selected rule:

1. If a rule is not already selected and open, open one.

2. Click the **Rule Context** tab.

    The displayed information is not editable.

To edit and delete rules, see Managing Rules with the Manage Rules Screen.

Creating Custom Calculation Rules

Rules form the core of a Profitability and Cost Management application. There are two types: allocation rules and custom calculation rules. Creating Allocation Rules with the Manage Rules Screen describes how to create allocation rules. They determine how allocated data flows and how drivers determine allocation amounts. This section describes how to create custom calculation rules.

Unlike allocation rules, custom calculation rules do not have a defined source and destination with options for defining a driver basis and accounting offset. Instead, custom calculation rules enable users to define calculations to be performed in a certain region of the database with results posted to a specific member. Custom calculation rules are used primarily for adjusting existing data to create a scenario, creating custom driver values for use in other allocation rules, or to accommodate reporting requirements. Other uses include clearing data from custom ranges, developing data sets, anonymizing data, and complex standard rate application.

Custom calculation rules have the following components that correspond to the tabs in the Rule Definition area:

- **Description** — Rule name and number, text description, and rule-level options (described later in this topic)

- **Target** — The target range in the database that the rule will affect

- **Formula** — The member to which results of the calculation are written and the mathematical expression of the calculation (Defining the Formula for Custom Calculation Rules)

- **Rule Context** — Enables you to view any Global or Rule Set contexts defined for the custom calculation rule (Viewing Contexts for Custom Calculation Rules

Like allocation rules, custom calculation rules belong to rule sets, have sequence numbers, inherit contexts, can be activated or deactivated with the **Enabled** setting, and have the same rule set execution options (serial, parallel, iterative). Custom calculation rules can be copied and deleted in the same way as allocation rules (Managing Rules with the Manage Rules Screen).

To define custom calculation rules for one POV in an application:

1. On the Home page, click and then select **Rules**.
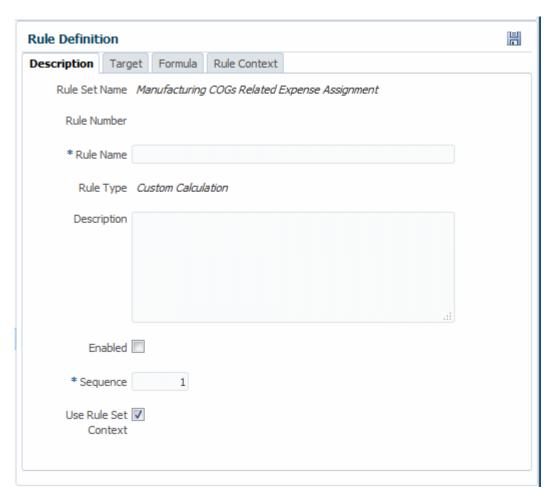
2. In the **Rules** screen (Figure 1), enter the year and period for a valid POV, and then click (Refresh).

3. In the **Rule Sets** area, select a rule set.

4. Do one of the following:

   • In the **Rules** area, click ![+], and then select **Custom Calculation**, or

   • Select **Actions**, then select **Create Rule**, and then select **Create Custom Rule**.

   The **Description** tab of the Rule Definition area is displayed ()

Figure 8-14   The Description Tab of the Custom Calculation Rule Definition Area

5. Enter a name for the rule.

6. **Optional:** In the **Description** box, enter a description of the rule set.

7. **Optional:** Select **Enabled** to indicate that the rule is active when the calculation is performed.

8. Enter a **Sequence** number to determine the order in which the rule runs within the rule set.

   Rules with the same sequence number will run at the same time if parallel calculation is enabled for the rule set and the computer hardware supports it.

9. If selected, **Use Rule Set Context** indicates that the rule set context is applied to the current rule, if one was defined.

   If a global context has been enabled for the rule set, it will also be applied.

10. When the rule set definition is complete, click **Save**, 💾.

> ✅ **Tip**
>
> The next step is to define a calculation target for the rule (Defining a Target for Custom Calculation Rules).

To edit and delete rules, see Managing Rules with the Manage Rules Screen.

Defining a Target for Custom Calculation Rules

Creating Custom Calculation Rules describes how to complete the **Description** tab for a custom calculation rule. The next step is to define a calculation target, the range of dimensions that are affected by the custom calculation rule.

To define the target which the custom calculation rule will affect:

1. In an open custom calculation rule, click the **Target** tab.

Figure 8-15   The Target Tab of the Custom Calculation Rule Definition Area

2. Select the **Result Dimension**, used in the formula to specify the member to hold the result.

3. Select the members in each that define the target range that will be affected by the custom calculation formula.

4. **Optional:** Filter the data as described in <u>Defining a Source for Allocation Rules</u>.

5. When the rule target information is complete, click 🖫 (Save).

> ✓ **Tip**
>
> The next step is to enter a formula for the custom calculation rule (<u>Defining the Formula for Custom Calculation Rules</u>).

To edit and delete rules, see <u>Managing Rules with the Manage Rules Screen</u>.

Defining the Formula for Custom Calculation Rules

Previous topics describe how to enter a range of dimensions and members that are affected by a custom calculation rule. The next step is to define the calculation formula for the rule.

To define the formula for a custom calculation rule:

1. In an open custom calculation rule, click the **Formula** tab (<u>Figure 1</u>).
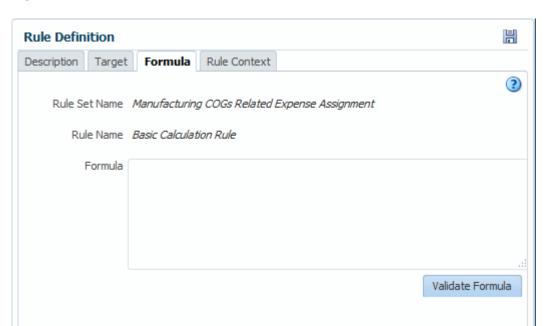
Figure 8-16   The Formula Tab of the Custom Calculation Rule Definition Area

2. Enter the formula as a text string (see <u>About Custom Calculation Rule Formula Syntax</u> for format information).

3. Select **Validate Formula** to determine if the formula is valid.

> **ⓘ Note**
>
> Custom calculation rules are validated against the data cube. If you have recently added or changed dimensions or members, the custom calculation rules may not validate correctly until you have redeployed the cube to propagate the changes.

4. When the formula is complete, click 💾 (Save).

> **ⓘ Note**
>
> Following rule calculation, you can define appropriate model views and use the **Rule Balancing** or **Manage Queries** tasks to view custom calculation rule results.

To view context definitions for the custom calculation rule, see Viewing Contexts for Custom Calculation Rules.

To edit and delete rules, see Managing Rules with the Manage Rules Screen.

Viewing Contexts for Custom Calculation Rules

Defining Global Contexts for Rules and Defining and Managing Rule Set Contexts describe how to select default dimensions and members to be applied to rules for a given POV.

To view contexts applied to a selected custom calculation rule:

1. If a custom calculation rule is not already selected and open, open one.

2. Click the **Rule Context** tab.

   The displayed information is not editable.

For general information about custom calculation rules, see About Rules

To edit and delete allocation and custom calculation rules, see Managing Rules with the Manage Rules Screen.

Managing Rules with the Manage Rules Screen

Previous sections describe how to create rules. You can also delete and copy rules.

To delete a rule:

1. Display the **Rules** screen (About the Manage Rules Screen).

2. Enter a POV and select a rule set.

3. In the **Rules** area, select a rule.

4. Click ✖ or select **Actions** and then **Delete Rule**.

5. Confirm that you want to delete the rule.

6. Click 💾 (Save).

To copy a rule:

1. In the **Rules** content area, enter a POV and select a rule set.

2. In the **Rules** area, select a rule.

3. Click 📄 or select **Actions** and then **Copy Rule**.

4. Enter a name for the new rule.

5. Click **OK**, and then click 💾 (Save).

> ⓘ **Note**
>
> You can make multiple copies of a rule by selecting the number of copies to make. A sequence number is appended to the New Rule Name value for each copy, to make the resulting rule names unique.
>
> For additional, more flexible rule management options, see Mass Edit Features for Rules.

Express Editing for Rules with the Calculation Rules Screen

You can use the Rules Express Editing page to manage models more efficiently.

The following topics explain available features:

- About the Calculation Rules Screen
- Searching For and Filtering Rules (Rules Express Editing Page)
- Replacing Members in Rules (Rules Express Editing Page)
- Adding Members to Rules (Rules Express Editing Page)
- Copying Rules to a New Rule Set (Rules Express Editing Page)
- Copying Rules to a Different Point of View (Rules Express Editing Page)
- Displaying Rules as a Hierarchy (Rules Outline Page)
- Displaying Rules as a Hierarchy (Rules Outline Page)

About the Calculation Rules Screen

You can use the Calculation Rules screen to perform several actions on multiple rules at once.

:You can:

Displaying the Calculation Rules Screen

To display the Calculation Rules screen, on the Profitability and Cost Management Home page, click **Application**, 🔲, and then click **Calculation Rules**, 🔴
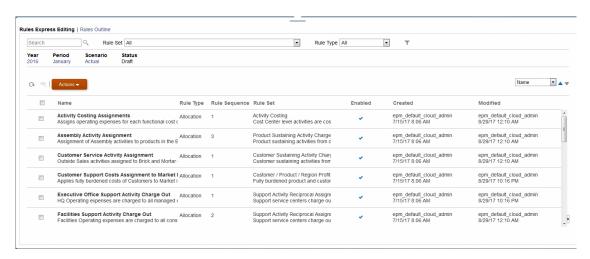
The Calculation Rules screen opens. By default the Rules Express Editing page is displayed (Figure 1).

The Rules Express Editing Page of the Calculation Rules Screen

Figure 8-17   Rules Express Editing Page

Most of the controls on this screen are described in Common Feature Controls. For more information on the robust Search features, see Searching For and Filtering Rules (Rules Express Editing Page). You can inspect the detail of a rule by highlighting it, and then clicking the **Inspect** icon . The Inspect region stays open and refreshes as you highlight a different rule.

The Sort box, to the right above the rules list, offers the following sort orders: **Model Calculation Sequence** (the default), **Name**, **Rule Set Name**, and **Rule Sequence**.

> ⓘ **Note**
>
> **Model Calculation Sequence** is determined by the rule set order and then rule sequence within the rule set.

You can use the POV bar to select a set of rules for editing, for example:

The **Actions** menu contains the following options:

- **Replace Member in Rules**, Replacing Members in Rules (Rules Express Editing Page)

- **Add Member to Rules**, Adding Members to Rules (Rules Express Editing Page)

- **Copy Rules to New Rule Set**, Copying Rules to a New Rule Set (Rules Express Editing Page)

- **Copy Rules to Point of View**, Copying Rules to a Different Point of View (Rules Express Editing Page)

- **Enable Rules**, **Disable Rules**, Enabling and Disabling Rules (Rules Express Editing Page)

Searching For and Filtering Rules (Rules Express Editing Page)

You can use the searching and filtering features of the Rules Express Editing page to explore rules for a particular point of view (POV) or to display rules for further operations such as replacing or adding members.

Follow these guidelines for searching and filtering:

1. Display the Rules Express Editing page of the **Calculation Rules** screen.

2. Select a POV for the search.

3. **Optional:** Enter all or part of a rule name into the **Search** control ( ).

   You can use asterisks (*) as wildcards in searches. They can represent part of a name, or the operator "and" when used between two strings. For example, `My*` matches to `Myname` and `Myother`. `My*name` matches to `Myname` and `Mynewname`.

4. **Optional:** Use the Sort box to arrange the selected rules. You can sort by **Model Calculation Sequence** (the default), **Name**, **Rule Set Name**, and **Rule Sequence**. Click an arrow to sort in ascending or descending order. You can click **Refresh**, , at any time to display the latest results.

5. **Optional:** Click **Add Filter** to create a custom filter to further limit the rule names available for selection.

   In the **Custom Filter** screen, enter a target **Dimension**, the page to search for the target member (**Source**, **Destination**, or **Target**), the filter **Operator** (**Contains** or **Does Not Contain**), and the target **Find Member** . For the **Find Member**, you can start typing the name to display matches, or click the Search symbol to display a list for selection. When you click **OK**, only marching names display on the **Calculation Rules** screen. You can add additional filters if you want.

6. Click the box at the beginning of a rule row to select that rule for further actions, such as the following:

   - [Replacing Members in Rules (Rules Express Editing Page)](#)
   - [Adding Members to Rules (Rules Express Editing Page)](#)
   - [Copying Rules to a New Rule Set (Rules Express Editing Page)](#)
   - [Copying Rules to a Different Point of View (Rules Express Editing Page)](#)
   - [Enabling and Disabling Rules (Rules Express Editing Page)](#)

Replacing Members in Rules (Rules Express Editing Page)

You can use the **Replace** command in the Rules Express Editing page to replace dimension members in one or more rules with one action.

> ⓘ **Note**
>
> This action cannot be undone. Oracle recommends that you use the Migration tools for backups if necessary.

To replace members in rules:

1. Display the Calculation Rules screen, open to the Rules Express Editing page.

2. Search to find rules to modify ([Searching For and Filtering Rules (Rules Express Editing Page)](#)).

3. Check the box before the names of target rules to select them, or select all.

4. Click **Actions**, and then **Replace Member in Rules**.

5. Complete the Find and Replace information:

   - Select a **Dimension**.

   - Select a **Find Member**, the member to locate and replace in the selected rules.

     Attribute dimensions are included in the **Dimension** list. If a dimension has a user-defined attribute (UDA) associated with it, then there is a UDA entry for it, such as Product -- UDA or Customer -- UDA. Selected attribute and UDA members are replaced in the filters defined for each selected rule.

   - **Optional:** Select one or more **Replace With Member**(s), the member or members to appear in the selected rules after replacement.

     > ⓘ **Note**
     >
     > If a **Replace With Member** isn't selected, the **Find Member** will be removed instead of replaced.

   - Select a **Target Rule Tab**, the page where the selected **Find Member** will be replaced.

     > ⓘ **Note**
     >
     > You can select from among **Source**, **Destination**, and **Target** pages.

   - **Optional:** Check **Preserve Filters** to keep any filters on the target member when it is replaced.

   - **Optional:** Add a **Job Comment** to display in the Job Library list.

6. When settings are complete, click **Run**.

Adding Members to Rules (Rules Express Editing Page)

You can use the **Add** command on the Rules Express Editing page to add dimension members to one or more rules with one action.

> ⓘ **Note**
>
> This action cannot be undone. Oracle recommends that you use the Migration tools for backups if necessary.

To add members to rules:

1. Display the **Rules Express Editing** page of the Calculation Rules screen.

2. Search to find rules to modify ([Searching For and Filtering Rules (Rules Express Editing Page)](#)).

3. Check the box before the names of target rules to select them, or select all.

4. Click **Actions**, and then **Add Member to Rules**.

5. Complete the Express Add Member information:

   • Select a **Dimension** to receive the member.

   • Select a **Member** to add to the selected dimension.

   > ⓘ **Note**
   >
   > – You can add POV members only to the Driver page.
   >
   > – You can add multiple members to the rule by typing member names, selecting them from the list which is displayed as you type, or pressing enter on an exact match; or you can click the search icon to use the member selector. Selected members are displayed in the box above the search box. You can also select members for deletion from the list so they are not added to the rule.

   • Select a **Rule Tab**, the page where the selected **Member** will be added.

   > ⓘ **Note**
   >
   > If you select **Offset** as the page, there can be only one member, at Level 0. The **Driver** page also can have only one member, at any level.

6. When settings are complete, click **Run**.

Copying Rules to a New Rule Set (Rules Express Editing Page)

This feature is useful if you need to include identical or similar rules in several rule sets. You can copy the rule with a slightly different name and leave it unchanged or modify it. You can select multiple rules to copy at one time to the same rule set.

To copy successfully, the rules must meet these requirements:

• If a rule uses a rule set context and the rule has dimension members that conflict with members in the target rule set, the rule is not copied. An error displays in the Job log.

• If a rule with the same name as the selected rule already exists in the target rule set, the rule is copied with a prefix or suffix added to the name to make it unique.

> ⓘ **Note**
>
> This action cannot be undone. Oracle recommends that you use the Migration tools for backups if necessary.

To copy a rule to a new rule set:

1. Display the Rules Express Editing page of the Calculation Rules screen.

2. Search to find rules to modify ([Searching For and Filtering Rules (Rules Express Editing Page)](link)).

3. Check the box before the names of target rules to select them, or select all.

4. Click **Actions**, and then **Copy Rules to New Rule Set**.

5. Select the **New Rule Set** to receive the copy or copies.

6. **Optional:**Enter a **Job Comment** to display in the Job log.

7. When settings are complete, click **Run**.

Copying Rules to a Different Point of View (Rules Express Editing Page)

This feature is useful if you need to include identical or similar rules in several POVs. You can copy the rule with a slightly different name and leave it unchanged or modify it. You can select multiple rules to copy at one time to the same existing POV.

To copy successfully, the rules and POVs must meet these requirements:

- The selected POV must be valid and different from the POV selected on the Express Editing page.

- If a rule uses a rule set context or global context and the rule has dimension members that conflict with context members in the target POV, the rule is not copied. An error displays in the Job log.

- If a rule with the same name as the selected rule already exists in the target POV, you can select **Overwrite** to overwrite the old rule with the copy. Otherwise, the rule is copied with a prefix or suffix added to the name to make it unique.

> ⓘ **Note**
>
> This action cannot be undone. Oracle recommends that you use the Migration tools for backups if necessary.

To copy a rule to a new rule set:

1. Display the Rules Express Editingpage of the Calculation Rules screen ([About the Calculation Rules Screen](link)).

2. Search to find rules to modify ([Searching For and Filtering Rules (Rules Express Editing Page)](link)).

3. Check the box before the names of target rules to select them, or select all.

4. Click **Actions**, and then **Copy Rules to Point of View**.

5. Select a **Year**, **Period**, and **Scenario** for the POV to receive the copy or copies.

6. **Optional:**Select **Overwrite** to overwrite rules with the same name with the copy. Leave unchecked to copy with a unique name.

7. **Optional:**Enter a **Job Comment** to display in the Job log.

8. When settings are complete, click **Run**.

Enabling and Disabling Rules (Rules Express Editing Page)

You can use the Rules Express Editing page of the Calculation Rules screen to disable and enable multiple rules in a POV at one time. This feature is useful if you need to modify a number of rules at once, or make other changes that would affect the validity of enabled rules.

> ⓘ **Note**
>
> This action cannot be undone. Oracle recommends that you use the Migration tools for backups if necessary.

To enable or disable multiple rules in a POV:

1. Display the Rules Express Editing page of the Calculation Rules screen ([About the Calculation Rules Screen](#)).

2. Enter POV data and then Search to find rules to modify ([Searching For and Filtering Rules (Rules Express Editing Page)](#)).

3. Check the box before the names of target rules to select them, or select all.

4. Click **Actions**, and then **Enable Rules** or **Disable Rules**.

5. Confirm the selected action. You can check the Job Library for status information.

Displaying Rules as a Hierarchy (Rules Outline Page)

Displaying calculation rules as a hierarchy allows you to:

- Create a rule outline

- Quickly find rules and rule sets within the hierarchy

- Quickly edit names, descriptions, and sequence values for rules and rule sets

To display rules as a hierarchy, display the Calculation Rules screen, and then click **Rules Outline**. On the Rules Outline page, click arrows in front of rule set names to expand the rules within them.

As you select a rule set or rule, information about it displays in the right side of the page.

9
Using Model Views and Validating Applications

Related Topics

- [Creating and Managing Model Views](#)
  The Model Views feature of Profitability and Cost Management enables users to define a slice of an application that can be saved, copied, and modified.

- [About Validating Applications](#)
  Several Profitability and Cost Management features help you validate an application.

- [Tracing Allocations](#)
  You can use the Trace Allocations feature to select a model view and POV and then trace forward or back from that point to see allocation inputs and outputs for a selected dimension.

- [Rule Balancing for Application Validation](#)
  Use rule balancing menus and tool bar buttons to perform application validation.

- [Performing Validation Analysis for Profitability and Cost Management](#)
  After a Profitability and Cost Management application is deployed, it can become invalid if changes are made to dimensions that are used in application artifacts.

Creating and Managing Model Views

The Model Views feature of Profitability and Cost Management enables users to define a slice of an application that can be saved, copied, and modified.

These slices, called model views, help to filter the data shown on screen or handled by the current task. Model views hold selected business dimensions constant while allowing the POV, Balance dimension, and Rule dimension to change as appropriate. For example, the Rule Balancing, Allocation Tracing, and Copy POV screens have POV controls while the Rule and Balance dimensions are hard-coded. For a given POV, selected customers, products, and other business dimension members can remain onscreen while related Rule and Balance dimension values change when calculated with different data.

Model views differ from points of view (POVs) in that POVs look at time and scenario dimensions instead of business dimensions. For example, a POV might retrieve actual or forecasted data for a selected month and year.

You can select model views in several screens to limit dimensions and members to retrieve. For example, when copying POVs, if the outline for an application is too large, you can use a model view to define a subset of data to copy. If necessary, you can perform multiple copy operations using different model views to cover the full set of data you need to copy. You can also use model views to limit the range of your work when tracing allocations, performing rule balancing, and more.

For more information, see [Creating Model Views](#) and [Managing Model Views](#).

Creating Model Views

To create a model view:

1. On the Home page, click ![icon] and then select **Model Views**.

2. In the **Model Views** screen, click ![icon] or select **Create Model View** in the **Actions** menu.

3. In the **Model View** area, enter a **Model View Name** and an optional **Description** ([Figure 1]).

   For this example, we'll enter `Operating Expenses 1` and `Operating Expenses for all entities;`, as shown in the following figure.
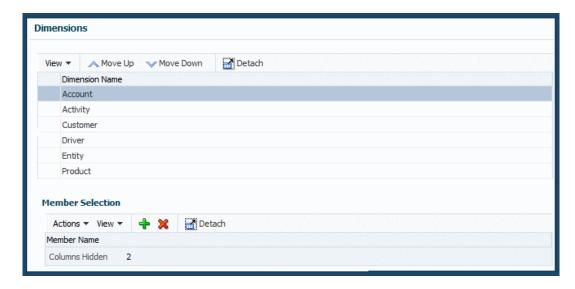
Figure 9-1   Information Required to Name and Describe a Model View (Includes Sample Information)

The next step is to select dimensions and members for the model view. These indicate the data to retrieve with the model view.

4. In the **Dimensions** area, select a dimension.

Figure 9-2   Dimension and Member for a Model View
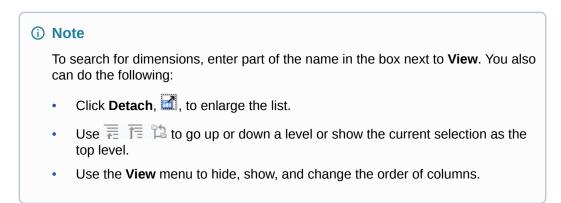
In this example, the **Account** dimension is selected by default. Ultimately, you want to select **Operating Expenses**, which is a member of **Account**.

5. To add dimension members to the view, select a dimension and click ➕ in the **Member Selection** area, or select **Add Member** in the **Actions** menu.

    You see the **Select Dimension Members** screen.

6. In the **Select Dimension Members** screen, select members and use the right and left arrows of the shuttle control to move members from the list of available members at the left to the list of selected members at the right.

> ⓘ **Note**
>
> To search for dimensions, enter part of the name in the box next to **View**. You also can do the following:
>
> - Click **Detach**, 🖾, to enlarge the list.
>
> - Use 📄 📄 📄 to go up or down a level or show the current selection as the top level.
>
> - Use the **View** menu to hide, show, and change the order of columns.

Click at the beginning of each member name to show submembers.

7. **Optional:** Use the **Move Up** and **Move Down** buttons in the **Dimensions** area to move selected dimensions toward the top or the bottom of the list.

    If there are many dimensions, you may find it helpful to move the most used dimensions toward the top.

8. **Optional:** Select a member, then click ≫ to move the member to the right column, and then click **OK**.

    For the illustrated example, you can select **Net Income**, then **Income From Operations**, and finally **Operating Expenses**.

    The Select Dimension Members screen looks like the following with **Operating Expenses** selected.
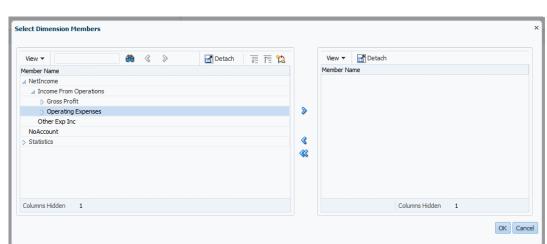
Figure 9-3   Select Dimension Members Screen for Model Views

9. To further limit the model view, select other dimensions and members.

10. When members have been selected, click **OK**.

11. **Optional:** Click ✖ or use the **Action** menu in the **Member Selection** area of the **Model View** panel to remove previously added members.

12. When changes are complete, click 🖫 to save changes.

To delete, copy, or modify a model view, see Managing Model Views.

Managing Model Views

To create a model view, see Creating Model Views.

To delete, copy, or modify a model view:

1. On the Home page, click ☰ and then select **Model Views**.

2. In the **Model Views** screen, select a model view.

3. **Optional:** To delete the selected model view, click ✖ or select **Delete Model View** in the **Actions** menu and confirm the deletino.

4. **Optional:** To copy the selected model view, click 📄 or select **Copy Model View** in the **Actions** menu and enter a name for the new model view.

5. **Optional:** To modify the selected model view, change appropriate information for it in the **Model View** panel at the right side of the screen.

6. When changes are complete, click 🖫.

About Validating Applications

Several Profitability and Cost Management features help you validate an application.

- Tracing allocations, Performing an Allocation Trace, can help you see the "big picture" of allocation flows.

- Rule balancing enables you to view dimension/member combinations within an application to confirm that allocations are working the way you expect (Rule Balancing for Application Validation).

- Validation and system reports enable you to identify and diagnose logic and system issues (Performing Validation Analysis for Profitability and Cost Management).

Model views assist with rule balancing and queries (Creating and Managing Model Views).

Tracing Allocations

You can use the Trace Allocations feature to select a model view and POV and then trace forward or back from that point to see allocation inputs and outputs for a selected dimension.

While rule balancing, described in Rule Balancing for Application Validation, presents some similar information in a grid format, tracing allocations shows graphically how allocation amounts are flowing in and out of application elements. You can use this information for evaluation and validation. When you trace, you can select a particular generation level or always roll up data to the top. For details, see the listed topics.

About Tracing Allocations

You begin an allocation trace by selecting a focal node, defined by the POV and model view entered into the **Trace Parameters** screen. You can trace forward or back from the focal node.

When you trace back, you display allocations that contribute to the selected dimension of the focal node. The first level back from the focal node is the rule node, which shows the contribution from each rule. The next level back from the rule node is the dimension node. Dimension nodes show the contribution from each member for the selected dimension at the top level or the selected generation or level (Figure 1).

> ⓘ **Note**
>
> This figure is a "zoomed out" view to display many nodes. You can zoom in to view details and can move the chart around the screen to focus on different parts (Performing an Allocation Trace).
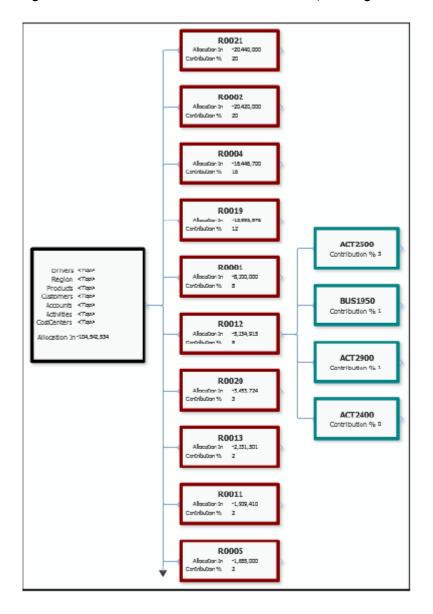
Figure 9-4   Trace Allocations Area with Nodes, Tracing Back

In default layout, the nodes display in columns. The single focal node is followed by a column of rule nodes, and then by a column of dimension nodes for the expanded rule node. The rule nodes and dimension nodes display the percentage of their contribution to the value in the focal node.

When you trace forward from the focal node, the rule nodes and dimension nodes display contributions (Allocations Out) from their predecessors — from the focal node to the rule nodes, and then from the rule nodes to the dimension nodes.

Performing an Allocation Trace
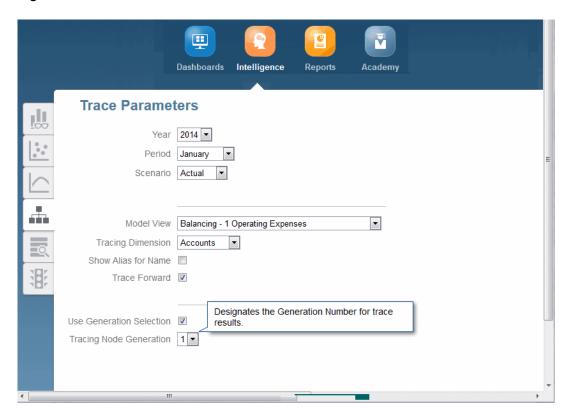
You can perform an allocation trace in Profitability and Cost Management.

To perform a trace:

1. On the Profitability and Cost Management **Home** page, click ![icon], the **Intelligence** icon.

2. Click ![icon] to display the **Trace Parameters** screen.

Figure 9-5   Trace Parameters Screen

3. Select POV information and a model view for the focal mode, the starting point for the trace (About Tracing Allocations).

4. Select a **Tracing Dimension**, the dimension of interest for your trace.

5. Indicate whether you want to use aliases instead of names.

6. Indicate whether you want to select a particular level of the tracing dimension or just display the bottom level (0).

7. Click **Trace Forward** or **Trace Back**, depending on whether you want to trace allocations coming from the focal node or contributing to it (About Tracing Allocations).

8. Click **Continue** in the upper right part of the screen to View the trace results (Viewing Allocation Trace Results). You can zoom or move around the results to show more or less detail or a different part of the chart.
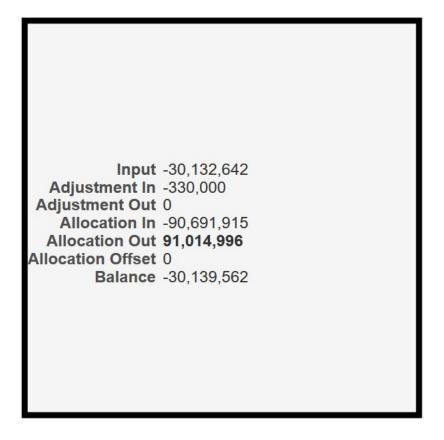
To trace further, you can change the POV, model view, dimension, or generation level. For example, you could make a dimension member the focal node for a new trace.

Viewing Allocation Trace Results

When you first perform a trace, the focal node is displayed.

Figure 9-6   Allocation Trace Focal Node Example

At full size (100% "zoom"), the focal node shows the following: balance, input, adjustment in, adjustment out, allocation in, allocation out, and allocation offset amount.

If the focal node is only partially visible, you can use the **Zoom and Center** tool to move it:

Click the dot in the center to center the chart. Click the arrows to move the chart background. This has the effect of moving the chart in the opposite direction.

When you point to the middle of the right edge of the focal node, a + (plus) sign is displayed:

You can click the + sign to expand the chart and show the rule nodes (Figure 2).

Figure 9-7   Allocation Trace Rule Node

At 100% zoom, a rule node shows the rule number, name, and rule set. It also shows the allocation driver, allocation in (back trace, allocation out (forward trace), and the contribution to the total allocation shown in the focal node.

If you point to the right edge of the rule node, you can click the + sign to show the dimension nodes (Figure 3). If you click the symbol on the left side, the rule node detaches and is displayed without the rest of the chart. Click the arrow symbol to return to the chart view.

Figure 9-8   Allocation Trace Dimension Node

At 100% zoom, the dimension nodes show the member name, allocation out (back trace), allocation in (forward trace), and percent of contributin to or from the focal node. If you click the symbol on the left edge of the node, it detaches from the rest of the chart. Click the arrow to restore it.

Additional Chart Controls

The remaining chart controls perform the following actions:

*   ⬚ — Changes the configuration of the node tree

*   ⬚ — Zooms out to display as much of the chart as possible. Up to ten rule and dimension nodes are displayed; arrows following the last node of each type indicate that there are more to display.

- ⊕ — When clicked, enlarges the chart by a step (zooms in)

- ⊖ — When clicked, shrinks the chart by a step (zooms out)

> ⓘ **Note**
>
> As you zoom in and out, an arrow moves between the two Zoom icons to show the relative degree of "zoom".

- ↤ — Hides the control panel; click to show it again

For Zoom levels of 100%, 75%, and 50%, hyperlinks display for AllocationIn and AllocationOut amounts on the focal node and rule nodes. You can click these to launch Oracle Smart View for Office , similar to the way ilinks work in the Rule Balancing screen.

Rule Balancing for Application Validation

Use rule balancing menus and tool bar buttons to perform application validation.

Related Topics

- [About Validating Applications](#)
  Several Profitability and Cost Management features help you validate an application.

- [Performing Validation Analysis for Profitability and Cost Management](#)
  After a Profitability and Cost Management application is deployed, it can become invalid if changes are made to dimensions that are used in application artifacts.

Related Topics

- [Viewing the Rule Balancing Screen](#)
  The Rule Balancing screen shows how all rules affect the selected slice of the database.

- [Performing Rule Balancing Tasks](#)
  Use the Rule Balancing menus and tool bar buttons to perform tasks.

Viewing the Rule Balancing Screen

The Rule Balancing screen shows how all rules affect the selected slice of the database.

To open the Rule Balancing screen, click the **Navigator** menu, ☰, and then click **Rule Balancing** in the **Manage** group.

> ⚠ **Caution**
>
> Users and Viewers with data grants may see incomplete data when using the Rule Balancing screen. Service Administrators should make sure that users accessing the Rule Balancing screen have appropriate data grants to allow them to see the data required for their investigation.

Figure 9-9   Rule Balancing Screen with Data

The layout illustrates the sequence of rule sets and rules that ran, the corresponding rule numbers, and the specific impacts of a rule displayed across columns. The columns include input values, additions and subtractions, running total, and final balances. By default, the following data displays: the POV members selected in the POV bar, the POV's global context, the tops of all other business dimensions, and the balance and rule members corresponding to the rows (rules) and columns (balances) displayed in the table. You can change this view by creating model views that show different slices of data, and then selecting one in the **Model View** list at the top of the task area.

By default, table columns are as follows (use the scroll bar and the View menu to display and rearrange the columns):

*   **Rules** — Displays the calculation program as a hierarchy of rule sets and the rules contained within each rule set. You can expand or contract rule sets to see or hide the rules contained within each. The rule sets and rules are displayed in the same order as in the Rules screen when sorted by sequence number. If rule sets or rules have the same sequence number, the secondary sort for this column is the same secondary sort used in the Rules screen.

*   **Rule Number** — Displays the rule dimension member corresponding to the rule.

*   **Input** — Displays the value of the input member corresponding to the slice indicated by the combination of POV and the rule number of the row. For all rows except the first, Input is typically blank.

*   **Adjustment In** — Displays the Adjustment In member corresponding to the slice indicated by the combination of POV and rule number of the row.

*   **Adjustment Out** — Displays the Adjustment Out member corresponding to the slice indicated by the combination of the POV and rule number of the row.

*   **AllocationIn** — Displays the AllocationIn member corresponding to the slice indicated by the combination of the POV and the rule number of the row.

*   **AllocationOut** — Displays the AllocationOut member corresponding to the slice indicated by the combination of the POV and the rule number of the row.

*   **Allocation Offset Amount** — Displays an amount that further reduces an AllocationIn member, if one was used in addition to the AllocationOut.

*   **Net Change** — Displays the Net Change member corresponding to the slice indicated by the combination of the POV and the rule number of the row.

- **Remainder** — Displays the difference between AllocationIn and AllocationOut plus Allocation Offset Amount, if any, for each row.

- **Running Remainder** — Displays the sum of the prior row's running remainder and the current row's net change column. This column serves like a checkbook register to indicate the remainder as of the execution of the rule corresponding to the current row. For rule set summary rows, this column shows the same running remainder as the last rule within that rule set.

- **Balance** — The amount resulting when adjustments, allocations, and offsets are taken into account. It should equal the Input.

- **Running Balance** — Displays the sum of the prior row's running balance and the current row's net change column. This column is similar to a checkbook register to indicate the balance as of the execution of the rule corresponding to the current row. For rule set summary rows, this column shows the same running balance as the last rule within that rule set.

For information about actions you can perform in this screen, see [Performing Rule Balancing Tasks](#).

Performing Rule Balancing Tasks

Use the Rule Balancing menus and tool bar buttons to perform tasks.

- Click **View** to display and rearrange the columns.

- Click **Refresh** or select **Actions**, and then **Refresh** to reload calculation results.

- Click ![icon], or select **Actions**, and then **Export To Excel** to export data in the table to a Microsoft Excel file.

- Select **Actions**, and then **Format** to indicate the number of decimal places to display in the table.

- Use **Detach**, ![icon], to display the table in its own window.

- Use the level buttons, ![icons], to go up or down a level or show the current selection as the top level.

If a value in the Rule Balancing table is displayed in blue and underlined when you point to it, this indicates a Oracle Smart View for Office hyperlink. You can click these hyperlinks to launch Smart View and drill down further on input or allocation data.

> ⓘ **Note**
>
> To display the Rule Balancing screen, see [Viewing the Rule Balancing Screen](#).

> ⓘ **Note**
>
> For a description of the Rule Balancing screen, see [Viewing the Rule Balancing Screen](#).

Performing Validation Analysis for Profitability and Cost Management

After a Profitability and Cost Management application is deployed, it can become invalid if changes are made to dimensions that are used in application artifacts.

Errors display if an invalid condition is created. You can learn more about these errors and search for validation errors in the **Model Validation** screen.

To check for and analyze validation errors:

1. On the Home page, click ☰ and then select **Model Validation**.

2. In the **Model Validation** screen, for each type of validation, enter POV information (such as **Year**, **Period**, and **Scenario**), and click **Run**.

   Errors, if present, display in a Model Validation table. The default tab is for rule sets and rules (Figure 1).
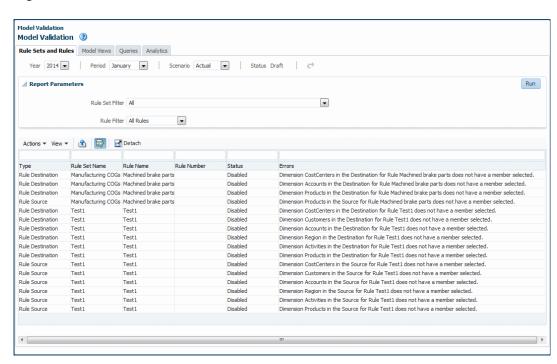
Figure 9-10   Model Validation Results for the Rule Sets and Rules Tab

The error table for rule sets and rules contains the following information:

- Error **Type** (location) — Global Context, Rule Set Context, Rule Source, Rule Destination, Rule Driver, or Rule Offset.

- Name and number of the rule or rule set involved.

- Status of the rule or rule set, usually **Disabled**.

- A description of the error.

3. Review the **Model Views**, **Queries**, and **Analytics** tabs. Display the tab and click **Run**.

Note that hese tabs apply to all POVs, so you do not need to select a POV.

4. Note errors on any tab. You can click] or select **Actions**, and then **Export to Excel** to export data in the table to a Microsoft Excel file.

5. Repair the errors and validate again.

> ⓘ **Note**
>
> You can fix rule set and rule errors in the **Rules** screen ([Working with Rule Sets](#)). If a rule has an invalid member, you can remove it by selecting the rule and clicking .

10

Deploying and Loading Data into an Application Database

Related Topics

- [Deploying Databases](#)
  You should deploy the database with application metadata whenever you add or modify dimensions or perform other structural changes.

- [Loading Data into Essbase](#)
  There are several ways to load data into the database.

- [Restarting Essbase](#)
  Sometimes calculations might take longer than expected or you may need to stop a process for another reason.

- [Creating File-Based Data Integrations](#)

Deploying Databases

You should deploy the database with application metadata whenever you add or modify dimensions or perform other structural changes.

For the first deployment of a Profitability and Cost Management database, you should select **Replace Database** to create the database in its entirety. After the first deployment, when you need to redeploy the calculation database, you can select deployment options to retain data already in the cube or to discard it upon restructure.

Any errors in the deployment are reported.

> ⚠ **Caution**
>
> For applications created with duplicate member outlines, data associated with members that are renamed or reparented will not be preserved when the database is deployed with **Preserve Data** selected.
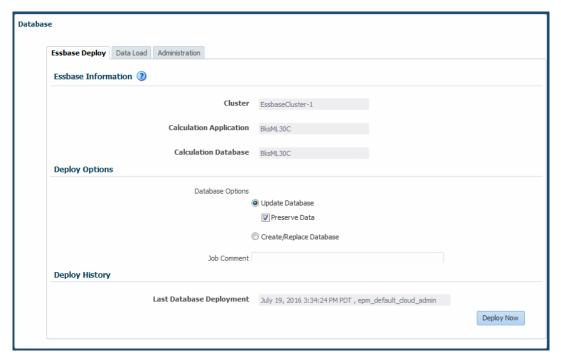
To deploy a Profitability and Cost Management database:

1. Click ▤, and then **Database**.

   The **Database** screen is displayed ([Figure 1](#)).

Figure 10-1   Essbase Deploy Screen

2. Confirm that the **Essbase Deploy** tab is selected.

3. Under **Essbase Information**, review the following information:

   - **Cluster** displays the name of the Oracle Essbase database server that contains the application.

   - **Calculation Application** displays the name of the application being deployed.

   - **Calculation Database** displays the name of the Essbase database to which the application is being deployed.

4. Under **Deploy Options**, select appropriate **Database Options** for deploying the database:

   - For the first deployment of a database, all selections are grayed out. This option creates the entire database for the first time.

   - To redeploy an existing database, select **Update Database** to retain existing artifacts and property settings in the new database, and change the outline to reflect current metadata.

     > ⓘ **Note**
     >
     > Those with Service Administrator or Power User roles can use this option.

     Optional: Select **Preserve Data** to build and restructure the Essbase cube while preserving data. This option can be time-consuming, based on the size of the outline and the amount of data present.

   - Alternatively, select **Create/Replace Database** to remove the database and applications completely, and recreate them.

> **⚠ Caution**
>
> Only those with Service Administrator roles can use this option. If you plan to select this option, you must first back up your data and then reload it yourself once the database is recreated.

5. **Optional:** Enter a comment in the **Job Comment** box. The comment will display in the **Job Library**.

6. **Optional:** Under **Last Database Deployment**, review the date and time of the previous deployment.

7. Click **Deploy Now** to deploy the database.

    A confirmation message is displayed, indicating that the job has been submitted.

> **⚠ Caution**
>
> Depending on the size and complexity of an application, this operation may take a significant amount of time.

8. Monitor the progress of the deployment on the **Job Status** page using the taskflow ID.

    Any validation errors are displayed in the Job Library screen.

9. Calculate the application ([Calculating an Application](#)).

Loading Data into Essbase

There are several ways to load data into the database.

For an overview, see this video:

▶ [Overview Video: Loading Data](#)

Service Administrators and other users with appropriate provisioning can load data into Oracle Essbase using Profitability and Cost Management. Files to load typically contain input data such as amounts to be allocated and driver information.

> **ⓘ Note**
>
> You can also open the **Navigator**, ☰, and then select **Data Management**. For instructions, access help within Data Management or locate Data Management documentation in the **User** section of **Books** in the Library ([Using Profitability and Cost Management Library](#)).

The formats of files to load are the same as for Oracle Essbase Administration Services console:

*   Text File data object(.txt) — IEssOlapFileObject.TYPE_TEXT

*   Excel worksheet File data object(.xls) — IEssOlapFileObject.TYPE_EXCEL

For information about creating these files, see Understanding Data Loading and Dimension Building in *Oracle Essbase Database Administrator's Guide*, particularly Data Sources that Do Not Need a Rules File.
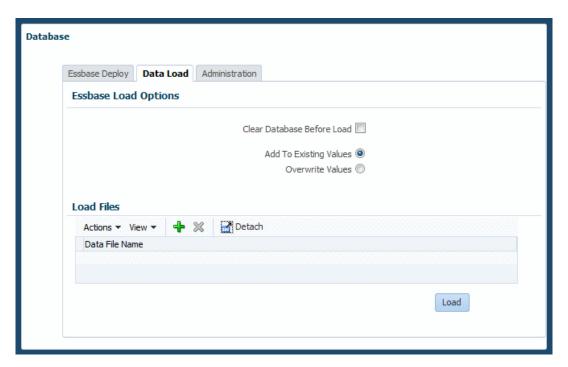
The following videos show how to use **Data Management** to load data into Profitability and Cost Management:

▶ Tutorial Video: Loading Data Files Using Data Management Part 1

▶ Tutorial Video: Loading Data Files Using Data Management Part 2

To load data into Essbase using Profitability and Cost Management:

1. Click ☰, and then **Database**. Click the **Data Load** tab (Figure 1).

Figure 10-2   Data Load Screen

2. Indicate how to handle the data load:

   • **Optional:** Select **Clear Database Before Load** to clear all data in the active cube of the application. To retain existing data, do not select this setting.

   • Select whether to **Add to Existing Values** or **Overwrite Existing Values**.

3. In the **Load Files** area, select files to load. Use the **Actions** menu or the buttons to perform the following tasks:

   • **Add Row** or
   ➕
   button — Displays **Browse** buttons so you can select a data file or rule file to load

   • **Delete Row** or
   ✖
   button — Removes the selected row from the table of files to load

> ⓘ **Note**
>
> You can use the **View** menu to show, hide, and reorder columns in the table and detach the table to float it in a separate window.

4. When files are selected, click **Load** to copy the files to the OLAP server and load data from the files into Essbase.

   You can use the **Job Library** to track the progress of the load.

Example 10-1   Notes

At least the first error for each file in the load is logged and displayed in the Job Library. Where possible, multiple errors per file are logged. The error describes which column is wrong and in which record. An error is logged if the outline is empty or the loaded file is empty, locked, exceeds size limits (2 GB for data files, 64 KB for rule files), or if the data file contains an error. Files must be either text files or Microsoft Excel files. File names must not exceed eight characters and should not contain spaces or certain characters (including ,=.+;[]).

Restarting Essbase

Sometimes calculations might take longer than expected or you may need to stop a process for another reason.

The Job Library has a **Stop** button, but if Oracle Essbase has control of the process, that button won't be active. In that case, Service Administrators can stop and restart Essbase from within Profitability and Cost Management.

To stop and restart Essbase:

1. Communicate with users to be certain that nothing critical is running and to notify them that Essbase is undergoing maintenance.

2. Click ▤, and then **Database**. Click the **Administration** tab.

   A warning is displayed. It states that all active processes and connections to the application will be unusable until the restart is completed. You are advised to notify other users that there will be a disruption in service.

3. Click **Restart** to initiate the shutdown and restart.

Creating File-Based Data Integrations

Data Integration is the mechanism by which integration processes are performed in Profitability and Cost Management. You can define file-based and direct integration sources, create mapping rules to translate source data into the required target format, and execute and manage the periodic data loading process.

To create a file-based integration:

1. From the **Home** page, select **Application**, and then **Data Exchange**.

   This opens the **Data Integration** page.

2. Review Creating File-Based Integrations in *Administering Data Integration for Oracle Enterprise Performance Management Cloud*.

11
Calculating an Application

Related Topics

- [About Profitability and Cost Management Calculations](#)
  If you have a Service Administrator or Power User role, you can calculate a deployed application in Profitability and Cost Management.

- [Performing Single-POV Calculations Using the Navigator](#)
  The global context, rule sets, and rules in applications are specific to a single point of view (POV).

- [Performing Single- and Multiple-POV Calculations Using Execution Control](#)
  The global context, rule sets, and rules in Profitability and Cost Management applications are specific to a single point of view (POV).

- [A Word About Troubleshooting](#)
  When calculations don't turn out the way you expect, Profitability and Cost Management offers several tools to help you locate and resolve the problem:

About Profitability and Cost Management Calculations

If you have a Service Administrator or Power User role, you can calculate a deployed application in Profitability and Cost Management.

Service Administrators and Power Users must perform calculations before Users and Viewers can create or view analyses and reports. The topics in this section describe how calculations work in Profitability and Cost Management.

Basically, rules run and perform financial allocations according to how the rules are defined. Originally, you could use only the **Calculation** option, available through the **Navigator** menu, , to perform basic single-POV calculations. For single-POV calculations, you select a point of view (POV) to calculate and, by default, its rules are applied to its own data.

Now, you can use **Execution Control**, available in the **Models** cluster, , to perform single- or multiple-POV calculations. While you can apply the rules from one POV against its own data, you also can apply the rules from one POV against the data for one or more different POVs. You can use the **Execution Control** and **Run Express Calculation** screens to select one or more data POVs, and then a model POV with rules to run against the data ([About POVs](#)).

- To review important calculation concepts, see the following topics:

  [Start with Dimensions](#)

  [Consider Allocations](#)

  [Analyze Calculation Workflow](#)

- For an overview of basic calculations using the **Navigator**, view the following video:

  [Video Overview: Calculation and Validation in Oracle Profitability and Cost Management Cloud](#)

- For a tutorial about performing basic calculations using the **Navigator** and validating models, view this video:

   [Calculating and Validating Models in Oracle Profitability and Cost Management Cloud](#)

- For information on troubleshooting calculation issues, see [Troubleshooting Calculation Issues](#) in the *Operations Guide*.

Start with Dimensions
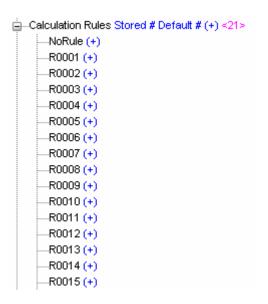
Application data stored in a database is organized by dimensions, which are data categories used to organize data for retrieval and preservation of values. Dimensions usually contain hierarchies of related members grouped within them. For example, a Year dimension often includes members for each time period, such as Quarter and Month.

Profitability and Cost Management includes the following dimensions:

- Business dimensions that reflect the business-specific elements of the application, such as departments, accounts, activities, customers, or products

- Point of View (POV) dimensions that identify a specific point of view or version of the application, such as year, scenario, period, and version

- Attribute dimensions that enable analysis based on the attributes or qualities of dimension members, such as the size or color of products

- Alias dimensions (optional), used to assign alternate names, descriptions, languages, or other items

- System dimensions that are reserved for use by Profitability and Cost Management for system requirements
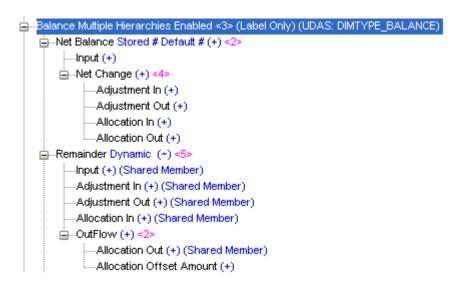
Profitability and Cost Management has two system dimensions:

- **Rule** dimension, that stores allocation instructions as Rule members for up to 1000 rules:

- **Balance** dimension, that stores calculation inputs and outputs as Balance members:

When each rule runs, you can trace all the inputs and outputs and see how they balance ([Rule Balancing for Application Validation](#)).

Consider Allocations

In Profitability and Cost Management, allocations control how costs and revenues are distributed to specified accounts or elements throughout the application. The calculated results are assigned from a source to a destination as the funds flow through the application.

Allocations move data from one or more sources to many destinations based on allocation drivers. For example, you can allocate rent from the corporate cost center to business function cost centers based on the percentage of square foot occupancy.

Rules define the calculation logic of Profitability and Cost Management applications and enable them to reflect the cost assignments within the modeled situations. Rules within rule sets run in the order of their sequence numbers within that rule set. There are two types of rules, allocation rules and custom calculation rules. You can define an allocation source, destination, driver basis, and offset for each allocation rule in a rule set.

Reciprocal calculations enable you to allocate data in a circular way among locations with reciprocal relationships. For example, HR allocates expenses to IT and Finance, IT allocates to HR and Finance, and Finance allocates to HR and IT. These groups can all have one-way relationships with other groups that do not allocate costs back to the administrative groups.

Analyze Calculation Workflow

A look at calculation workflow can help you set up reports. All input arrives in the NoRule member of the Rule dimension. From there, rules assign funds to sources and destinations depending on rule definitions. As rules run, adjustments and allocations in and out take place. Each pair of adjustments and allocations results in a zero sum to balance the transaction. The difference between Allocation In and Allocation Out appears in the Remainder member of the Balance dimension. The Remainder member provides the input for each subsequent rule that runs.

These changes can be tracked by queries, reports, analysis views, and in the Rule Balancing screen.

Figure 11-1   Rule Balancing Screen with Data

In the Rule Balancing screen, Rule dimension members are on the rows and Balance members are on the columns. As you read across a row, you can see fund distributions taken for that rule as it ran. The Profitability and Cost Management calculation process captures where money came from and where it went, rule by rule. The Rule Balancing screen shows summary amounts. With Oracle Smart View for Office installed, you can click on a link in the Rule Balancing screen to drill down . Then, ad hoc analysis in Smart View can help you show the flow of funds within each rule.

Data is captured in a multidimensional way that enables you to reveal detail in reports as well as in Smart View. For more information about the Rule Balancing screen, see Rule Balancing for Application Validation. To learn about Smart View and Financial Reporting, visit the Library (Using Profitability and Cost Management Library), then **Books**, and then see the **User** section.

Performing Single-POV Calculations Using the Navigator

The global context, rule sets, and rules in applications are specific to a single point of view (POV).

This means that a rule set or rule of the same name may exist in multiple POVs but each of the instances of that rule set or rule is a unique artifact and may have a unique definition. Running a rule for a specific POV executes the definition of that rule set or rule as it exists in that POV. When you perform a single-POV calculation using the Calculation screen (accessed with the **Navigator** menu), you select a single POV with data and rules and run the calculation against it using its own rules. If you also want to calculate the data in one POV using rules from another, or if you want to use the rules in one POV against the data in several different POVs, you can perform multiple-POV calculations using the Execution Control screen (Performing Single- and Multiple-POV Calculations Using Execution Control). Also see:

• For an overview of basic calculations using the **Navigator**, view the following video:

  Video Overview: Calculation and Validation in Oracle Profitability and Cost Management Cloud

• For a tutorial about performing basic calculations using the **Navigator** and validating models, view this video:

  Calculating and Validating Models in Oracle Profitability and Cost Management Cloud

- For information on troubleshooting calculation issues, see Troubleshooting Calculation Issues in the *Operations Guide*.

> ⚠️ **Caution**
>
> Before calculating an application, ensure that cost and revenue data have been loaded. Otherwise, the calculation uses an empty data set.

To clear or calculate a Profitability and Cost Management application using the **Navigator**:

1. Click ☰, and then **Calculation**.

Figure 11-2   The Calculation Screen

2. In the **Calculation** screen, enter the POV information to calculate, such as **Year**, **Period**, and **Scenario**.

   For a list of available POVs, click ☰, and then **Points of View**.

3. **Optional:** Enter a **Job Comment** to display on the **Job Library** screen.

4. **Optional:** In the **Processing Options** group, select one or more actions to perform:

   • **Clear Calculated Data** to clear all cells that could be updated by the rules in the **Processing Range** options (selected by default); this also clears results from previously running the rule or rules that will run as part of this calculation job

   • **Execute Calculation** to run the rules specified in the **Processing Range** options (selected by default)

   • **Capture Essbase Debug Scripts** to store engine-generated scripts for each allocation or custom calculation rule included in a calculation (see About Debug Scripts later in this topic)

   > ⓘ **Note**
   >
   > **Capture Essbase Debug Scripts** is intended for troubleshooting purposes and can increase processing overhead. Avoid selecting this setting without an appropriate reason to do so.
   >
   > If **Capture Essbase Debug Scripts** is selected, the Job Details list indicates that selection on the Job Library screen.

   • **Optimize for Reporting** to run the default aggregations on the Essbase cube when the calculation completes (About Optimizing for Reporting)

5. In the **Processing Range** group, indicate which rules to run:

   • **All Rules** runs all enabled rules defined for the selected POV.

   • **Specify Rule Set Range** runs all enabled rules in the rule set range defined by the **First Rule Set Sequence Number** text box and the **Last Rule Set Sequence Number** text box, inclusive.

   • **Stop After Rule** enables you to specify a stopping point for a calculation job. All rule sets and rules, up to and including the selected rule, will run and the calculation will stop at that point.

   • **Run Single Rule** runs a single rule as selected in the **Rule Set Name** and **Rule Name** lists.

6. Click **Run Now** to run the calculations or clear data immediately. A confirmation message indicates that the job has started and identifies the assigned taskflow ID.

   > ⚠ **Caution**
   >
   > Depending on the size and complexity of an application, this operation may take a significant amount of time.

7. Monitor the progress of the calculation using the taskflow ID in the Job Library screen.

Example 11-1   About Debug Scripts

Scripts are generated in the Outbox folder, which can be accessed using the File Explorer (Transferring Files with the File Explorer).

The file name format for scripts is `P+XX+RuleMemberName.txt`, defined as follows:

• `P` = POV

- `XX` = last two digits of the selected POV member group ID

- `RuleMemberName` = Unique rule member name assigned to the particular rule

For example, a generated script may be named `P99R0001.txt`.

Each script file has a header with the following information:

- Application name

- POV

- Rule set name

- Rule name

- Rule sequence

- Number of iterations

Individual script files are compressed into a larger file. When uncompressed, they run in Essbase MAXL without editing. If custom calculation formulas are used, their debug script files have the same name as the main script file, followed by an underscore and sequential number. For example, if a rule file script's file name is `P5R0005.txt` and it has two custom calculation scripts, their names are `P5R0005_1.txt` and `P5R0005_2.txt`. The ZIP file containing these scripts is `Calc_Debug_Scripts_<appName>_<JobId>zip`.

Example 11-2   About Optimizing for Reporting

When **Optimize for Reporting** is selected, Profitability and Cost Management runs aggregations on the Essbase cube when the calculation is complete. This improves performance for queries, reports, and analytics. You can also run this setting by itself.

These aggregations are dropped at the beginning of each calculation to improve calculation performance, so it is a good practice to select **Optimize for Reporting** only for running a final calculation before querying data, performing analytics, or running reports. For example, if you have three calculation jobs to run before you run reports, selecting this option before the first or second job adds unnecessary time to the calculation without providing a benefit.

Other helpful practices are as follows:

- **Optimize for Reporting** is selected by default. Keep it selected unless you are running a single rule or a sequential series of several POVs and need to save processing time.

- When running multiple concurrent calculation jobs, keep **Optimize for Reporting** selected for all jobs. Only the last to complete will perform the aggregation. This avoids redundant processing and prevents slow-down of jobs.

Performing Single- and Multiple-POV Calculations Using Execution Control

The global context, rule sets, and rules in Profitability and Cost Management applications are specific to a single point of view (POV).

This means that a rule set or rule of the same name may exist in multiple POVs but each of the instances of that rule set or rule is a unique artifact and may have a unique definition. Running a rule for a specific POV executes the definition of that rule set or rule as it exists in that POV. When you perform a basic calculation, you select a single POV with data and rules and run the calculation against it usng its own rules. Originally, you could do that only by using the **Navigator**, as described in Performing Single-POV Calculations Using the Navigator. Now, you can use the Execution Control features to perform single-POV or multiple-POV calculations,

such as calculating the data in one POV using rules from another, or using the rules in one POV against the data in several different POVs.

> ⓘ **Note**
>
> Once a POV has been calculated, to calculate it with a different model POV you must clear it first. There can be only one set of calculated results for a given POV at any one time.
>
> To clear calculated results for a POV, follow the steps to perform an express calculation and select **Clear Calculated Data** in step 5.

To perform calculations using Execution Control features, see the following:

- Performing Single-POV Calculations Using Execution Control
- Performing Multi-POV Calculations

> ⚠ **Caution**
>
> Before calculating an application, ensure that cost and revenue data have been loaded. Otherwise, the calculation uses an empty data set.

Performing Single-POV Calculations Using Execution Control

> ⚠ **Caution**
>
> Before calculating an application, ensure that cost and revenue data have been loaded. Otherwise, the calculation uses an empty data set.

To clear or calculate an application using a single POV:

1. On the Home page, click **Models**, , and then **Execution Control**, .

   The **Execution Control** screen opens.

Figure 11-3   Execution Control Screen with a Single POV Selected

2. Select a POV.

    Here, the selected POV is for `January 2016` with `Actual` data and a status of `Draft`. **Model Exists** is checked to show that this POV is associated with rules.

3. Click **Run Calculation** to calculate that POV.

    The Run Express Calculation screen opens.

Figure 11-4   Run Express Calculation Screen with a Single Model POV Selected

Because you selected a single POV with both data and rules, that POV is entered by default into the Select Model Point of View boxes.

> ⓘ **Note**
>
> A POV with rules is called a model POV. You can select any POV with a check in the **Model Exists** column of the previous screen (Execution Control).

4. For this example, leave the default POV and all other defaults as entered. Enter a descriptive comment in the **Job Comment** box, as shown, to identify this job in the Job Library.

   To learn more about the other settings, see Entering Calculation Settings.

5. Click **Run** to run the calculations or clear data immediately. A confirmation message indicates that the job has started and identifies the assigned taskflow ID.

> ⚠ **Caution**
>
> Depending on the size and complexity of an application, this operation may take a significant amount of time.

6. Monitor the progress of the calculation using the taskflow ID in the Job Library (Viewing the Job Library).

Performing Multi-POV Calculations

To perform a multi-POV calculation, follow these steps:
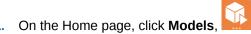
- Opening the Execution Control Screen

- Selecting One or More Data Points of View (POVs)

- Entering Calculation Settings

- Running the Calculation

- Viewing the Job Library

These topics describe how to build an example where rules from the model POV `January 2016 Actual` are run against three data POVS: `April 2016 Actual`, `May 2016 Actual`, and `June 2016 Actual`. This example uses the sample application supplied with Profitability and Cost Management.

> ⚠ **Caution**
>
> Before calculating an application, ensure that cost and revenue data have been loaded. Otherwise, the calculation uses an empty data set.

Opening the Execution Control Screen

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

2. Click **Execution Control**, .
   The **Execution Control** screen opens (Figure 1).

   You can use the controls on this screen to do the following:

   - Search for POVs (About POVs)

   - Create, edit, delete, clear, copy, and inspect POVs (Managing POVs)

   - Refresh the screen

   - Sort the screen in ascending or descending order by **Outline** (all fields in order from left to right), **Year**, **Period**, **Scenario**, or **Status**

   - Run a calculation on selected POVs
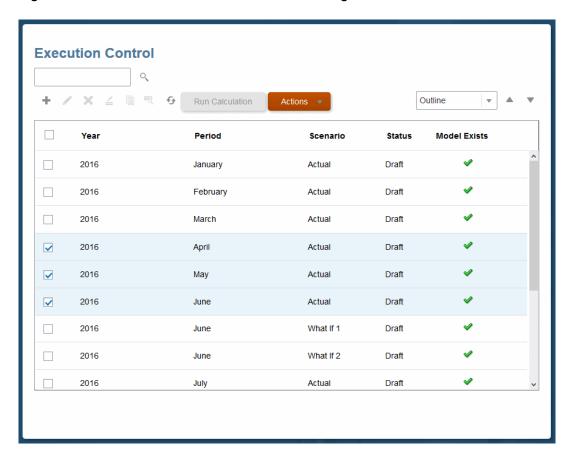
Selecting One or More Data Points of View (POVs)

Data POVs are POVs with data to calculate using the same set of rules in a model POV. The model POV supplies the rules that are used to calculate selected data POVs.

1. On the **Execution Control** screen, begin by selecting one or more data POVs to calculate.

   In this example, POVs for April, May, and June of the same year are selected.

Figure 11-5   The Execution Control Screen for Single- and Multi-POV Calculations

2. Click **Run Calculation**.

   The **Run Express Calculation** screen opens (Figure 1).

Entering Calculation Settings

If you selected a single POV with both data and rules, that POV is entered by default into the **Select Model Point of View** boxes.

> ⓘ **Note**
>
> A POV with rules is called a model POV. You can select any POV with a check in the **Model Exists** column of the previous screen (Execution Control).

1. Leave the default POV as entered and move to the next step, or select a different model POV to apply to the selected POV or POVs.

   For this example, use the default POV.

2. In the **Processing Options** group, select one or more actions to perform:

   - **Clear Calculated Data** to clear all cells that could be updated by the rules in the **Processing Range** options (selected by default); also clears results from previously running the rule or rules that will run as part of this calculation job

   - **Execute Calculation** to run the rules specified in the **Processing Range** options (selected by default)

   - **Capture Essbase Debug Scripts** to store engine-generated scripts for each allocation or custom calculation rule included in a calculation (About Debug Scripts).

   > ⓘ **Note**
   >
   > **Capture Essbase Debug Scripts** is intended for troubleshooting purposes and can increase processing overhead. Avoid selecting this setting without an appropriate reason to do so.
   >
   > If **Capture Essbase Debug Scripts** is selected, the Job Details list indicates that in the Job Library.
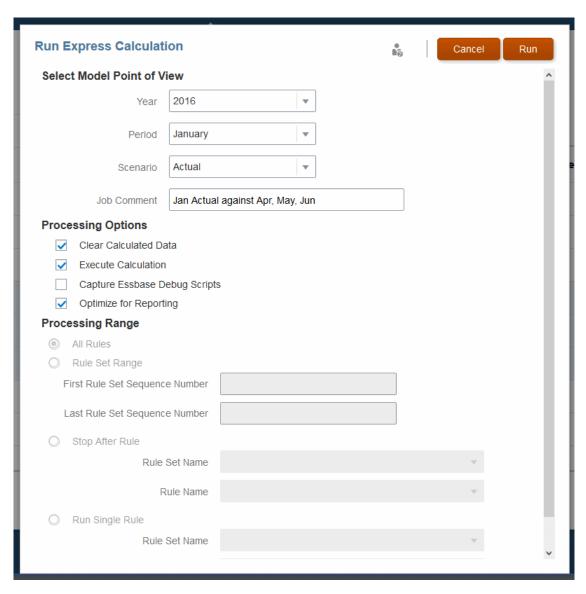
   - **Optimize for Reporting** to run the default aggregations on the Essbase cube when the calculation completes (About Optimizing for Reporting).

3. In the **Processing Range** group, indicate which rules to run:

   - **All Rules** runs all enabled rules defined for the selected POV.

   - **Rule Set Range** runs all enabled rules in the rule set range defined by the **First Rule Set Sequence Number** text box and the **Last Rule Set Sequence Number** text box, inclusive.

   - **Stop After Rule** enables you to specify a stopping point for a calculation job. All rule sets and rules up to and including the selected rule will run and the calculation will stop at that point.

   - **Run Single Rule** runs a single rule as selected in the **Rule Set Name** and **Rule Name** lists.

The settings in the following example screen, Run Express Calculation, run all rules in the model POV `January 2016 Actual` against the three data POVs selected in Figure 1.

Figure 11-6   The Run Express Calculation Screen

When the calculation runs with these settings, existing calculated data is cleared and the data is optimized for reporting but Essbase debug data is not captured.

About Debug Scripts

Scripts are generated in the Outbox folder, which can be accessed using the Profitability and Cost Management Cloud File Explorer.

The file name format for scripts is `P+XX+RuleMemberName.txt`, defined as follows:

- `P` = POV

- `XX` = last two digits of the selected POV member group ID

- `RuleMemberName` = Unique rule member name assigned to the particular rule

For example, a generated script may be named `P99R0001.txt`.

Each script file has a header with the following information:

- Application name

- POV

- Rule set name

- Rule name

- Rule sequence

- Number of iterations

Individual script files are compressed into a larger file. When uncompressed, they run in Essbase MAXL without editing. If custom calculation formulas are used, their debug script files have the same name as the main script file, followed by an underscore and sequential number. For example, if a rule file script's file name is `P5R0005.txt` and it has two custom calculation scripts, their names are `P5R0005_1.txt` and `P5R0005_2.txt`. The ZIP file containing these scripts is `Calc_Debug_Scripts_<appName>_<JobId>zip`.

About Optimizing for Reporting

When **Optimize for Reporting** is selected, Profitability and Cost Management runs aggregations on the Essbase cube when the calculation is complete. This improves performance for queries, reports, and analytics. You can also run this setting by itself.

These aggregations are dropped at the beginning of each calculation to improve calculation performance, so it is a good practice to select **Optimize for Reporting** only for running a final calculation before querying data, performing analytics, or running reports. For example, if you have three calculation jobs to run before you run reports, selecting this option before the first or second job adds unnecessary time to the calculation without providing a benefit.

Other helpful practices are as follows:

- **Optimize for Reporting** is selected by default. Keep it selected unless you are running a single rule or a sequential series of several POVs and need to save processing time.

- When running multiple concurrent calculation jobs, keep **Optimize for Reporting** selected for all jobs. Only the last to complete will perform the aggregation. This avoids redundant processing and prevents slow-down of jobs.

Running the Calculation

When calculation settings are complete:

1. Click **Run** to calculate and clear data immediately, depending on the settings.

   A confirmation message indicates that the job has started, and identifies the assigned taskflow ID. Each data POV is calculated with the model POV entered in the Run Express Calculation screen.

   > ⚠ **Caution**
   >
   > Depending on the size and complexity of an application, this operation may take a significant amount of time.
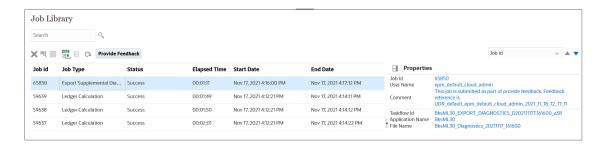
2. **Optional:** Monitor the progress of the calculation using the Job Library (Figure 1).

Viewing the Job Library

To view the Job Library, from the Home page, select **Application**, and then select **Job Library**.

Figure 11-7   The Job Library

When viewing the Job Library, you can:

- Run a Supplemental Diagnostics job and submit feedback for Oracle Support. To do this, select one or more jobs, and then click the **Provide Feedback** button. In addition to the standard content provided in Supplemental Diagnostics, for each calculation job selected, the Execution Statistics Report for that job is included in the feedback, along with the Program Documentation report for the POV used to calculate the job.

- View job details and export them to a spreadsheet (Viewing and Exporting Job Details).

> ⓘ **Note**
>
> If a job isn't running, there are ways to find the problem. For an overview, see A Word About Troubleshooting.

Viewing and Exporting Job Details

You can view a table of job details and export them to Microsoft Excel. The **Warnings** and **Errors** columns are especially helpful.

To view the job details:

1. Run a calculation and display the Job Library (click **Job Library**,).

2. In the Job Library, click , **Export To Excel**.

   You can choose to save or display the Job Details table.

Figure 11-8   The Job Details Table

> **(i) Note**
>
> If you display it without saving it, you can save the displayed table by copying the table or any part of it. Then, select a single cell in Microsoft Excel and choose one of the **Paste Special** options.

A Word About Troubleshooting

When calculations don't turn out the way you expect, Profitability and Cost Management offers several tools to help you locate and resolve the problem:

- Rule Balancing features -- Show flows of funds into and out of dimensions

- Rule Data Validation report -- Shows source and driver data targeted for each selected rule

- Execution Statistics report -- Shows runtime statistics collected for the selected calculation job following the end of the job

- Program Documentation report -- Shows rule sets and rules plus rule definitions

For details, see Troubleshooting Calculation Issues

A Word About Troubleshooting

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For details, see Troubleshooting Calculation Issues

12

Working with Profitability and Cost Management Analytics Features

Related Topics

* [About the Profitability and Cost Management Analytics Features](#)
  Profitability and Cost Management offers a variety of features for viewing sets of data, defined using analysis views and queries in charts and reports.

* [Working with Analysis Views](#)
  Similar to queries, analysis views provide a way to locate and save sets of data drawn from the database cube for the current application.

* [Working with Dashboards](#)
  Dashboards in Profitability and Cost Management are sets of small-scale charts that display values and trends.

* [Working with Scatter Analysis Graphs](#)
  Scatter analysis graphs plot one value against another for the same member.

* [Working with Profit Curves](#)
  Profit curves are useful for profitability analysis.

* [Working with Key Performance Indicators](#)
  Key Performance Indicators (KPIs) are display tiles that show one value for one dimension.

* [Setting User Preferences](#)
  Use the Preferences menu option to set a variety of general preferences and to define a set of dimension members to use as defaults.

* [Working With Profitability and Cost Management Financial Reports](#)
  With Profitability and Cost Management, you can run basic financial reports from queries displayed in the Intelligence area.

About the Profitability and Cost Management Analytics Features

Profitability and Cost Management offers a variety of features for viewing sets of data, defined using analysis views and queries in charts and reports.

Service Administrators and Power Users can set up these tools for viewing by Users and Viewers.

View this video for an overview of the Profitability and Cost Management analytics features:

[Overview Video: Analytics Features in Profitability and Cost Management Cloud](#)

To display the analytics features, listed in [Table 1](#), click **Intelligence**, , on the Profitability and Cost Management Home page.

Table 12-1   Profitability and Cost Management Analytics Features

Icon	Name	Description	Link
	Dashboards	Create or view charts of values and trends for selected dimensions	Working with Dashboards
	Intelligence	Create or generate analysis views, scatter analysis graphs, profit curve charts, allocation trace charts, queries, and key performance indicators (KPIs):	Table 2
	Reports	Define or generate tables of query results	Working With Profitability and Cost Management Financial Reports
	Academy	Overview and tutorial content about Profitability and Cost Management	

> ⓘ **Note**
>
> Academy content is available in a number of places and doesn't relate only to analytics.

The **Intelligence** icon, , accesses the following features (Table 2).

Table 12-2   Profitability and Cost Management Intelligence Analytics Features

Tab	Description	Link
, Analysis Views	Analysis views provide a way to locate and save sets of data drawn from the database cube for the application.	Working with Analysis Views
, Scatter Analysis Graph	Scatter analysis graphs plot one value against another for the same member.	Working with Scatter Analysis Graphs

Table 12-2   (Cont.) Profitability and Cost Management Intelligence Analytics Features

Tab	Description	Link
, Profit Curves	Profit curves are useful for profitability analysis. A population dimension, such as Customers or Products, displays along the x-axis in descending order by profit yields.	Working with Profit Curves
, Trace Allocations	You begin an allocation trace by selecting a POV and model view to define a focal node to display allocations that contribute to the selected dimension of the focal node.	About Tracing Allocations
, Queries	Service Administrators and others with sufficient security provisioning can define queries to gather data for management reporting, segmented profitability analysis, rule analysis, input data verification. You can run queries from the **Intelligence** screen.	Running Queries from the Intelligence Panel

Table 12-2   (Cont.) Profitability and Cost Management Intelligence Analytics Features

Tab	Description	Link
⚟, Key Performance Indicators	Key Performance Indicators (KPIs) are display tiles that show one value for one dimension. For example, you might show net income for a customer for the previous quarter.	Working with Key Performance Indicators

Working with Analysis Views

Similar to queries, analysis views provide a way to locate and save sets of data drawn from the database cube for the current application.

You can specify dimensions and members to view. Once created, analysis views are displayed in a selection list. You can use them as basic data reports, as the basis for dashboards, and to build profit curve charts. You can also export their data to Microsoft Excel for further processing.

You can run analysis views unless they contain restricted data. With appropriate security provisioning, you also can create and edit analysis views.
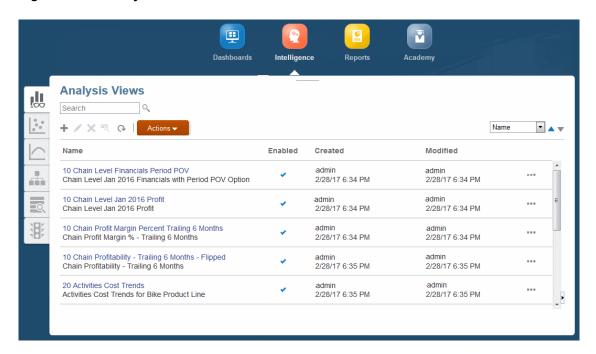
To run, create, or edit an analysis view, click **Intelligence**, 🧠, and then ⏚.

Figure 12-1   Analysis Views Screen

As shown in Analysis View Screen, the **Analysis Views** screen contains a list of analysis views and space for optional descriptions. A check in the **Enabled** column indicates that an analysis view is ready for use.

The **Analysis Views** screen contains the following controls: **Create**, **Edit**, **Delete**, **Inspect**, and **Refresh**. The name of each displays when you point to it. For icons and descriptions, see Common Feature Controls.

The **Actions** menu offers two options:

- **Copy** -- Saves the selected view with a different name.

- **Diagnose** -- Displays the underlying query and performance information for you to view and save as a file.

> ⓘ **Note**
>
> The control functionality and **Actions** menu options are also available through the **Actions** button, ⋯. You can also choose to add the selected analysis view to the **Favorites** list on the **Home** page.

Related Topics

- Creating and Editing Analysis Views

- Generating Analysis View Results

Creating and Editing Analysis Views

To create a new analysis view:

1. Display the **Analysis Views** screen.

2. Click **Create**, ➕.
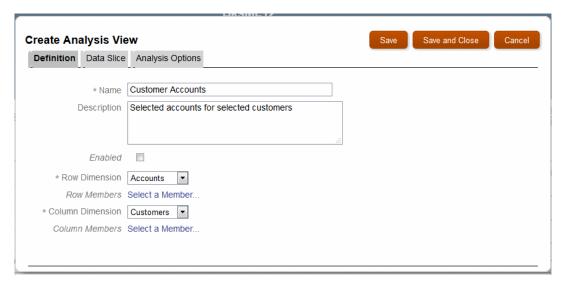
> ⓘ **Note**
>
> You can access this option only if your security provisioning allows it.

3. In the **Create Analysis View** screen, enter a name for the analysis view and an optional description.

4. Select a **Row Dimension**, for example **Customers**, and then select a **Column Dimension**, for example **Accounts** .

Figure 12-2   Create Analysis View Screen

5. Click **Select a Member** to select specific row or column dimension members:

   • Select to any level of detail, for example Net Income, then Income From Operations, and then Gross Profit.

   • Select **Member Function** to use a default dimension member or select a formula to reference one or more members relative to the current selection.

   Optionally, click f_x to use a Selection Function.
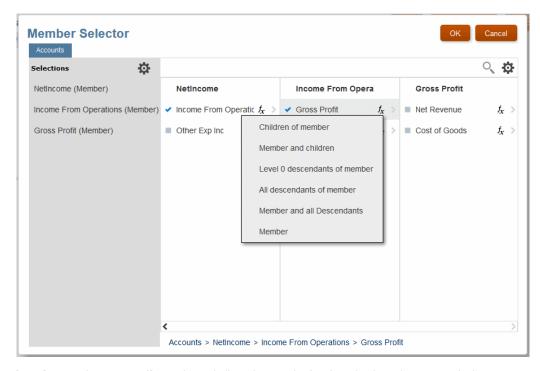
Figure 12-3   Member Selector with Selection Function Options

6. **Optional:** Use the **Data Slice** tab to define the analysis view further, for example by including **Products** and selecting **Bikes**, but not **Accessories**.

> ⓘ **Note**
>
> If you don't specify a data slice, all dimensions that aren't rows or columns are used at the top level.

7. **Optional:** Use the **Analysis Options** tab to add more detail to the definition, especially concerning what displays on dashboards:

    • You can select one or more **Point of View Bar Dimensions** for user input, such as **Year** or **Period**, or any other dimensions available for that analysis view.

    Users can customize member selection with the POV bar.

    • You can specify whether to use **Generations** or **Levels** for member ancestors, how many generations or levels to show for the row dimension, which row dimension attributes to use, what level of decimal precision to use, and whether or not to use aliases, if present.

    Row dimension member's ancestors are displayed as additional columns in the view.

    • You can select from the following **Row Sort Order** and **Column Sort Order** settings to determine the order of rows and columns in the analysis view:

        – **Outline** -- Their order within the database outline

        – **Alpha Ascending** -- In alphabetical order from A to Z

        – **Alpha Descending** -- In reverse alphabetical order from Z to A

    You can sort rows and columns in different orders. This feature can be helpful when using analysis views as simplified reports.

8. When the definition is complete, select **Enabled** on the **Definition** tab, and then select **Save** or **Save and Close** to add the new analysis view to the list.

To edit an existing analysis view, click ⚙ at the end of the row. The **Edit Analysis View** screen is displayed. You can edit and save the definition following the previous steps used to create it.

You can also use ⚙ to **Copy** an analysis view.

Select **Diagnose** in the ⚙ menu to display an overview of queries and other structural elements created by the definition. This diagnostic data can help you understand the analysis view and edit it if results are not as expected.

Related Topics

* [Working with Analysis Views](#)
  Similar to queries, analysis views provide a way to locate and save sets of data drawn from the database cube for the current application.

Using Member Functions

You can use Member Functions to select the member defined for that dimension in **Preferences** ([Setting User Preferences](#)), or you can use a formula that references a member relative to the current one. The following figure shows the **Member Function** list for the **Period** dimension.
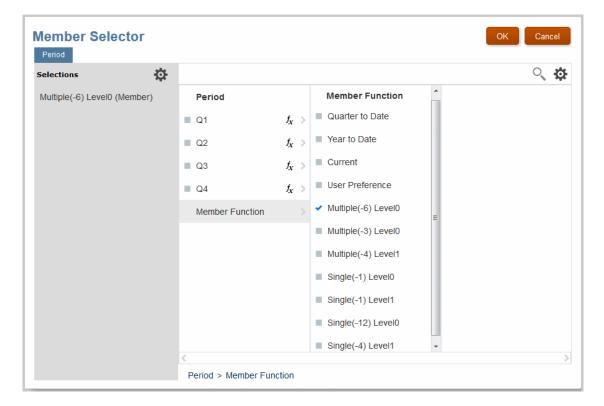
Figure 12-4   Member Functions for the Period Dimension

In the previous figure, **Quarter to Date** and **Year to Date**, and **Current** are self-explanatory and based on the date selected for this purpose. To set **Current** dates, see [Editing an Application's Description and Default Dimension Settings](#).

The **Single...** options select one member at the indicated level, counting back the indicated number from the current member at that level. For example, **Single(-1) Level 0** provides data for June if the current month is July. **Single(-1) Level1** provides data for Q2 if the current month is July, since July is in the third calendar quarter.

The **Multiple...** options select all members in the indicated range, counting back from the current member at that level. For example, Multiple(-6) Level 0 retrieves trailing six months data (for February through July, if the current month is July).

Generating Analysis View Results
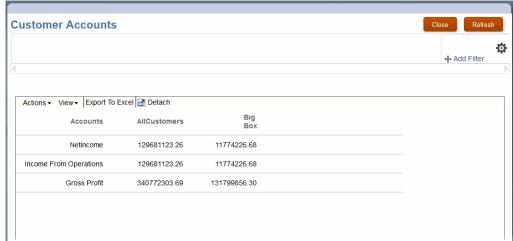
Analysis views are similar to queries. With access to underlying data, you can run an analysis view to create a table of results for the selected view definition. Then, you can use the table to confirm or troubleshoot the definition, or you can use it for further analysis in Microsoft Excel or other applications with compatible formats.

To generate analysis view results:

1. Display the **Analysis Views** screen (see the following figure).

2. Click **Refresh**, , and then click the **Name** of an analysis view.

Figure 12-5   Analysis View Results Table

In this case, the table of results shows net income, income from operations, and gross profit for all customers and a set of customers categorized as Big Box.

With appropriate security provisioning, you can use the buttons and menus to perform the following operations in this table:

- Drag the right edge of each column to change the column width (or use the **Actions** menu).

- Click each heading to sort the table.

- Use the **Actions** menu to change the font size.

- Use the **View** menu to hide and show columns and change column order.

- If a Point of View bar displays above the results table, you can click the link below a label to select a member for that dimension to refine the results.

- Use ⚙ to list additional dimensions not included in the results.

- Use the **View** menu or the **Detach** button to move the table to a separate window and back to the main window.

- If a Point of View bar displays above the results table, you can click the link below a label to select a member for that dimension.

- Click the **Export...** button to export the table to Microsoft Excel.

You can also apply filters to the table to show only data that meets certain criteria. To apply filters:

1. Click **Add Filter**.

2. Select a dimension member.

3. Select a comparison operator.

4. Enter one or more values, depending on the selected operator.

5. Click **OK** to apply the filter.

You can create a filter for each member offered in the **Add Filter** list.

Related Topics

- [Working with Analysis Views](#)
  Similar to queries, analysis views provide a way to locate and save sets of data drawn from the database cube for the current application.
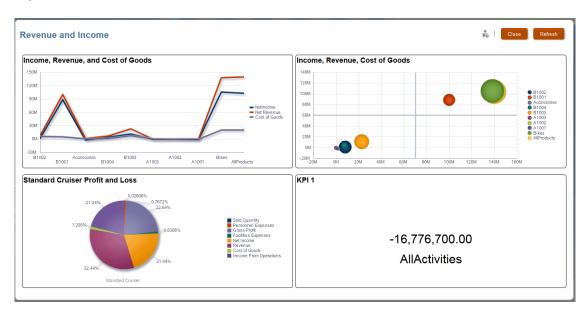
Working with Dashboards

Dashboards in Profitability and Cost Management are sets of small-scale charts that display values and trends.

They are based on analysis views ([Working with Analysis Views](#)). As with other analytics features, virtually all users can view dashboards after they are defined by administrators and others with sufficient security provisioning.

Figure 12-6   A Four-cell Dashboard
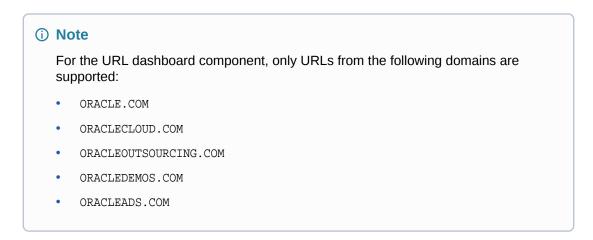
Related Topics

- [Creating Dashboards](#)
- [Displaying Dashboards](#)

Creating Dashboards

[Working with Dashboards](#) describes Profitability and Cost Management dashboards.

> ⓘ **Note**
>
> For the URL dashboard component, only URLs from the following domains are supported:
>
> - `ORACLE.COM`
> - `ORACLECLOUD.COM`
> - `ORACLEOUTSOURCING.COM`
> - `ORACLEDEMOS.COM`
> - `ORACLEADS.COM`
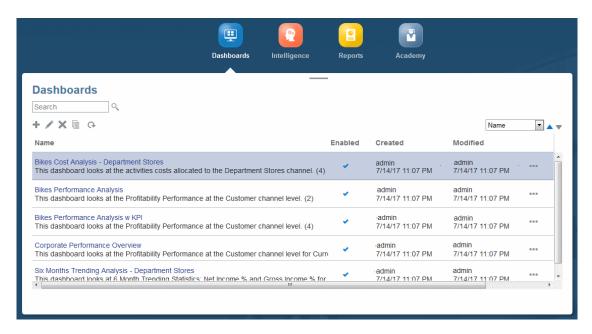
To display the **Dashboards** screen:

1. On the Profitability and Cost Management **Home** page, click **Dashboards**, .
2. Or, click **Dashboards** while viewing the **Intelligence** screen.

The **Dashboards** screen is displayed.

Figure 12-7   Dashboards Screen
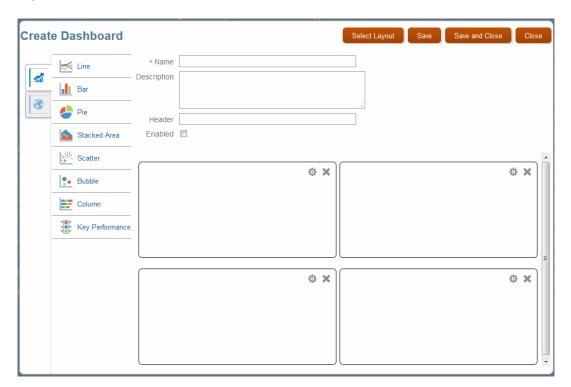
The Dashboards screen lists and describes existing dashboards. To display one, click its name.

The Dashboards screen contains controls for searching, sorting, and managing dashbaords (Common Feature Controls).

To create a dashboard:

1. On the **Dashboards** screen, click **Create**, ✚.

Figure 12-8   The Create Dashboard Screen

2. In the **Create Dashboard** screen, enter a name, an optional description, and a header label.

3. Click **Select Layout** to define the number of charts to display, from one to six. Click **OK** after selecting chart squares to include.

   Click squares to include them. The placement of the shaded squares determines whether rectangular layouts are vertical or horizontal.

4. Drag a chart type to each empty chart square in the **Create Dashboard** screen.

> ⓘ **Note**
>
> **Key Performance** inserts a Key Performance Indicator (Working with Key Performance Indicators).

5. Click the settings button, ⚙, in each chart square to select what to display there.

   • **Header**, a label that describes the chart contents

   • **Analysis View**, a defined analysis view that provides data for the chart

- • **Lines**, **Pie Slices**, and so on, analysis view members to include in the chart

6. **Optional:** Click the **URL** tab to enter a URL or custom text in any dashboard.

> ⓘ **Note**
>
> The target URL must support being loaded as a frame by an outside client.

7. When all the dashboard charts are defined, select **Enabled**, and then click **Save** or **Save and Close**.

   The new dashboard is listed and ready for use.

   To display a dashboard with the latest data, see Displaying Dashboards

   To edit an existing dashboard, see Editing Dashboards.

Editing Dashboards

Creating Dashboards describes how to display the Profitability and Cost Management **Dashboards** screen and create a dashboard.
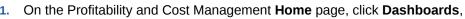
To edit a dashboard:

1. Select a dashboards in the **Dashboards** screen.

2. Click **Edit**, ✎.

3. In the **Edit Dashboard** screen, edit as you prefer. The procedure is essentially the same as described in Creating Dashboards.

4. When edits are complete, select **Enabled**, and then click **Save** or **Save and Close**.

   The edited dashboard is listed and ready for use.

   To display a dashboard with the latest data, see Displaying Dashboards

Displaying Dashboards

To display a set of dashboards with the latest data:

1. On the Profitability and Cost Management **Home** page, click **Dashboards**, ▦.

2. Click **Refresh**, ↻, and then click the **Name** of a dashboard to display those dashboard charts with the latest data.

Working with Scatter Analysis Graphs

Scatter analysis graphs plot one value against another for the same member.

When plotted for a number of members, you can identify trends and also determine if some members deviate strongly from those trends (Figure 1). The following graph of Profit against Revenue shows a strong linear correlation of these variables throughout the range of values.
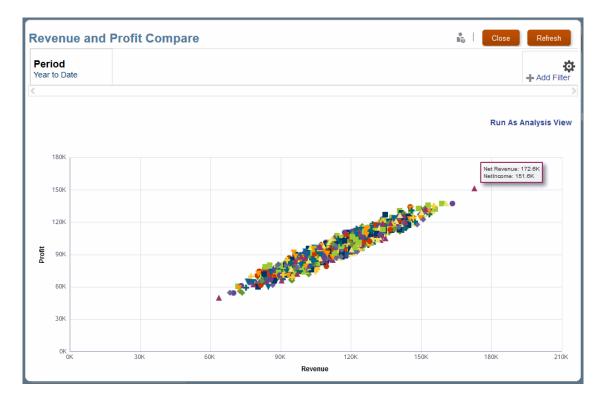
Figure 12-9   A Scatter Analysis Graph of Profit Against Revenue

For illustrations of a scatter analysis graph definition and results, see Scatter Analysis Graph Example.

Most users can generate scatter analysis graphs from existing definitions, but only administrators and others with sufficient security provisioning can define scatter analysis graphs.

Related Topics

•   Defining Scatter Analysis Graphs

•   Scatter Analysis Graph Example

•   Generating Scatter Analysis Graphs

Defining Scatter Analysis Graphs

Working with Scatter Analysis Graphs describes scatter analysis graphs.

To define a scatter analysis graph:

1.   On the Profitability and Cost Management **Home** page, click **Intelligence**,   , and then   .

    The **Scatter Analysis** screen is displayed, with controls for searching, sorting, and managing scatter analysis graphs (Common Feature Controls).

2.   On the **Scatter Analysis** screen, click **Create**,   .

> ⓘ **Note**
>
> You only see **Create** if your security provisioning enables you to use it.

3. In **Create Scatter Analysis**, enter the following:

   - A **Name** for the scatter analysis graph

   - An optional **Description**

   - The **Analysis View** to provide data for the graph ([Working with Analysis Views](#))

   - An **X Axis Member** to provide values to plot horizontally

   - An optional **X Axis Label** for the horizontal axis

   - A **Y Axis Member** to provide values to plot vertically

   - An optional **Y Axis Label** for the vertical axis

   > ✅ **Tip**
   >
   > For ease of use, create descriptive names and labels to help other users analyze the scatter analysis graph.

4. When selections are complete, select **Enabled**, and then **Save** or **Save and Close**.

To open an existing scatter analysis graph definition for editing, select it and then click **Edit**, ✏️ .

In the **Actions** menu, you can also **Copy** the selected definition, or select **Diagnose** to view a detailed analysis of its contents.

To permanently delete a scatter analysis graph definition, select it and click **Delete**, ✖️.

For an example of a scatter analysis graph definition and output, see [Scatter Analysis Graph Example](#)
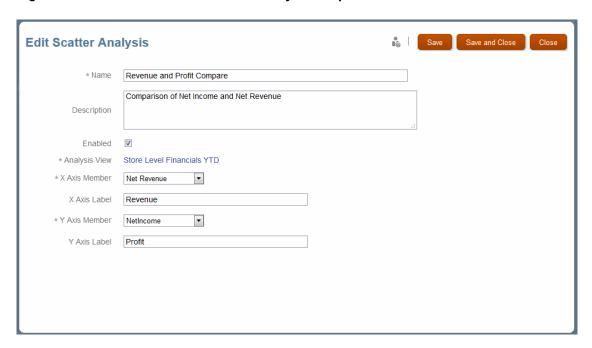
To generate a scatter analysis graph, see [Generating Scatter Analysis Graphs](#).

Scatter Analysis Graph Example

[Figure 1](#) shows the definition for a scatter analysis graph.

Figure 12-10   Definition for a Scatter Analysis Graph

When you select and run this definition and apply a filter, the scatter analysis graph displays as shown in Figure 2. All data is included, but values are filtered to show only profit-revenue pairs with net revenue greater than $120,000. The graph is quite linear, which suggests a strong relationship between net profit and net revenue. You can click **Run As Analysis View** to display the graphed data in a table for further analysis.

Figure 12-11   A Filtered Scatter Analysis Graph of Profit Against Revenue

Generating Scatter Analysis Graphs

Working with Scatter Analysis Graphs describes scatter analysis graphs.

To generate a scatter analysis graph:

1. On the **Home** page, click **Intelligence**, ![icon], and then ![icon].

2. In the **Scatter Analysis** screen, click **Refresh**, ![icon], and then click the **Name** of an enabled definition.

    Results display as shown in Scatter Analysis Graph Example.

    If dimensions display in the Point of View bar, you can click the link beneath a name and select a member. You can click **+** to select a member and then an operator and value or value range to restrict values for that member in the graph. Click ![icon] to further control the display.

Working with Profit Curves

Profit curves are useful for profitability analysis.

For example, a population dimension, such as Customers or Products, displays along the x-axis in descending order by profit yields.

With customers, the most profitable customer is at the far left and the least profitable at the far right. The y-axis shows cumulative values for the account dimension, such as Profit. The most profitable customer's profit is the first y plot. The second y plot is the second customer's profit added to the first, and so on.

The first part of the curve is the steepest and shows the largest gains in profit. As less profitable customers are added to the curve, it flattens. If profitability goes negative for the least profitable customers, the curve moves downward.

Figure 12-12   Profit Curve of Net Income for All Products

You can click **Category Analysis** to show the amount contributed by each member of the selected category.
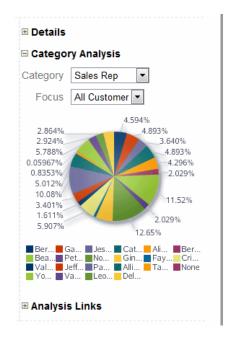
Figure 12-13   Profit Curve Category Analysis

Click **Analysis Links**, and then **Run As Analysis View** to run the underlying analysis view.

As with other Profitability and Cost Management analytics features, virtually all users can generate and view profit curves, but only administrators and others with sufficient security provisioning can define them.

Related Topics

• [Defining Profit Curves](#)

• [Generating Profit Curves](#)

Defining Profit Curves

[Working with Profit Curves](#) describes profit curves. For an example of a definition and results, see [Profit Curve Example](#).
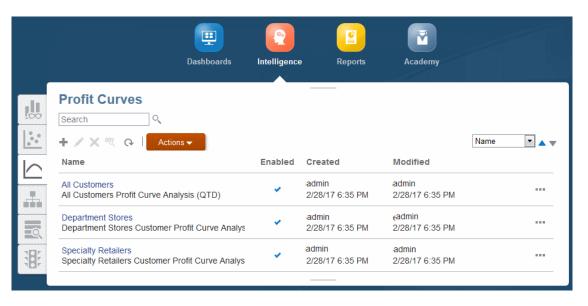
To display the Profit Curves screen:

1. On the Profitability and Cost Management **Home** page, click **Intelligence**, .

2. Click .

Figure 12-14   Profit Curves Screen

The **Profit Curves** screen contains the following controls: **Create**, **Edit**, **Delete**, **Inspect**, and **Refresh**. The name of each displays when you point to it. You can also **Search** entered text and **Sort** selected columns. For control descriptions, see [Common Feature Controls](#).

The **Actions** menu offers two options:

• **Copy** -- Saves the selected graph with a different name.

• **Diagnose** -- Displays underlying queries and performance information for you to view and save as a file.

> **ⓘ Note**
>
> The control functionality and **Actions** menu options are also available through the **Actions** button, ⋯. You can also choose to add the selected profit curve to the **Favorites** list on the **Home** page.

To define a profit curve:

1. On the **Home** page, click **Intelligence**, 🔲, and then ⌒.
2. In the **Profit Curves** screen, click **Create**, ✚.

> **ⓘ Note**
>
> You only see the **Create** option if your security provisioning enables you to use it.

3. In **Create Profit Curve**, enter the following:
   - A **Name** for the profit curve
   - An optional **Description**
   - The **Analysis View** to provide data for the graph ([Working with Analysis Views](#))
   - A **Measure Member**, a member of the analysis view column dimension; its value is accumulated and plotted on the y-axis

     The row dimension of the analysis view supplies the member plotted on the x-axis. For example, if the measure member is Net Profit and the x-axis member is Customer, then the first symbol at the left shows where the Net Profit value of the most profitable customer falls on the y-axis, the next symbol shows where the Net Profit value of the most profitable customer added to the next most profitable customer falls on the chart, the third symbol shows the Net Profit sum of the first three most profitable customers, and so on.
   - An optional **X Axis Label** for the horizontal axis
   - An optional **Y Axis Label** for the vertical axis, usually Profit, Revenue, or similar

> **✅ Tip**
>
> For greatest ease of use, create descriptive names and labels to help other users analyze the profit curve.

4. When selections are complete, select **Enabled**, and then **Save** or **Save and Close**.

To edit an existing profit curve definition, select its row in the **Profit Curves** screen, click **Edit**, ✏, and follow the previous steps.
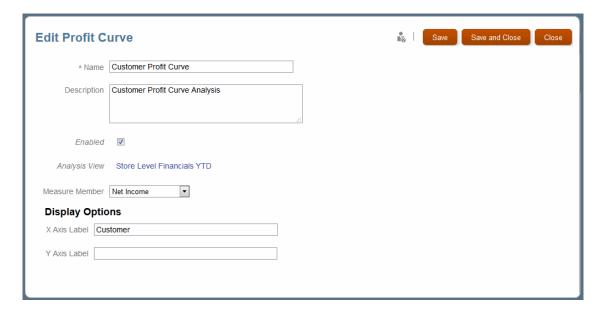
To permanently delete a profit curve definition, select it and click **Delete**, ✖.

Profit Curve Example

The following figure shows the definition for a profit curve.

Figure 12-15   Definition for a Profit Curve

When you select and run this definition, the profit curve displays as shown in Figure 1. Some customers contribute negatively so the Potential Profit is greater than the Actual Profit.

Click ⚙ to further define the display. If attributes or member generations were included in the underlying analysis view, you can click **Category Analysis** to select an analysis category and narrow the focus interactively to show only a portion of the category. If you click **Analysis Link** and then **Run As Analysis View**, the graphed data opens in a table for further analysis.

Generating Profit Curves

Working with Profit Curves describes profit curves.

To generate a profit curve:

1.	On the **Home** page, click **Intelligence**, 🧠, and then ⌒.

2.	Click **Refresh**, ↻, and then click the **Name** of an enabled definition..

Results display as shown in Figure 1. You can do the following to further define the curve:

•	If dimensions display in the Point of View bar, you can click the link below a name and select a member.

•	You can click **+** to select a member and then an operator and value or value range to restrict values for that member in the graph.

•	You can click ⚙ to view a list of other dimensions in the data application.

Working with Key Performance Indicators
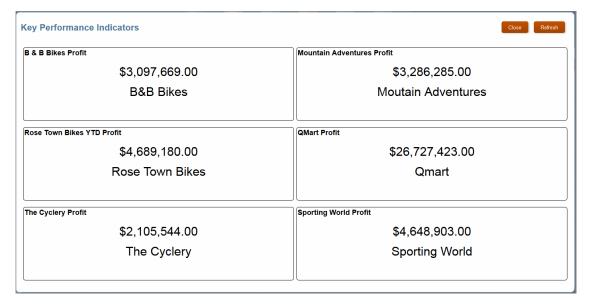
Key Performance Indicators (KPIs) are display tiles that show one value for one dimension.

For example, you might show net income for a customer for the previous quarter. The measured dimension, such as Customers, is called the population dimension. Once a value is

retrieved for a member of the population dimension, that value can be treated in a number of ways (ranked, averaged, summed, and so on). You can also assign it to a score range with a label, such as Fair or Poor. You can use member functions for comparison with previous single numbers (such as the previous quarter) or groups of members (the last three quarters). KPIs are most frequently displayed with dashboards (Working with Dashboards). The following figure shows a dashboard with six KPIs.

Figure 12-16   Key Performance Indicators in a Dashboard

Related Topics

- Defining Key Performance Indicators
- Generating Key Performance Indicators

Defining Key Performance Indicators

Working with Key Performance Indicators describes Key Performance Indicators.

To display the **Key Performance Indicators** screen:
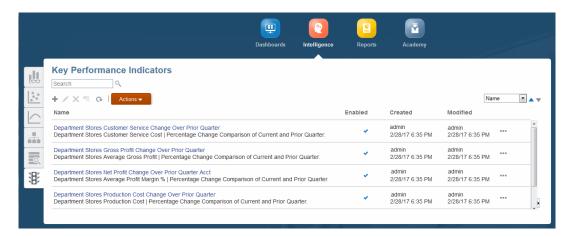
1. Click the **Intelligence** icon, .

2. Click the **Key Performance Indicator** tab, .

Figure 12-17   Key Performance Indicators Screen

The **Key Performance Indicators** screen contains the following controls: **Create**, **Edit**, **Delete**, **Inspect**, and **Refresh**. The name of each displays when you point to it. You can also **Search** entered text and **Sort** selected columns. For control descriptions, see Common Feature Controls.

The **Actions** menu offers two options:

- **Copy** -- Saves the selected graph with a different name.

- **Diagnose** -- Displays underlying queries and other information for you to view and save as a file.

> **ⓘ Note**
>
> The control functionality and **Actions** menu options are also available through the **Actions** button, ▪▪▪.

To create a KPI:

1. On the Profitability and Cost Management **Home** page, click ▢, and then click ▢.

2. In the Key Performance Indicators screen, Figure 1, click **Create**.

Figure 12-18　Create Key Performance Indicator

3. In the **Base Definition** tab, do the following:

   - Enter a **Name** for the KPI.

     A descriptive name is helpful, since it labels the KPI.

   - **Optional:** Enter a **Description**.

   - Select a **Population Dimension**, the thing that you want to measure.

     The **Population Dimension** choice determines what a key performance indicator can be ranked against.

   - Select a **Population Dimension Member** to measure.

     It can be a single member, such as one product or customer, or a group, such as a type of retail outlet.

   - Select a **Computation Option**, either **Average** or **Sum**.

     This determines the final presentation of the selected measure if a multiperiod function is used in the **Comparison** tab (so that multiple values would be returned).
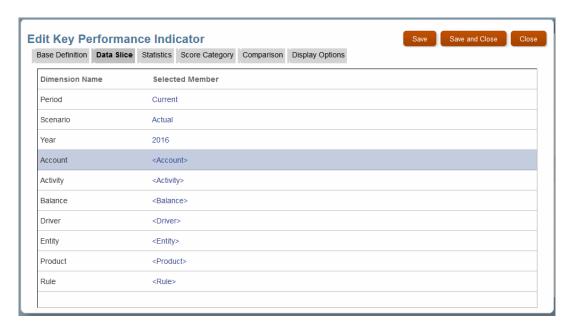
4. **Optional:** Click the **Data Slice** tab to further identify the data point to be used for the key performance indicator.

   You can drill down and select a member from any or all of the displayed dimensions. For example, suppose you select **Period**, **Q1**, **February**, Any further definition elements you apply will be based on February data for the selected Population Dimension Member.

   For example, the following figure shows that the first three dimensions have selections as shown and no other dimensions are selected.

Figure 12-19   Data Slice Tab with Three Dimensions Selected
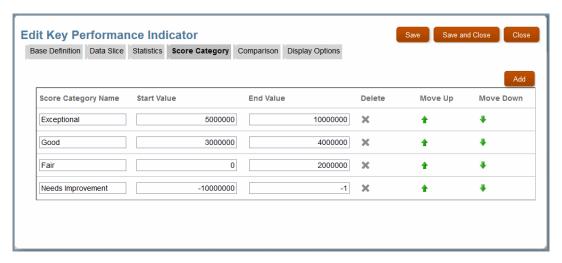
> **ⓘ Note**
>
> In this example, **Period** was set to **Current** using the **Member Function** option on the **Member Selector** screen. For more information about member functions, see Using Member Functions.

5. **Optional:** Click **Statistics** to further define the Population Dimension Member analysis.

   You can select from **Rank**, **Average**, **Median**, **Quartile**, or **None** to look at values divided by that statistic. The statistical value for the **Population Member** displays in the KPI tile.

6. **Optional:** Click **Score Category** to assign labels to ranges of values that can apply to the **Population Member**.

   Click **Add** to add a **Score Category Name**, a **Start Value**, and a higher **End Value** for the category. For example, the following figure shows possible profit levels for customers. If the selected customer had a loss, the KPI tile shows "Needs Improvement".

Figure 12-20   Example of Key Performance Indicator Category Definitions

7. **Optional:** Click **Comparison** to define a comparison of the current KPI value with one from another time period or year. You can choose a **Value Comparison** or **Percentage Comparison**.

   If you select one of the comparison options, controls for **Comparison Dimension** and **Comparison Member** open.

   • For **Comparison Dimension**, select **Period** or **Year**.

   • For **Comparison Member**, select a quarter (and month, if you prefer), or a year, depending on the **Comparison Dimension** selection.

   > ⓘ **Note**
   >
   > Alternatively, you can select **Member Function** to choose a period or year relative to the current one (Using Member Functions).

8. **Optional:** Click **Display Options** to use aliases for dimension names and to include a symbol or label before or after the value displayed in the KPI tile.

   For example, you could type **$** in the **Value Prefix** box or **€** in the **Value Suffix** box, depending on whether the value was in dollars or euros.

9. When settings are complete, click the Base Definition tab, and then select **Enabled**.

10. Select **Save and Close** to display the **Key Performance Indicators** screen with the new KPI.

11. To display the KPI, click its name in the **Key Performance Indicators** screen.

Generating Key Performance Indicators
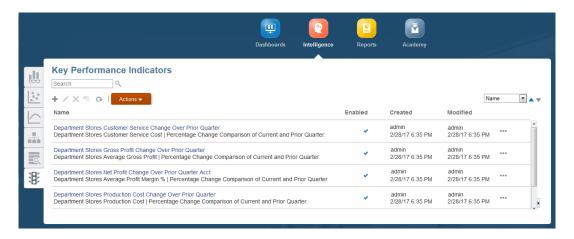
Working with Key Performance Indicators describes Key Performance Indicators.

To display a KPI:

1. Click the **Intelligence** icon, , and then click the **Key Performance Indicator** tab, .

Figure 12-21   Key Performance Indicators Screen

> ### ⓘ Note
>
> You only see controls that your security provisioning entitles you to use, so the screen you see may look slightly different from the figure.

2. Click the name of a KPI to display it.

Setting User Preferences

Use the Preferences menu option to set a variety of general preferences and to define a set of dimension members to use as defaults.

Then, when the **Member Selector** offers **User Preferences** as an option, you can apply all these defaults at once.

> ### ✅ Tip
>
> **Preferences** settings are used as defaults in setting up and running features available through the **Dashboards** and **Intelligence** icons.

To set user preferences:

1. Click the **Settings and Actions** menu, Administrator ▼ , in the Profitability and Cost Management screen header, and then select **Preferences**.

2. **Optional:** In the **General** page of the **Preferences** screen, select a photo to upload to your **Home page**. It can be in one of these file formats: .JPG, .PNG, or .GIF.

   The photo displays in the preview circle near the top of the page.

3. **Optional:** In the **Time Zone** list, select your time zone.

4. **Optional:** In the **Language** list, select the language for your user interface display.

5. **Optional:** Indicate whether to show dimension aliases in the user interface screens.

   You can use the **Default** alias table, or select another from the **Alias Table** list.

6. **Optional:** Set default dimensions and members:

   a. In the Preferences screen, click **Dimensions**.

   b. Click **Select a Member...** next to a dimension in the list.

   c. Use the Member Selector to select a dimension tab, drill down to the level you want, and then select a member to use as a default for that dimension.

   > ⓘ **Note**
   >
   > You can use the scroll arrows at the end of the dimension tabs to display hidden tabs, if present. Use 🔍 to locate specific dimension members.

   d. **Optional:** Click ⚙ next to **Selections** to remove one or all member selections in that window. Or, click ⚙ on the other side of the screen to filter selections, show dimension aliases, show the member count, or refresh the screen.

   e. When your selection is complete, either click **OK** to save all current settings in the Member Selector and close the window or click a tab for another dimension and select default members for it.

7. When all settings on both the General and Dimensions pages are complete, Click **Save**. Otherwise, click **Reset** to restore original settings or click **Close** to exit the Preferences screen without saving the current settings.

   > ⓘ **Note**
   >
   > After changing user preferences, log out of Profitability and Cost Management, and then log in again to activate the changes.

Working With Profitability and Cost Management Financial Reports

With Profitability and Cost Management, you can run basic financial reports from queries displayed in the Intelligence area.

These reports can be further refined using Financial Reporting.

Service Administrators, Power Users, and other users with sufficient security provisioning can also define these reports for Users and Viewers to run. Because reports defined using queries within Profitability and Cost Management are very basic and not formatted, it is recommended that you define reports directly within Financial Reporting.

Related Topics

- [Defining Financial Reports within Profitability and Cost Management](#)
- [Defining Financial Reports within Financial Reporting](#)
- [Running Financial Reports](#)

Defining Financial Reports within Profitability and Cost Management

Working With Profitability and Cost Management Financial Reports describes Profitability and Cost Management financial reports.

To define financial reports:

1. On the Profitability and Cost Management Home page, click **Reports**, .

2. Click **Create**;, .

3. In **Create Reports**, do the following:

   • Enter a descriptive **Report Name**.

   • **Optional:** Enter a **Report Description**, highly recommended for understanding report contents.

   • Select a query to provide data for the report.

   > ⓘ **Note**

   Click the link to select a query. You can use any query that has at least one dimension assigned to Row, at least one dimension assigned to Column, and one and only one dimension assigned to POV.

4. Click **OK** to create the report and add it to the **Reports** list.

To run the report, select it in the **Reports** list and then click **Run** (Running Financial Reports.

Defining Financial Reports within Financial Reporting

For an overview of using financial reports within Profitability and Cost Management, see Working With Profitability and Cost Management Financial Reports.

This video shows how to define reports within Financial Reporting Web Studio:

Creating Reports with Financial Reporting Web Studio

To define financial reports within Financial Reporting or related products:

1. Click .

2. Click **Reporting Web Studio** to run the Financial Reporting web client.

3. Follow instructions in the Financial Reporting help to create and edit reports in the repository. This is the same repository mentioned in Running Financial Reports.

   For more detailed instructions, see the Financial Reporting documentation available in Oracle Learning Library for Profitability and Cost Management (Using Profitability and Cost Management Library.

> ⓘ **Note**
>
> To access the report repository directly, click ▤, and then select **Explore Repository** under **Reporting**.

> ✅ **Tip**
>
> You can hide reports within the report repository. To do this, display the repository as described in the previous note. Then, right click a report, select **Properties**, and then click **Advanced**. In the **Advanced Properties** screen, select **Hidden item**. To view hidden reports again, follow these steps and clear **Hidden item**.

Running Financial Reports

Working With Profitability and Cost Management Financial Reports describes Profitability and Cost Management financial reports.

> ⓘ **Note**
>
> Viewer and User roles do not by default have access to run Financial Reporting reports. The Administrator must grant permissions on the PCM application folder or on individual reports within that folder. Permissions can be granted to the seeded Viewer and User roles, to native groups that are assigned to them, or to individual users, using the Edit Permissions option in Explore Repository. Only then will users with the Viewer or User role privileges be able to see and run the Financial Reporting reports in Profitability and Cost Management.
>
> Data Grants are necessary for users with Viewer and User roles to see the data in the reports they run.

To run financial reports:

1. On the Profitability and Cost Management Home page, click **Reports**, ▦.

2. Select a report in the list.

3. Click **Refresh**, ↻, to access the latest report definition and data, and then click the **Actions** button, ⋯.

4. Select the report format: **Run as HTML** or **Run as PDF**.

The report displays as illustrated in the following figure. Note that this report includes formatting applied using Financial Reporting and is displayed in **PDF** format.

To close the report, close its tab in your browser.

Figure 12-22   A Financial Report

Bikes Corp Income Statement
Year | Scenario

	January	February	March
Revenue	44,215,382	44,873,888	44,771,069
Net Revenue	**44,215,382**	**44,873,888**	**44,771,069**
Gross Profit	**44,215,382**	**44,873,888**	**44,771,069**
Net Income	**44,215,382**	**44,873,888**	**44,771,069**
Gross Profit %	**100.00%**	**100.00%**	**100.00%**
Net Income %	**100.00%**	**100.00%**	**100.00%**

Aug 3, 2016 3:37:50 PM

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Managing Queries

Related Topics

- [Running Queries from the Intelligence Panel](#)
  Service Administrators and others with sufficient security provisioning can define queries to gather data for management reporting, segmented profitability analysis, rule analysis, input data verification, and more.

Related Topics

- [About Profitability and Cost Management Queries](#)
  You can use the Manage Queries task area to create and organize queries against an application database for a variety of purposes.

- [Creating Custom Queries in Applications](#)
  Several types of queries can help with various tasks.

- [Running Queries from the Administer and Manage Menus](#)
  The topics in this section describe several ways to run queries and generate results.

- [Running Queries from the Intelligence Panel](#)
  Service Administrators and others with sufficient security provisioning can define queries to gather data for management reporting, segmented profitability analysis, rule analysis, input data verification, and more.

- [Formatting Query Results in Smart View](#)
  Profitability and Cost Management displays results data within Smart View from the Rule Balancing screen, the Trace screen, and when running a query.

- [Editing and Deleting Custom Queries in Profitability and Cost Management Applications](#)
  Once you create custom queries, you can edit them.

About Profitability and Cost Management Queries

You can use the Manage Queries task area to create and organize queries against an application database for a variety of purposes.

You can use these queries for management reporting, segmented profitability analysis, rule analysis, input data verification, and more. You can find data of interest without having to research the rule definitions or understand the system dimensions that control how calculated and input data is stored.

Queries can be saved and reused. They also can be exported and imported using the lifecycle management features of Profitability and Cost Management.

You can launch some predefined query integrations from the **Rule Balancing** screen. The launch data points are represented as blue hyperlinks in the Rule Balancing table. You can drill down further on input or allocation data. For example, you could drill down into certain costs after a calculation runs, or to examine input data that was used in the same run.

If any dimensions or dimension members are renamed or deleted, the queries that reference those dimensions become invalid. The query validation screen validates all queries, and displays an error message for any invalid queries.

Only administrators or other users with sufficient security provisioning can create, edit, or delete queries. Most users can run existing queries from the **Intelligence** panel:

Creating Custom Queries in Applications

Several types of queries can help with various tasks.

Managing Queries describes Oracle Smart View for Office queries and how they can help with analysis and reporting.
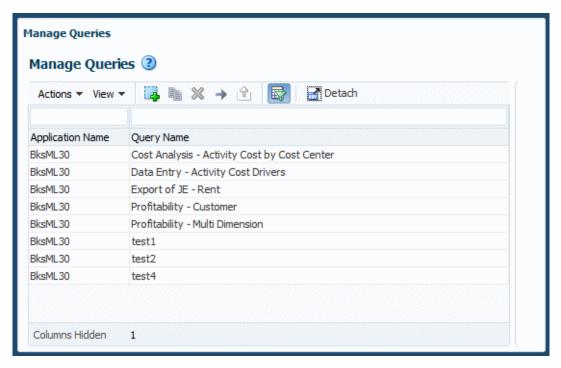
> ⓘ **Note**
>
> Before using queries, install Smart View . See "Available Clients" in *Getting Started Guide for Administrators*.

To create a query:

1. On the Home page, click ☰, and then click **Manage Queries**.

   The **Manage Queries** screen shows all queries available to you (Figure 1).

   Figure 13-1   Queries Screen

2. Click ⊞ or select **Actions**, and then **Create Query**.

   The **New Query** wizard opens.

3. In **Step 1 of 3: Description**, enter the following information for the new query and select **Next**:

   • Select the **Application** to use for the query from the drop-down list.

- Enter a **Query Name**.

4. In **Step 2 of 3: Program Context**, select whether to use a program context (global context, rule set context, or a rule) to define dimensions. For more information about contexts, see Working with Profitability and Cost Management Rules.

   - If you selected **Use Program Context?**, enter POV information and then click **Next**.

   - If you did not select **Use Program Context?**, click **Finish**, and then skip to step 6, later in this procedure.

5. If you select **Use Program Context?** and click **Next, Step 3 of 3: Dimensions** is displayed. Select which program context to use, and then select from any lists that are presented. When selections are complete, click **Finish**.

   Context options are the following:

   - **Use Global Context** -- Applies the default dimensions selected for all rule sets and rules in the application

   - **Use Rule Set Context** -- Applies default dimensions selected for the specified rule set (requires a rule set name)

   - **Use Rule** -- Applies rule-specific dimension information; requires a rule set name, a rule name, and a rule component (**Source**, **Destination**, **Driver**, or **Offset**)

   After you click **Finish**, the **Manage Queries** screen opens, including the new query.

   Select a query and complete the custom query definition as described in the following steps.

6. **Optional:** On the **Description** tab, do the following if appropriate:

   - Enter a **Description** for the query.

   - Select **Use Alias** to display any assigned aliases for all dimensions in the query.

   - Select **Suppress Missing** to set the data suppression option for the first query in Smart View, if required.

   > ⓘ **Note**
   >
   > If you select **Suppress Missing**, the Smart View option is set only for the first query run, not all queries. To set the option for subsequent drills into the data, set the option manually in Smart View.

7. Click **Dimensions** to review and edit dimension selections (Figure 2).

   By default, all dimensions in the application outline are displayed, except attribute dimensions.

   > ⓘ **Note**
   >
   > To display attribute dimensions, select **Include Attribute Dimensions** on the Dimensions tab.

Figure 13-2　Dimensions Tab of the Queries Definition Screen

8. A default **Position** is assigned to each dimension. To change the position, select a dimension, open the **Move To** list, and then select the new position: **Row**, **Column**, or **POV** (Smart View POV).

9. **Optional:** Use **Move Up** and **Move Down** to change the position of a highlighted dimension in the query within its **Position**.

10. **Optional:** Select a dimension and use the **Member Selection** area to add or delete members and change the column display.

    The list displays all dimension members, including alternate hierarchies and the NoMember member. Because there are no restrictions on level, alternate hierarchy, shared or base members, you can select any member.

11. When the query definition is complete, click 🖫 to save it.

To run, edit, or delete queries, see the following:

*   [Running Queries from the Administer and Manage Menus](#)

*   [Running Queries from the Intelligence Panel](#)

*   [Editing and Deleting Custom Queries in Profitability and Cost Management Applications](#)

Running Queries from the Administer and Manage Menus

The topics in this section describe several ways to run queries and generate results.

To use these features, you must be able to see **Manage Queries** and **Rule Balancing** when you click ▤.

Also see Running Queries from the Intelligence Panel.

Running Custom Queries in Profitability and Cost Management Applications

> ⓘ **Note**
>
> Creating Custom Queries in Applications describes how to create a query.
>
> Before you run a query, the database must be deployed and calculated.

You can run queries and display the results in Oracle Smart View for Office for further analysis, validation, and editing.

To run a query and launch it in Smart View from the Manage Queries screen:

1. On the Home page, click ▤, and then click **Manage Queries**.

   The **Manage Queries** screen is displayed, showing all queries your security provisioning enables you to view (Figure 1).

2. Select the query to run.

   Click ➔ or select **Actions**, and then **Execute Query**.

   Smart View opens with query results.

   Results have special formatting that makes them easier to interpret and present. For more information, see Formatting Query Results in Smart View.

Running Queries from the Profitability and Cost Management Rule Balancing Screen

You can launch some predefined query integrations from the **Rule Balancing** screen. The launch points are represented as hyperlinks defined on data in the screen. The hyperlinks in the columns represent values that were contributed through rule calculations.

You can click the hyperlinks to display data in Smart View. There, you can analyze calculations and determine whether areas may need to be repaired, and can explore details of any discrepancies or missing information.

To access queries through the Rule Balancing screen:

1. On the Home page, click ▤, and then click **Rule Balancing**.

2. For most complete results, calculate the application before running the query.

3. In the **Rule Balancing** screen, enter POV data, click ↩ , and then select a **Model View**.

4. In the Rule Balancing table, click a blue hyperlink (for example, for AllocationIn).

   When you click the hyperlink, results display in Smart View for further analysis and reporting.

Figure 13-3   Query Results in Smart View for Activities Allocations In

These results have special formatting that makes them easier to interpret and present. For more information, see Formatting Query Results in Smart View.

5. **Optional:** To modify the current POV, on the **POV_Linked_View** pane, click the down arrow beside any dimension listed for the current POV, and then click the ellipsis (...) to open a Member Selector. Select any members that you want to change, and then click **Refresh**, ↩, to activate the POV change.

6. Review the results of the query.

7. **Optional:** To view a specific intersection, use the Zoom commands on the Oracle Essbase tab to drill down or back up to a specific intersection.

Running Queries from the Intelligence Panel

Service Administrators and others with sufficient security provisioning can define queries to gather data for management reporting, segmented profitability analysis, rule analysis, input data verification, and more.

You can use queries to generate financial reports (Working With Profitability and Cost Management Financial Reports). You can also run queries from within the Intelligence panel to display retrieved data in the form of tables. You can then export the tables for printing or further analysis.

> **ⓘ Note**
>
> You can use Oracle Smart View for Office as a convenient way to view data from a query. Once the data is in Smart View, you can use it as the starting point for further *ad hoc* analysis.
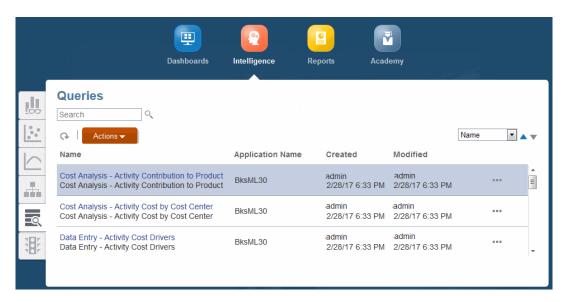
To run a query, install Oracle Smart View for Office as described in *Getting Started Guide for Administrators*, and then follow these steps:

1. On the Profitability and Cost Management **Home** page, click **Intelligence**, 🧠, and then
   📑.

Figure 13-4   Queries Screen, Intelligence Panel

2. Select a query.

   You can use the drop-down menu with column headings to sort the selected column in ascending or descending order.

   Click **Refresh**, ↻, and then click the query name to run the query. Connect to Smart View.

   Query results display in Smart View for printing and further analysis.

   Results have special formatting that makes them easier to interpret and present. For more information, see Formatting Query Results in Smart View.

3. **Optional:** Click **Actions**, and then **Export Query Results** to export the query in .csv format, to import into spreadsheets and other compatible applications.

   > **ⓘ Note**
   >
   > **Export Query Results** works for queries that return less than 5 million cells.

   You can enter a name for the file, indicate whether to export only Level 0 data (the lowest level data, such as Month for Period data), and specify a **Rounding Precision** level

(default is equal to two places). When you click **OK**, the file is sent to the File Explorer **Outbox**.

4. **Optional:** Click **Actions**, and then **Diagnose** to view the following information that can help you fine-tune the query for optimal performance:

   • The actual MDX query produced by the selected query definition

   • The query run time in seconds

   • The number of cells returned by the query

   In the Diagnose Query screen, you can click **Refresh** to view the latest information for the selected query. Click **Save to File** to save the information to **result.txt** in the File Explorer **Outbox**.

5. **Optional:** To save the selected query to Favorites on your home page, click **Settings**, ▪▪▪ and then click **Add as Favorite**. The query displays on the Home page. You can run it directly from there.

Related Topics

• [Managing Queries](#)

Formatting Query Results in Smart View

Profitability and Cost Management displays results data within Smart View from the Rule Balancing screen, the Trace screen, and when running a query.

By default, results display with special formatting that makes it easier to interpret and present data. For example, cell colors make it easier to tell editable cells from read-only cells.

Cell style options are global options, which apply to the entire current workbook, including any *new* worksheets added to the current workbook, and to any workbooks and worksheets that are created after global options are set. You can use the Oracle Smart View for Office **Options** settings to change these defaults. Because cells may belong to more than one type—a member cell can be both parent and child, for example—you can also set the order of precedence for how cell styles are applied.

To specify a style:

1. In Smart View, select **Options**.

2. On the **Cell Styles** page, select **PCM**.

3. Expand the list of available cell types.

   This enables you to view current cell type formatting.

4. Select a cell type.

5. Select **Properties** and specify a font, background color, or border.

   You can set only one style per cell type. For example, you may set a background style *or* a font style for Parent members, but you cannot set both a background *and* font style for Parent members.

6. To reorder precedence of cell styles, use the **Move Up** and **Move Down** buttons or drag and drop the cell styles.

7. Click **OK**. The setting takes effect after you refresh or perform a drill operation.

8. **Optional:** To revert cell styles or precedence to the default styles of Profitability and Cost Management, click **Reset**.

9. **Optional:** To set your selections on this page as default settings, click the arrow in the **OK** button, and then select **Default Styles**.

   For more information, see "Cell Styles" in *Working with Oracle Smart View for Office*.

Editing and Deleting Custom Queries in Profitability and Cost Management Applications

Once you create custom queries, you can edit them.

Creating Custom Queries in Applications describes how to create custom queries in Profitability and Cost Management applications.

To edit queries:

1. On the Home page, click ☰, and then click **Manage Queries**.

   The **Manage Queries** screen is displayed, showing all queries your security provisioning enables you to view (Figure 1).

2. Select a query and then use the **Description** and **Dimension** tabs of the **Queries Definition** area to refine the query (Creating Custom Queries in Applications).

3. When the query edits are complete, click 🖫 to save the query.

To delete queries from within Profitability and Cost Management applications:

1. Ensure that no other users need the query.

2. In the **Manage Queries** screen, select the query to delete and then click 🗙, or select **Actions**, and then **Delete Query**.

3. Respond **Y**es to any confirmation prompts.

   The selected query is removed from the list.

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Working with Profitability and Cost Management System Reports

Related Topics

- [Viewing and Printing Data in Profitability and Cost Management Applications](#)
  There are several ways to view and print data in Profitability and Cost Management applications.

- [Generating Profitability and Cost Management System Reports](#)
  Profitability and Cost Management has several types of system reports.

Viewing and Printing Data in Profitability and Cost Management Applications

There are several ways to view and print data in Profitability and Cost Management applications.

You can do the following:

- You can view internal data tables for validating the application; for example the **Rule Balancing** and **Model Validation** screens. To create reports from these tables, click a button and export them to a Microsoft Excel file ([Performing Validation Analysis for Profitability and Cost Management](#)).

- You can create and view financial reports from the **Intelligence** panel ([Working With Profitability and Cost Management Financial Reports](#)).

- You can generate preformatted system reports to see lists and descriptions of rule sets and rules or calculation statistics.

> ✅ **Tip**
>
> For a list of system reports, see [Generating Profitability and Cost Management System Reports](#).

Generating Profitability and Cost Management System Reports

Profitability and Cost Management has several types of system reports.

System reports show one of the following for an open application:

- **Program Documentation** -- Rule sets and rules plus rule definitions ([Program Documentation Report](#))

- **Dimension Statistics** -- Number of dimension members, number of level 0 members, and number of hierarchy levels for each dimension in the current application ([Dimension Statistics Report](#))

- **Rule Data Validation** -- Source and driver data targeted for each selected rule (Rule Data Validation Report

  > ⓘ **Note**
  >
  > If the intersection count is greater than 1000, only the first 100 intersections are displayed. If either **Source Data** or **Driver Data** is not selected, that portion of the report is blank.

- **Execution Statistics** -- Runtime statistics collected for the selected calculation job following the end of the job (Execution Statistics Report)

To generate a system report:

1. On the Home page, click ▤, and then click **System Reports**.

2. In the **System Reports** screen, select one of the following for each setting:

   - **Report Name** -- **Program Documentation**, **Dimension Statistics**, **Rule Data Validation**, or **Execution Statistics**

   - Output Type -- **PDF** (Adobe Portable Document Format), Microsoft **EXCEL**, Microsoft **WORD**, **XML**, or **HTML**

3. For **Program Documentation** and **Execution Statistics** reports, enter the following in the **Report Parameters** area:

   - **Program Documentation** -- POV information, whether to run a **Detail Report**, and whether to **Show Member Alias**es, if present, or member names

   - **Execution Statistics** -- **Job ID** for a successfully completed job from the **Job Library** screen

   For **Rule Data Validation** reports, enter the following:

   - POV information

   - Rule Set

   - Rule

   - Whether to generate a report of summary values only, or summary values and data

   - Whether to include source data, driver data, or both for the selected rule

   > ⓘ **Note**
   >
   > **Dimension Statistics** reports do not require Report Parameters information.

4. Click **Run** to generate and display the report.

Program Documentation Report

Program Documentation reports describe every rule and rule set. The resulting summary of calculation logic is useful for project documentation or as a tool for audiitors.

Figure 14-1   Example of a Program Documentation Report

Dimension Statistics Report

Dimension Statistics reports show the number of dimension members, number of level 0 members, and number of hierarchy levels for each dimension in the current application. Potential values are possible mathematical combinations that might not all be used.

Figure 14-2   Example of a Dimension Statistics Report

Rule Data Validation Report

Rule Data Validation reports help you verify that all required source and driver data is included for allocation rules and custom calculation rules in a Profitability and Cost Management application. The report shows all of the intersections for the selected rule's source and driver as well as any rule and driver data totals and number of total records. Alternatively, you can select just the total summary data.
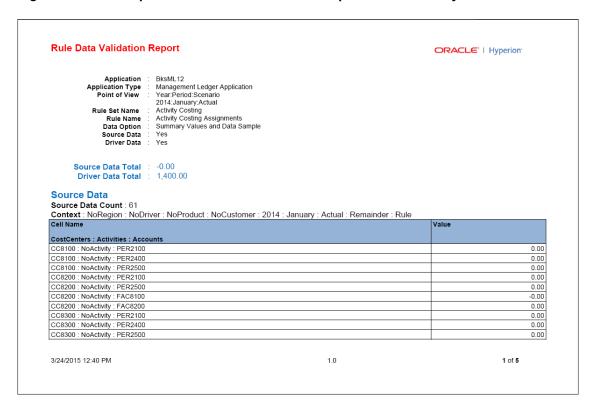
> ✅ **Tip**
>
> Running the detail on these reports can take a long time and produce a large report. Try displaying the summary as a first step.

If the intersection count is greater than 1000, only the first 100 intersections are displayed. If either Source Data or Driver Data is not selected, that portion of the report is blank.

Figure 1 shows total summary data for the selected rule's source and data intersections as well as data for each intersection. Cost Center accounts supply source data. Source data is missing here.
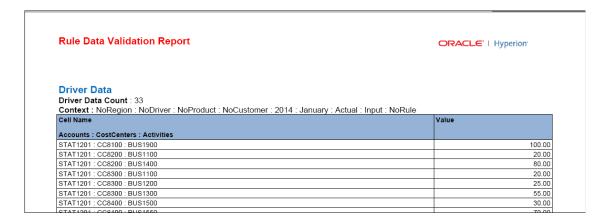
Figure 14-3   Example of a Rule Data Validation Report with Summary and Source Data

Figure 2 shows the format of driver data for the Rule Data Validation report. This report shows driver data intersection count and a list of driver intersections with values.
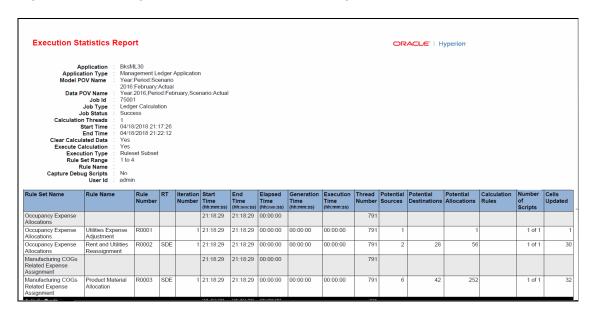
Figure 14-4   Part of a Rule Data Validation Report Showing Driver Data

Rule Data Validation Report   ORACLE® | Hyperion

Driver Data
Driver Data Count : 33
Context : NoRegion : NoDriver : NoProduct : NoCustomer : 2014 : January : Actual : Input : NoRule

Cell Name Accounts : CostCenters : Activities	Value
STAT1201 : CC8100 : BUS1900	100.00
STAT1201 : CC8200 : BUS1100	20.00
STAT1201 : CC8200 : BUS1400	80.00
STAT1201 : CC8300 : BUS1100	20.00
STAT1201 : CC8300 : BUS1200	25.00
STAT1201 : CC8300 : BUS1300	55.00
STAT1201 : CC8400 : BUS1500	30.00
STAT1201 : CC8400 : BUS1550	70.00

Execution Statistics Report

Execution Statistics reports show runtime statistics collected for the selected Ledger Calculation job type following the end of the job.

Figure 14-5   Example of an Execution Statistics Report

Execution Statistics Report   ORACLE® | Hyperion

Application : BksML30
Application Type : Management Ledger Application
Model POV Name : Year:Period:Scenario
2016:February:Actual
Data POV Name : Year:2016,Period:February,Scenario:Actual
Job Id : 75001
Job Type : Ledger Calculation
Job Status : Success
Calculation Threads : 1
Start Time : 04/18/2018 21:17:26
End Time : 04/18/2018 21:22:12
Clear Calculated Data : Yes
Execute Calculation : Yes
Execution Type : Ruleset Subset
Rule Set Range : 1 to 4
Rule Name :
Capture Debug Scripts : No
User Id : admin

Rule Set Name	Rule Name	Rule Number	RT	Iteration Number	Start Time (hh:mm:ss)	End Time (hh:mm:ss)	Elapsed Time (hh:mm:ss)	Generation Time (hh:mm:ss)	Execution Time (hh:mm:ss)	Thread Number	Potential Sources	Potential Destinations	Potential Allocations	Calculation Rules	Number of Scripts	Cells Updated
Occupancy Expense Allocations					21:18:29	21:18:29	00:00:00			791						
Occupancy Expense Allocations	Utilities Expense Adjustment	R0001		1	21:18:29	21:18:29	00:00:00	00:00:00	00:00:00	791	1		1		1 of 1	1
Occupancy Expense Allocations	Rent and Utilities Reassignment	R0002	SDE	1	21:18:29	21:18:29	00:00:00	00:00:00	00:00:00	791	2	28	56		1 of 1	30
Manufacturing COGs Related Expense Assignment					21:18:29	21:18:29	00:00:00			791						
Manufacturing COGs Related Expense Assignment	Product Material Allocation	R0003	SDE	1	21:18:29	21:18:29	00:00:00	00:00:00	00:00:00	791	6	42	252		1 of 1	32

> ### ⓘ Note
>
> The number of calculation subrules that ran for a rule compared with the total, is only displayed for allocation rules where the destination is the same as the source, but a different dimension is selected. Rules of this type are calculated with a different subrule for each distinct member combination of the matched source dimensions in the source member selection of the rule. For successful calculations, the number of subrules that ran is the same as the total number.

POV Statistics Report

The Point of View Statistics report provides a larger view of the entire application by listing all of the POVs and the details of the last calculation event for each.

Figure 14-6   Example of a POV Statistics Report

POV Statistics Report ORACLE®

Application Name : BksML30
Application Type : Management Ledger Application

Data POV Name	Model POV Name	Job Id	Start Time	Elapsed Time	Calculation Parameters	Cells Updated
2016:December:Actual	2016:January:Actual	59742	09/17/2021 10:14:55	00:05:33	Clear Data:Yes Execute Calculation:Yes Execution Type:All Rules Capture Debug Scripts:No Optimize for Reporting:Yes	1682876
2016:November:Actual	2016:January:Actual	59741	09/17/2021 10:14:55	00:06:00	Clear Data:Yes Execute Calculation:Yes Execution Type:All Rules Capture Debug Scripts:No Optimize for Reporting:Yes	1643277
2016:October:Actual	2016:January:Actual	59728	09/17/2021 10:14:56	00:05:33	Clear Data:Yes Execute Calculation:Yes Execution Type:All Rules Capture Debug Scripts:No Optimize for Reporting:Yes	1634722
2016:September:Actual	2016:January:Actual	59694	09/17/2021 10:14:54	00:05:38	Clear Data:Yes Execute Calculation:Yes Execution Type:All Rules Capture Debug Scripts:No Optimize for Reporting:Yes	1665546
2016:August:Actual	2016:January:Actual	59692	09/17/2021 10:14:54	00:05:02	Clear Data:Yes Execute Calculation:Yes Execution Type:All Rules Capture Debug Scripts:No Optimize for Reporting:Yes	1678637
2016:July:Actual	2016:January:Actual	59691	09/17/2021 10:14:54	00:05:38	Clear Data:Yes Execute Calculation:Yes Execution Type:All Rules	1677903

A

Creating and Managing Rules with the Designer Features

About Creating and Managing Rules

Rules determine how data, such as revenue and expenses, can be pulled from a source location in the database and assigned to an allocation destination according to an optional driver.

For more information about rules, see About Rules.

Currently, Profitability and Cost Management offers several ways to create and manage rules. For example, the topics in this appendix describe how to create and manage rules with the **Designer** in the **Models** cluster, while Creating and Managing Rules with the Manage Rules Screen describes how to create and manage rules with the **Navigator** menu. You can also use the Mass Edit screen in the **Application** cluster to perform some rule editing and management tasks. Its user interface is similar to the **Designer** and you can apply many of the instructions in this appendix to it if you substitute **Rules Outline** for **Waterfall Setup** and **Rules Express Editing** for **Mass Edit** in these instructions.

> ⓘ **Note**
>
> The following topics describe how to work with rules using the **Mass Edit** features. For descriptions of legacy procedures to create and manage rules using the **Navigator screens**, see About the Manage Rules Screen.

About the Designer Features

You can define allocation logic for applications with the **Designer** features.

For an overview of all of the Designer features, see Creating and Managing Rules with the Designer Features. You can use those features and associated screens to define rule set contexts (dimension defaults), define rule sets, and then define rules with their associated data sources, data destinations, optional drivers, and optional offsets. Most of those tasks are performed with the Waterfall Setup features.

Each group of rule sets and rules applies to a single POV. There are allocation rules and custom calculation rules. The same context and rule set information applies to both rule types.

> ⓘ **Note**
>
> You can also define global contexts for rules, optional defaults that specify default dimensions and members for all new rules. These are defined in the POV screen and are described in this sequence of tasks.

To display the **Designer** screen:
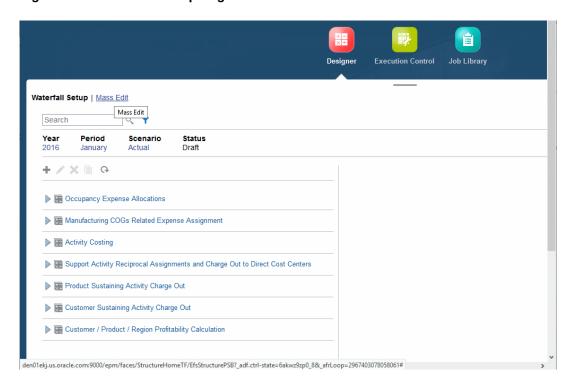
1. On the **Home** page of an application with data, click **Models**, .

2. Click **Designer**,

.

By default, the Designer screen opens to the Waterfall Setup page, similar to the following figure. The rules you define on this screen control the flow of funds through the financial system, similar to how water flows through a system of pipes or streams and rivers.

Figure A-1   Waterfall Setup Page

You can use the Waterfall Setup page to display calculation rules as a hierarchy. This enables you to:

• Create a rule outline

• Quickly find rules and rule sets within the hierarchy

• Quickly edit names, descriptions, and sequence values for rules and rule sets

To display rules as a hierarchy, display the Waterfall Setup page of the Designer screen, and then click arrows in front of rule set names to expand the rules within them.

As you select a rule set or rule, information about it displays in the right side of the page.

Most of the controls on this screen and the Mass Edit page are described in Common Feature Controls. For more information on the robust **Search** features, see Searching For and Filtering Rules (Rules Express Editing Page). You can inspect the detail of a rule by

highlighting it, and then clicking the **Inspect** icon ![Inspect icon]. The Inspect region stays open and refreshes as you highlight a different rule.

The Sort box, to the right above the rules list, offers the following sort orders: **Model Calculation Sequence** (the default), **Name**, **Rule Set Name**, and **Rule Sequence**.

> ⓘ **Note**
>
> **Model Calculation Sequence** is determined by the rule set order and then rule sequence within the rule set.

You can use the POV bar to select a set of rules for editing, for example:

Year	**Period**	**Scenario**	**Status**
2016	December	Actual	Draft

The **Actions** menu contains the following options:

- **Replace Member in Rules**, Replacing Members in Rules (Rules Express Editing Page)
- **Add Member to Rules**, Adding Members to Rules (Rules Express Editing Page)
- **Copy Rules to New Rule Set**, Copying Rules to a New Rule Set (Rules Express Editing Page)
- **Copy Rules to Point of View**, Copying Rules to a Different Point of View (Rules Express Editing Page)
- **Enable Rules**, **Disable Rules**, Enabling and Disabling Rules (Rules Express Editing Page)

See the following sections for information about defining and managing allocations in the **Rules Express Editing** screen and related screens.

Once you create rules, you can run calculations and view the allocation results. As you work, you can validate the rules (Using Model Views and Validating Applications).

Defining Global Contexts for Rules

Setting a global context enables you to define default definitions for dimensions and members that will be used in all rule definitions for the selected POV.

> ⓘ **Note**
>
> Define a global context before defining rule sets for the selected POV.

To define a global context for one POV of a Profitability and Cost Management application:

1. On the Home page, click **Models**, [icon], and then click **Execution Control**,

   [icon]

   .

2. In the **Execution Control** screen, select the POV for which you want to define a global context.

3. Click **Edit**, [icon], and then click **Global Context** to display the Global Context Definition area.

4. In the **Global Context Definition** box, click **Add Dimensions**.

5. The **Add Dimensions** menu displays all dimensions for the selected application that are not required system dimensions. Select one to apply to all rules as a default and then click **Select Member**.

6. Click the **Search** button,

   [icon]

   , then select one dimension to include in the global context default for that POV, select one or more members, and then click **OK**.

7. **Optional:** Repeat steps 5 and 6 for other dimensions.

8. When the global context definition is complete, click **OK** in the Edit Point of View window.

   The next step is to define and manage rule sets (Working with Rule Sets on the Designer Screen).

Working with Rule Sets on the Designer Screen

Rule sets enable users to group related rules together to better organize the definition of calculation logic, to execute similar rules together, and to simplify the definition of rules that share common dimension members.

Rule sets have a set order, determined by the rule set sequence number, and may also contain options specific to the execution of rules within that rule set. Rule sets apply to the specified POV.

Setting a **rule set context** enables you to define default definitions for dimensions that will be used in all rules included in the selected rule set for the selected POV.

The following topic describes how to create and manage rule sets and rule set contexts: Defining Rule Sets (Designer)

Defining Rule Sets (Designer)

Rule sets help organize allocation and calculation rules in several ways (Working with Rule Sets on the Designer Screen).

To define a rule set for one POV of an application:

1. On the **Home** page of an application with data, click **Models**, [icon].

2. Click **Designer**,

.

The **Designer** screen opens. If it's not already open, display the **Waterfall Setup** page.

3. Use the POV bar to select a year, period, scenario, and status of rule data for editing, then click

(Refresh), and then
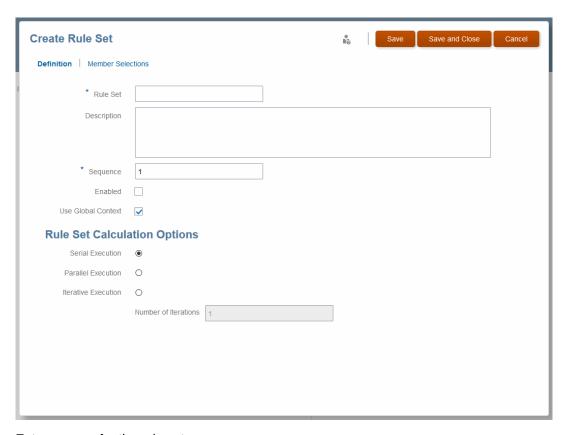
(Create).

4. Click **Rule Set**, not **Rule Sets**.

The Create Rule Set screen opens.

Figure A-2   Create Rule Set Screen

5. Enter a name for the rule set.

6. **Optional:** In the **Description** box, enter a description of the rule set. Using clear descriptions is highly recommended.

7. Enter a **Sequence** number to determine the order in which the rule set runs.

8. **Optional:** Select **Enabled** to indicate that the rule set is active when the calculation is performed.

9. Select one of the calculation options to indicate how the rule set calculations should run:

- **Serial Execution**, the default, runs all rules in the rule set sequentially, depending on their sequence number.

    - **Parallel Execution** runs rules with the same sequence number at the same time if computer hardware supports that.

    - **Iterative Execution** runs the rule set multiple times in sequence; **Number of Iterations** indicates the number of iterations to run.

        These settings support reciprocal allocations.

10. If selected, **Use Global Context** indicates that the global context should be applied to the current rule set, if one hs been defined.

11. **Optional:** Define a rule set context to apply dimension defaults to all rules in the rule set (Defining and Managing Rule Set Contexts).

12. When the rule set definition is complete, click **Save** or **Save and Close**.

- To define a rule set context and set defaults for all rules in the rule set, see Defining and Managing Rule Set Contexts.

- To edit and delete rule sets, see Managing Rule Sets.

Managing Rule Sets

Defining Rule Sets (Designer) describes how to create a rule set. You can also edit, delete, and copy rule sets.

To edit a rule set:

1. Open an application and display the **Waterfall Setup** screen (About the Designer Features).

2. Select a POV and a rule set, and then click ✏, (Edit).

3. On the **Edit Rule Set** screen, change any settings and then click **Save** or **Save and Close**.

    To edit dimensions and members, click Member Selections on the Edit Rule Set screen before you save the rule set.

To delete a rule set:

1. Follow the steps above to open the **Waterfall Setup** screen and select a rule set.

2. Click ✖.

3. Confirm that you want to delete the rule set and all its rules.

4. Click **Save** or **Save and Close**.

To copy a rule set:

1. Follow previous steps to open the **Waterfall Setup** screen and select a rule set.

2. Click 📄.

3. Enter a name for the new rule set. Optionally, select **Copy rules** to add existing rules to the new rule set. If selected, enter text in **Prefix for Rule Names** to use at the beginning of the new rule names that are created as part of the copy operation.

4. Click **OK**.

Defining and Managing Rule Set Contexts
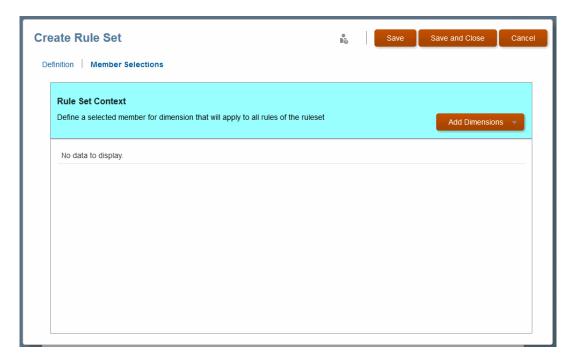
You can define a **rule set context** to specify default dimensions and members for use in all rules included in the selected rule set for the selected POV. It is convenient to do that while you are defining a rule set.

To define a rule set context for a new rule set:
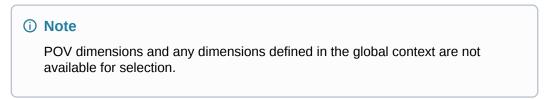
1. Define a rule set ([Defining Rule Sets (Designer)](#)).

2. On the Create Rule Set screen, click **Member Selections**.

   The Member Selections page opens.

Figure A-3   Create Rule Set Screen, Member Selections Page

3. Create the rule set context by selecting a default dimension and members to use for all rules in that rule set. Click **Add Dimension**.

4. Select one of the available dimensions from the list that applies to all rules in that rule set.

> ⓘ **Note**
>
> POV dimensions and any dimensions defined in the global context are not available for selection.

5. Next to the dimension name, click **Select Member**, and then 🔍 , (Search).

6. Select members at each level to drill down and select members to assign to all rules in the rule set.
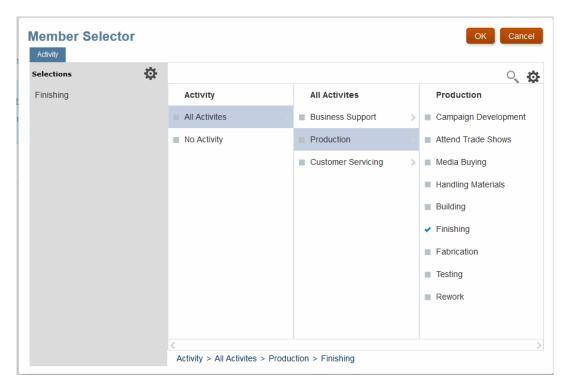
Figure A-4   Rule Set Context Member Selector

7. You can click ⚙ (Settings) to remove selections, or to filter, show alias, show member count, or refresh.

8. When the rule set context definition is complete, click **OK** and then click **Save** or **Save and Close**.

All selected dimension-member combinations will be applied to new rules created for the selected POV.

Managing Rule Set Contexts

You can add members to and delete them from dimensions already added to a rule set context.

To add members to a rule set context:

1. Follow the steps in Defining and Managing Rule Set Contexts to select a rule set and open the Edit Rule Set screen.

2. Click **Member Selections** and make dimension and member selections as described in Defining Rule Sets (Designer).

   Use ⚙ (Settings) in the first column to delete members from the context.

Creating Allocation Rules with the Designer Screen

Allocation rules form the core of a Profitability and Cost Management application. They determine how allocated data flows and how drivers determine allocation amounts.

To define allocation rules for one POV in an application using the Designer features:

1. On the **Home** page of an application with data, click **Models**, .

2. Click **Designer**,

.
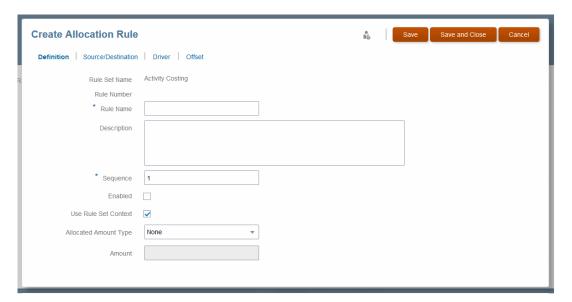
The **Designer** screen opens. Confirm that the **Waterfall Setup** page is open.

3. Enter POV data to select a year, period, and other relevant data. Then, click ↻ (Refresh).

4. Select a rule set, such as Activity Costing in the sample application.

5. Click ✚ (Create), and select **Allocation Rule**.

The Create Allocation Rule screen opens to the **Definition** page.

Figure A-5   The Definition Page of the Create Allocation Rule Screen

6. Enter a name for the rule.

7. **Optional:** In the **Description** box, enter a description of the rule.

8. Enter a **Sequence** number to determine the order in which the rule runs within the rule set.

   Rules with the same sequence number will run at the same time if parallel calculation is enabled for the rule set and the computer hardware supports it.

9. **Optional:** Select **Enabled** to indicate that the rule is active when the calculation is performed.

10. **Optional:** Select **Use Rule Set Context** to apply the rule set context, if one was defined.

    If a global context has been enabled for the application, it is also applied.

11. For **Allocated Amount Type**, indicate if the allocation amount should be interpreted as a percentage or currency, and then enter the amount.

12. When the rule set definition is complete, click **Save**.

> ✅ **Tip**
>
> The next step is to define a funding source and destination for the allocation rule (Defining a Source and Destination for Allocation Rules (Designer).

- To edit, delete, and copy rules, see Managing Existing Rules with the Designer Screen.
- To create a custom calculation rule, see Creating Custom Calculation Rules with the Designer Screen.

Defining a Source and Destination for Allocation Rules (Designer)
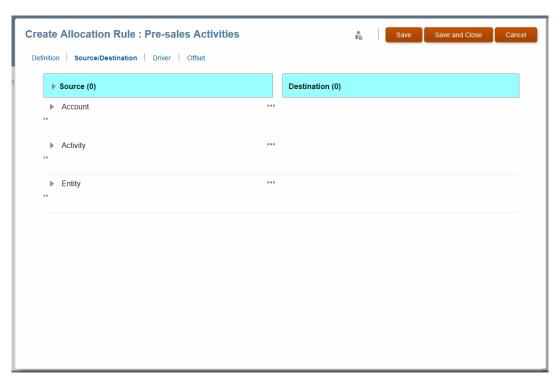
Creating Allocation Rules with the Designer Screen describes how to create and describe a new allocation rule. The next step is to define an allocation source, the dimensions with the expense or other data you are assigning to an allocation destination.

Defining a Source

To define the source from which the rule will retrieve data to allocate:

1. In the Create Allocation Rule screen for the new rule, click **Source/Destination** to open that page of the Create Allocation Rule screen.

Figure A-6   The Source/Destination Page of the Create Allocation Rule Screen

2. Dimensions associated with the rule are listed under **Source**. To view members, click the space below the dimension name and then click

🔍

(Search) in the **Add Member** box.

3. Select the dimension and members that hold the data to be allocated. If you select a parent member, all of its descendants are selected also.

> ⓘ **Note**
>
> You can click the group of dots next to a dimension to add more than one member to the source or to clear settings.

4. **Optional:** Click **...**, the **Options** button, to select one of the following:

   - **Add Multiple Members Source** -- allows you to enter the names of additional members to provide funds

   - **Calculation Segmentation** -- activates a way of calculating specific dimensions and levels to enhance scalability with very large models (for use if recommended by Oracle).

   - **Clear [source dimension] Selections** -- resets member selections for the selected source dimension

5. The next step is to enter a **Destination** for the allocated data.

Defining a Destination

Defining a Source describes how to enter the data source for an allocation. The next step is to define an allocation destination, the dimensions to receive the expense or other data you are pulling from the allocation source.

To define the destination where the rule puts data to be allocated, such as funds:

1. If you just defined an allocation source as described in Defining a Source, remain on the **Source/Destination** page of the page of the Create Allocation Rule screen.

2. Selected destination dimensions display in the **Destination** column. To view members, click the space in the row with the dimension name and then click

   🔍

   (Search) in the **Add Member** box.

3. Select the dimension and members to receive the data to be allocated. If you select a parent member, all of its descendants are selected also.

> ⓘ **Note**
>
> You can click the group of dots next to a dimension to add more than one member to the destination, set the destination to "same as source," or to clear settings.
>
> You can select from the **Same As Dimension** list to use a member of the same name in a different dimension.
>
> You can enter dimension-member combinations as text. This could be useful if you had them in a spreadsheet, for example. See Adding Dimension-Member Combinations by Pasting Text.

4. Click **Save** or **Save and Close**.

5. The next step, optional, is to enter a **Driver** for the allocated data (Defining a Driver for Allocation Rules.

Defining a Driver for Allocation Rules

Defining a Destination dcribes how to enter the data destination for an allocation. The next step is optional -- to define an allocation driver, the member where optional driver values are found.

> ⓘ **Note**
>
> Profitability and Cost Management assumes a focus on the destination. The dimension and member selection on the **Driver** page represents a change to the destination that defines where the driver is located.
>
> For example, if the allocation destination is the intersection of the Sales department and Salaries account, the Driver definition is the Headcount account member.

By default, data is allocated to the destination proportionally, using the ratio of the driver value for that member divided by the sum of all driver values. You can choose to allocate data evenly, which is the same as if the driver ratio was 1.

Typically, systems are set up so that one member from one dimension, usually the Accounts dimension, contains the statistical members associated with any intersection. Only one member can be selected for each dimension.
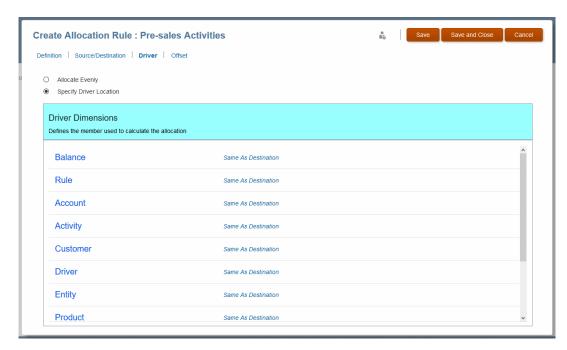
To define the driver for an allocation rule:

1. In a rule you are creating, click **Driver**.

   The Driver page opens.

Figure A-7   The Driver Page of the Create Allocation Rule Screen

2. Select whether data should be allocated by ratio (**Specify Driver Location**), the default, or allocated evenly (**Allocate Evenly**).

3. If you selected **Specify Driver Location**, select the dimension and member that holds the driver data, for example Headcount.

4. When the driver information is complete, click **Save** or **Save and Close**.

> ✅ **Tip**
>
> The next **optional** step is to enter an offset for the rule, the member to hold an increase to balance a corresponding decrease in the allocation source ([Defining an Allocation Offset for Allocation Rules](#)).

Defining an Allocation Offset for Allocation Rules

[Defining a Driver for Allocation Rules](#) describes how to select drivers that determine allocation amounts. The next step is to define an allocation offset location, the member to hold an increase to balance a corresponding decrease in the allocation source. This step is optional.

> ⓘ **Note**
>
> By default, offsets are written to the source but you can specify another location.

The offset location definition assumes a focus on the source with the option to select an alternate location. For example, suppose the allocation source is the Sales department intersecting the Salaries account. The default location for the offset is the intersection of Salaries and Sales. However, you can specify Outbound Allocations of the Sales department instead. By specifying that single change, you are instructing the system to write the offset entry at the source, except you are changing the target location so the offset is written to the intersection of Outbound Allocations and Sales dimension instead of the source.

To define the offset for an allocation rule:

1. In an allocation rule you are creating, click **Offset**.

Figure A-8   The Offset Page of the Allocation Create Allocation Rule Screen

2. Select whether offset data should be written to the Source intersection, or to an alternate location.

3. If you select **Post Offset to Alternate Location**, select the dimension and member to hold the offset data.

> ⓘ **Note**
>
> For all dimensions where a member selection is NOT made, the same member as the source is used. Enter members to show how the offset location should DIFFER from the source.

4. When the rule source information is complete, click **Save** or **Save and Close**.

To edit and delete rules, see Managing Existing Rules with the Designer Screen.

Creating Custom Calculation Rules with the Designer Screen

Allocation rules determine how allocated data flows and how drivers determine allocation amounts.

Creating Allocation Rules with the Designer Screen describes how to create allocation rules.

This section describes how to create custom calculation rules defined by formulas. Unlike allocation rules, custom calculation rules do not have a defined source and destination with options for defining a driver and accounting offset. Instead, custom calculation rules enable users to define calculations to be performed in a certain region of the database with results posted to a specific member. Custom calculation rules are used primarily for adjusting existing data to create a scenario, creating custom driver values for use in other allocation rules, or to accommodate reporting requirements. Other uses include clearing data from custom ranges, developing data sets, anonymizing data, and complex standard rate application.

Custom calculation rules have the following components that correspond to the pages in the **Create Allocation Rule** screen:

- **Definition** — Rule name and number, text description, and rule-level options (described later in this topic)

- **Target** — The target range in the database that the rule will affect.

  The **Target** contains the **Formula** — The member to which results of the calculation are written and the mathematical expression of the calculation.

Like allocation rules, custom calculation rules belong to rule sets, have sequence numbers, inherit contexts, can be activated or deactivated with the **Enabled** setting, and have the same rule set execution options (serial, parallel, iterative). Custom calculation rules can be copied and deleted in the same way as allocation rules (Managing Existing Rules with the Designer Screen).

To define custom calculation rules for one POV in an application:

1. Display the Designer screen as described in About the Designer Features.

2. Confirm that the **Waterfall Setup**. page is displayed.

3. In the **Waterfall Seetup** page, enter the year and period for a valid POV, and then click ↻ (Refresh).

4. Select a rule set to include the new rule by clicking within its row.

5. Click ➕ (Create), and then select **Custom Rule**,

   The Definition page of the Create Custom Rule screen opens.
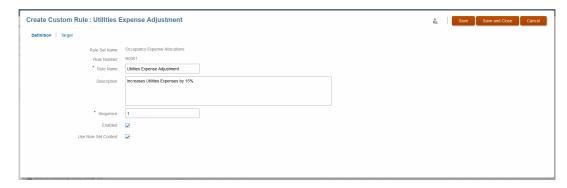
> ⓘ **Note**
>
> The following figure shows the screen filled out for a new custom rule titled Utilities Expense Adjustment.

Figure A-9   The Definition Page of the Create Custom Rule Screen

6. Enter a name for the rule.

7. **Optional:** In the **Description** box, enter a description of the rule set.

    In this example, the rule increases utilities expenses by 15%.

8. Enter a **Sequence** number to determine the order in which the rule runs within the rule set.

    Rules with the same sequence number will run at the same time if parallel calculation is enabled for the rule set and the computer hardware supports it.

9. **Optional:** Select **Enabled** to indicate that the rule is active when the calculation is performed.

10. If selected, **Use Rule Set Context** indicates that the rule set context is applied to the current rule, if one was defined.

    If a global context has been enabled for the rule set, it also is applied.

11. When the rule set definition is complete, click **Save**.

> ✔ **Tip**
>
> The next step is to define a calculation target for the rule (Defining a Target for Custom Calculation Rules).

To edit and delete rules, see Managing Existing Rules with the Designer Screen.

Defining a Target for Custom Calculation Rules

Creating Custom Calculation Rules with the Designer Screen describes how to complete the **Description** page for a custom calculation rule. The next step is to define a calculation target, the range of dimensions that are affected by the custom calculation rule.
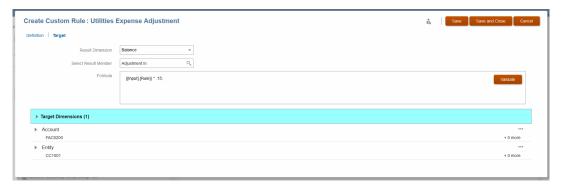
To define the target that the custom calculation rule will affect:

1. In an open custom calculation rule, click **Target**.

The **Target** page opens, shown here for an example rule titled Utilities Expense Adjustment.

Figure A-10   The Target Page of the Create Custom Rule Screen

2. Select the **Result Dimension**, used in the formula to specify the member to hold the result.

3. Select the **Target Dimensions**, the members that define the target range that will be affected by the custom calculation formula.

   Optional: You can filter the data as described in Filtering Dimension Members (Mass Edit Page).

4. Define a formula for the rule:.

   a. Enter the formula as a text string (see About Custom Calculation Rule Formula Syntax for format information).

      In this example, the formula looks at the intersection of the Rule and Input dimensions and multiplies it by 0.15, or 15%.

   b. Select **Validate** to determine if the formula is valid.

   > ⓘ **Note**
   >
   > Custom calculation rules are validated against the data cube. If you have recently added or changed dimensions or members, the custom calculation rules may not validate correctly until you have redeployed the cube to propagate the changes. For other validation procedures, see Using Model Views and Validating Applications.

5. When the formula is complete, click **Save** or **Save and Close**.

   To edit and delete rules, see Managing Existing Rules with the Designer Screen.

Managing Existing Rules with the Designer Screen

Managing existing rules with the Designer screen involves editing, copying, deleting, and performing other related tasks on existing rules using the Designer features

These basic editing procedures all assume that you select **Models**, and then **Designer** on the Home page. Then, you click Waterfall Setup and select a rule to edit. Finally, you perform one of these procedures:

- To edit a rule:

    1. Click 🖉 .

    2. Edit as you want, and then click **OK**.

- To delete a rule:

    1. Click ✖.

    2. Confirm that you want to delete the rule.

    3. Click **OK**.

- To copy a rule:

    1. Click 📋.

    2. Enter a name for the new rule.

    3. Click **OK**.

When edits are complete, save the changes.

Entering Text in the Dimension Member Editor

You can paste dimension-member combinations from Microsoft Excel into the Dimension Member Editor accessed from the Designer screen. This reduces the keystrokes needed to create new rules or modify existing rules. It is helpful for cases where users manually generate rules; for example, by using a spreadsheet or downloading dimension files through Dimension Management.

To access the Dimension Member Editor from the Designer screen:

1. On the Home page, select **Models,** and then **Designer**.

2. In **Waterfall Setup**, select a rule, and then click ➕ to create a new rule or 🖉 to edit an existing rule.

    - For allocation rules, select the **Source/Destination** tab, and then click ▪▪▪ next to either **Source** or **Destination** to access the Dimension Member Editor.

    - For custom rules, select the **Target** tab, and then click ▪▪▪ next to **Target Dimensions** to access the Dimension Member Editor.

3. In the **Dimension Member Editor**, copy and paste dimension-member combinations using the following format:

   "DimensionName", *"MemberName"*

   Use one row per member. You can include combinations for multiple dimensions in the same box. When entries are complete, click **OK**.

   If you try to input a dimension or member that does not exist or one that is not available for that tab, an error message is displayed.

4. Click **OK** to close the Dimension Member Editor.

Mass Edit Features for Rules

You can use the Mass Edit page of the Designer screen to create and manage models more efficiently.

The following topics explain available features:

- [About the Calculation Rules Screen](#)
- [Searching For and Filtering Rules (Rules Express Editing Page)](#)
- [Replacing Members in Rules (Rules Express Editing Page)](#)
- [Adding Members to Rules (Rules Express Editing Page)](#)
- [Copying Rules to a New Rule Set (Rules Express Editing Page)](#)
- [Copying Rules to a Different Point of View (Rules Express Editing Page)](#)
- [Enabling and Disabling Rules (Rules Express Editing Page)](#)

About the Designer Mass Edit Features

You can define allocation logic for applications with the **Designer** features.

For an overview of all of the Designer features, see [Creating and Managing Rules with the Designer Features](#). You can use those features and associated screens to define rule set contexts (dimension defaults), define rule sets, and then define rules with their associated data sources, data destinations, optional drivers, and optional offsets. Most of those tasks are performed with the Waterfall Setup features.

The following topics focus on the Mass Edit features of the Designer screen.

To display the Mass Edit page of the Designer screen:

1. On the **Home** page of an application with data, click **Models**, .

2. Click **Designer**,

   .
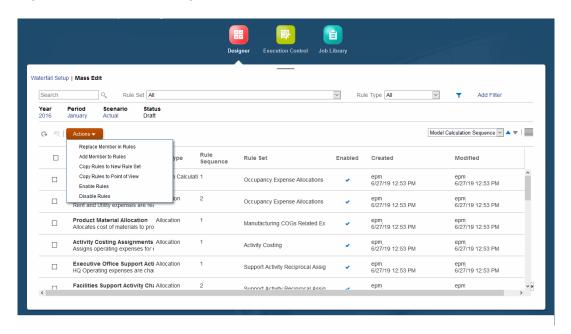
3. Click Mass Edit to display that page.

   The **Mass Edit** page opens, similar to the following figure.

Figure A-11   Mass Edit Page

Most of the controls on this page are described in Common Feature Controls. For more information on the robust **Search** features, see Searching For and Filtering Rules (Rules Express Editing Page).

The Sort box offers the following sort orders: **Model Calculation Sequence** (the default), **Name**, **Rule Set Name**, and **Rule Sequence**. It is located in the upper-right of the page.

> ⓘ **Note**
>
> **Model Calculation Sequence** is determined by the rule set order and then rule sequence within the rule set.

You can use the POV bar to select a set of rules for editing, for example:

Year	Period	Scenario	Status
2016	December	Actual	Draft

The **Actions** menu contains the following options:

- **Replace Member in Rules**, Replacing Members in Rules (Rules Express Editing Page)

- **Add Member to Rules**, Adding Members to Rules (Rules Express Editing Page)

- **Copy Rules to New Rule Set**, Copying Rules to a New Rule Set (Rules Express Editing Page)

- **Copy Rules to Point of View**, Copying Rules to a Different Point of View (Rules Express Editing Page)

- **Enable Rules**, **Disable Rules**, Enabling and Disabling Rules (Rules Express Editing Page)

This is similar to functionality available in the Rules Express Editing screen, accessed through the **Application** cluster.

Searching For and Filtering Rules (Mass Edit Page)

You can use the searching and filtering features of the Mass Edit page to explore rules for a particular point of view (POV) or to display rules for further operations such as replacing or adding members.

Follow these guidelines for searching and filtering:

1. Display the Mass Edit page of the **Designer** screen.

2. Select a POV for the search.

3. **Optional:** Enter all or part of a rule name into the **Search** control (Search).

   You can use asterisks (*) as wildcards in searches. They can represent part of a name, or the operator "and" when used between two strings. For example, `My*` matches to `Myname` and `Myother`. `My*name` matches to `Myname` and `Mynewname`.

4. **Optional:** Use the Sort box to arrange the selected rules. You can sort by **Model Calculation Sequence** (the default), **Name**, **Rule Set Name**, and **Rule Sequence**. Click an arrow to sort in ascending or descending order. You can click **Refresh**, ↻, at any time to display the latest results.

5. **Optional:** Click **Add Filter** to create a custom filter to further limit the rule names available for selection.

   In the **Custom Filter** screen, enter a target **Dimension**, the page to search for the target member (**Source**, **Destination**, or **Target**), the filter **Operator** (**Contains** or **Does Not Contain**), and the target **Find Member** . For the **Find Member**, you can start typing the name to display matches, or click the Search symbol to display a list for selection. When you click **OK**, only marching names display in the **Mass Edit** screen. You can add additional filters if you want.

6. Click the box at the beginning of a rule row to select that rule for further actions, such as the following:

   - [Replacing Members in Rules (Mass Edit Page)](#)
   - [Adding Members to Rules (Mass Edit Page)](#)
   - [Copying Rules to a New Rule Set (Mass Edit Page)](#)
   - [Copying Rules to a Different Point of View (Mass Edit Page)](#)
   - [Enabling and Disabling Rules (Mass Edit Page)](#)

Filtering Dimension Members (Mass Edit Page)

> ⓘ **Note**
>
> Filtering selects a subset of dimension members to work with. Members not selected by the filter are not available for that operation. Filtering is useful only if the filtered member is a parent. The filter is based on its descendants.

Follow these steps to filter members in the **Member Selector** for the **Create Allocation Rule** screen and similar locations:

1. Wherever you can add a dimension member, At the bottom of the **Rule Definition** area, click ⚙ at the right side of the screen and select **Filter**.

2. Indicate whether the filter is at Level 0 or not.

3. In the Member Selector, select dimensions and members to drill down and indicate what you want to match.

4. To edit a filter, follow these steps and select different dimension members. Change the filter as you want and then click **OK**.

5. To delete a filter, clear the member selections and click **OK**.

Replacing Members in Rules (Mass Edit Page)

You can use the Replace command in the Rules Mass Edit screen to replace dimension members in one or more rules with one action.

> ⓘ **Note**
>
> This action cannot be undone. Oracle recommends that you use the Migration tools for backups if necessary.

To replace members in rules:

1. Display the Designer screen, open to the Mass Edit page ([About the Designer Features](#)).

2. Search to find rules to modify ([Searching For and Filtering Rules (Rules Express Editing Page)](#)).

3. Check the box before the names of target rules to select them, or select all.

4. Click **Actions**, and then **Replace Member in Rules**.

5. Complete the Find and Replace information:

   - Select a **Dimension**.

   - Select a **Find Member**, the member to locate and replace in the selected rules.

     Attribute dimensions are included in the **Dimension** list. If a dimension has a user-defined attribute (UDA) associated with it, then there is a UDA entry for it, such as Product -- UDA or Customer -- UDA. Selected attribute and UDA members are replaced in the filters defined for each selected rule.

   - **Optional:** Select one or more **Replace With Member**(s), the member or members to appear in the selected rules after replacement.

     > ⓘ **Note**
     >
     > If a **Replace With Member** isn't selected, the **Find Member** will be removed instead of replaced.

   - Select a **Target Rule Tab**, the page where the selected **Find Member** will be replaced.

> ⓘ **Note**
>
> For the Rule dimension, you can select only from the **Driver Basis** tab.

- **Optional:** Check **Preserve Filters** to keep any filters on the target member when it is replaced.
- **Optional:** Add a **Job Comment** to display in the Job Library list.

6. When settings are complete, click **Run**.

Adding Members to Rules (Mass Edit Page)

You can use the **Add** command on the Mass Edit page to add dimension members to one or more rules with one action.

> ⓘ **Note**
>
> This action cannot be undone. Oracle recommends that you use the Migration tools for backups if necessary.

To add members to rules:

1. Display the Mass Edit page of the Designer screen ([About the Designer Features](#)).
2. Search to find rules to modify ([Searching For and Filtering Rules (Rules Express Editing Page)](#)).
3. Check the box before the names of target rules to select them, or select all.
4. Click **Actions**, and then **Add Member to Rules**.
5. Complete the Express Add Member information:
   - Select a **Dimension** to receive the member.
   - Select a **Member** to add to the selected dimension.

   > ⓘ **Note**
   >
   > – You can add POV members only to the Driver page.
   >
   > – You can add multiple members to the rule by typing member names, selecting them from the list which is displayed as you type, or pressing enter on an exact match; or you can click the search icon to use the member selector. Selected members are displayed in the box above the search box. You can also select members for deletion from the list so they are not added to the rule.

   - Select a **Rule Tab**, the page where the selected **Member** will be added.

> ⓘ **Note**
>
> If you select **Offset** as the page, there can be only one member, at Level 0.
> The **Driver** page also can have only one member, at any level.

6. When settings are complete, click **Run**.

Copying Rules to a New Rule Set (Mass Edit Page)

This feature is useful if you need to include identical or similar rules in several rule sets. You can copy the rule with a slightly different name and leave it unchanged or modify it. You can select multiple rules to copy at one time to the same rule set.

To copy successfully, the rules must meet these requirements:

- If a rule uses a rule set context and the rule has dimension members that conflict with members in the target rule set, the rule is not copied. An error displays in the Job log.

- If a rule with the same name as the selected rule already exists in the target rule set, the rule is copied with a prefix or suffix added to the name to make it unique.

> ⓘ **Note**
>
> This action cannot be undone. Oracle recommends that you use the Migration tools for backups if necessary.

To copy a rule to a new rule set:

1. Display the Mass Edit page of the Designer screen (About the Designer Features).

2. Search to find rules to modify (Searching For and Filtering Rules (Rules Express Editing Page).

3. Check the box before the names of target rules to select them, or select all.

4. Click **Actions**, and then **Copy Rules to New Rule Set**.

5. Select the **New Rule Set** to receive the copy or copies.

6. **Optional:**Enter a **Job Comment** to display in the Job log.

7. When settings are complete, click **Run**.

Copying Rules to a Different Point of View (Mass Edit Page)

This feature is useful if you need to include identical or similar rules in several POVs. You can copy the rule with a slightly different name and leave it unchanged or modify it. You can select multiple rules to copy at one time to the same existing POV.

To copy successfully, the rules and POVs must meet these requirements:

- The selected POV must be valid and different from the POV selected on the Mass Edit page.

- If a rule uses a rule set context or global context and the rule has dimension members that conflict with context members in the target POV, the rule is not copied. An error displays in the Job log.

- If a rule with the same name as the selected rule already exists in the target POV, you can select **Overwrite** to overwrite the old rule with the copy. Otherwise, the rule is copied with a prefix or suffix added to the name to make it unique.

> ⓘ **Note**
>
> This action cannot be undone. Oracle recommends that you use the Migration tools for backups if necessary.

To copy a rule to a new rule set:

1. Display the Mass Edit page of the Designer screen (About the Designer Features).

2. Search to find rules to modify (Searching For and Filtering Rules (Rules Express Editing Page).

3. Check the box before the names of target rules to select them, or select all.

4. Click **Actions**, and then **Copy Rules to Point of View**.

5. Select a **Year**, **Period**, and **Scenario** for the POV to receive the copy or copies.

6. **Optional:**Select **Overwrite** to overwrite rules with the same name with the copy. Leave unchecked to copy with a unique name.

7. **Optional:**Enter a **Job Comment** to display in the Job log.

8. When settings are complete, click **Run**.

Enabling and Disabling Rules (Mass Edit Page)

You can use the Mass Edit page of the Designer screen to disable and enable multiple rules in a POV at one time. This feature is useful if you need to modify a number of rules at once, or make other changes that would affect the validity of enabled rules.

> ⓘ **Note**
>
> This action cannot be undone. Oracle recommends that you use the Migration tools for backups if necessary.

To enable or disable multiple rules in a POV:

1. Display the Mass Edit screen (About the Designer Features).

2. Enter POV data and then Search to find rules to modify (Searching For and Filtering Rules (Rules Express Editing Page).

3. Check the box before the names of target rules to select them, or select all.

4. Click **Actions**, and then **Enable Rules** or **Disable Rules**.

5. Confirm the selected action. You can check the Job Library for status information.

B

Essbase Naming Conventions

Essbase Naming Conventions for Attribute Calculations Dimension

The members that Oracle Essbase creates in the attribute calculations dimension (Sum, Count, Min, Max, and Avg) are not considered reserved words because you can change these names in the attribute calculations dimension and then use the standard name in an attribute or standard dimension.

If the outline is tagged as a unique member outline, avoid using Sum, Count, Min, Max, and Avg as member names. For example, if you use Max in a standard dimension and then create an attribute dimension, in which Essbase creates the Max member in the attribute calculations dimension, Essbase detects a duplicate name and returns the following error message:

```
"Analytic Server Error(1060115): Attribute Calculations dimension/member name
already used."
```

If the outline is tagged as a duplicate member outline, and an attribute dimension (and, therefore, the attribute calculations dimension) exists before you use Sum, Count, Min, Max, and Avg as a base member, Essbase allows the duplicate name. However, if, you use Sum, Count, Min, Max, and Avg as a base member before creating an attribute dimension, the duplicate name is not allowed.

Generated Calculation Script Naming Conventions

When Profitability and Cost Management generates Oracle Essbase scripts, the scripts are automatically named using specific conventions.

The driver calculation scripts and allocation calculation scripts are combined into one script per stage. The script name is created in the following format:

```
String scriptName = scriptSuffix + POV-identifier + Stage Order Number + "_" +
index;
```

*   The script Suffix is based on the type of script. The following table displays the list of suffixes.

Table B-1   Calculation Script Suffixes

Script Type	Cost Layer	Revenue Layer
Interstage Allocation	"a"	"r"
Intrastage Allocation	"i"	"t"

*   The POV-identifier is based on the POV ID and may include up to three digits. A script is generated and identified for every POV.

- The Stage Order Number is the order number for the Source stage (for example, 1, 2, 3, and so on).
- If multiple scripts are generated because of script splitting, the _index displays the numerical sequence of the scripts for the same type, POV, Stage, and Layer, starting with 001, 002, and so on.

Sample Script Names

- `a3682001.csc` represents a calculation script for POV identifier 368, Source Stage 2, and the cost layer.
- `t4533002.csc` represents an intrastage calculation script for POV identifier 453, Source Stage 3, and the revenue layer.

Essbase Naming Restrictions for Applications and Databases

When creating names for applications and databases, enter the name in the case in which you want the word displayed. The application or database name is created exactly as it is entered. If you enter the name as all capital letters (for instance, NEWAPP), Oracle Essbase does not automatically convert it to upper- and lowercase (for instance, Newapp).

> ⓘ **Note**
>
> This list provides a partial set of the restrictions. For the complete list of all restrictions, Oracle recommends that you refer to the *Administering Oracle Analytics Cloud - Essbase:*

The following naming restrictions apply when you are naming applications and databases:

- For non-Unicode-mode application and database names, use no more than 8 bytes.
- For Unicode-mode application and database names, use no more than 30 characters.
- Do not use spaces in the name.
- Do not use the following special characters in the name:
    - * asterisks
    - + plus signs
    - \ backslashes
    - ? question marks
    - [] brackets
    - " double quotation marks
    - : colons
    - ; semicolons
    - , commas
    - ' single quotation marks
    - = equal signs
    - / slashes
    - > greater than signs

- – tabs

- – < less than signs

- – | vertical bars

- – . periods

- For aggregate storage databases only, do not use the following words as application or database names:

  - – DEFAULT

  - – LOG

  - – METADATA

  - – TEMP

Essbase Naming Restrictions for Dimensions, Members, and Aliases

When defining dimensional outlines, there are restricted characters that may not be used for naming dimensions, members and aliases.

A list of the most common restricted characters is provided in this section; however, Oracle strongly suggests that you review the Essbase naming conventions described in the *Administering Oracle Analytics Cloud - Essbase* for a complete list.

> ⓘ **Note**
>
> This list provides a partial set of the restrictions. For the complete list of all restrictions, Oracle recommends that you refer to the *Administering Oracle Analytics Cloud - Essbase*:

When naming dimensions, members and aliases, follow these naming restrictions:

- For non-Unicode-mode dimensions, members, or aliases, use no more than 80 bytes.

- For Unicode-mode dimensions, members, or aliases, use no more than 80 characters.

- Distinguish between upper and lower case only if case-sensitivity is enabled. To enable case-sensitivity, see" Setting Outline Properties" in the *Administering Oracle Analytics Cloud - Essbase*.

- Do not use HTML tags in dimension or member names, aliases, and descriptions.

- Do not use quotation marks, periods, brackets, backslashes, or tabs within a name.

> ⚠ **Caution**
>
> Brackets are permitted but not recommended in block storage outlines because they cause errors when converting to aggregate storage outlines.

- Duplicate member names or aliases are not allowed within the same dimension.

- Do not use the following characters to begin dimension or member names:

- at signs (@)
- backslashes (\)
- brackets ([])
- commas (,)
- dashes
- hyphens
- minus signs (-)
- equal signs (=)
- less than signs (<)
- parentheses ( )
- periods (.)
- plus signs (+)
- single quotation marks (')
- quotation marks (")
- underscores (_)
- vertical bars(|)

- Do not place spaces at the beginning or end of names, as they are ignored by Oracle Essbase.

- Do not use forward slashes in member names.

- For time periods in custom calendars, do not use spaces in prefixes.

- Do not use the following items as dimension or member names.

  - Calculation script commands, operators or keywords. For a complete list of commands, see the *Administering Oracle Analytics Cloud - Essbase*.

  - Report writer commands

  - Function names and function arguments

  - If Dynamic Time Series is enabled, do not use History, Year, Season, Period, Quarter, Month, Week, or Day.

  - Names of other dimensions and members (unless the member is shared), generation names, level names, and aliases in the database.

- Do not use the following words:

  - ALL
  - AND
  - ASSIGN
  - AVERAGE
  - CALC
  - CALCMBR
  - COPYFORWARD
  - CROSSDIM
  - CURMBRNAME

- DIM

- DIMNAME

- DIV

- DYNAMIC

- EMPTYPARM

- EQ

- EQOP

- EXCEPT

- EXP

- EXPERROR

- FLOAT

- FUNCTION

- GE

- GEN

- GENRANGE

- GROUP

- GT

- ID

- IDERROR

- INTEGER

- LE

- LEVELRANGE

- LOOPBLOCK

- LOOPPARMS

- LT

- MBR

- MBRNAME

- MBRONLY

- MINUS

- MISSING

- MUL

- MULOP

- NE

- NON

- NONINPUT

- NOT

- OR

- PAREN

- – PARENPARM
- – PERCENT
- – PLUS
- – RELOP
- – SET
- – SKIPBOTH
- – SKIPMISSING
- – SKIPNONE
- – SKIPZERO
- – TO
- – TOLOCALRATE
- – TRAILMISSING
- – TRAILSUM
- – UMINUS
- – UPPER
- – VARORXMBR
- – XMBRONLY
- – $$UNIVERSE$$
- – #MISSING
- – #MI

Essbase Naming Conventions for Attribute Calculations Dimension

The members that Oracle Essbase creates in the attribute calculations dimension (Sum, Count, Min, Max, and Avg) are not considered reserved words because you can change these names in the attribute calculations dimension and then use the standard name in an attribute or standard dimension.

If the outline is tagged as a unique member outline, avoid using Sum, Count, Min, Max, and Avg as member names. For example, if you use Max in a standard dimension and then create an attribute dimension, in which Essbase creates the Max member in the attribute calculations dimension, Essbase detects a duplicate name and returns the following error message:

```
"Analytic Server Error(1060115): Attribute Calculations dimension/member name
already used."
```

If the outline is tagged as a duplicate member outline, and an attribute dimension (and, therefore, the attribute calculations dimension) exists before you use Sum, Count, Min, Max, and Avg as a base member, Essbase allows the duplicate name. However, if, you use Sum, Count, Min, Max, and Avg as a base member before creating an attribute dimension, the duplicate name is not allowed.

C

Business Scenario: Streamlining Your General Ledger with Profitability and Cost Management

The topics in this section explain how to simplify an overburdened general ledger and streamline your financial close with Profitability and Cost Management

Topics include the following:

- [The Issue](#)

- [The Solution, and How It Works](#)

- [The Results](#)

- [Key Concepts](#)

For another business scenario, see [Business Scenario: IT Financial Management](#).

See the following videos for this scenario and an additional use case:

- [Overview: Streamlining Your General Ledger With Profitability and Cost Management](#)

- [Overview: Tax Transfer Pricing in Profitability and Cost Management](#)

The Issue

Different lines of business often have competing needs for related data, and Profitability and Cost Management can help.

Management executives and planners need quick financial answers for agile, fact-based decision making. At the same time, accounting teams need streamlined general ledger and chart of account data for smooth financial closes and swift reactions to market and industry shifts.

These divergent business needs are often handled in ways that cut efficiencies for both sides. In trying to provide the data that executives need, accountants swell the general ledger with operational and management details such as customer, product, channel, activity, and service dimensions as well as statutory GAAP figures. Other data is pulled into spreadsheets and shadow systems that are difficult to maintain and access. As general ledgers become more complex and bloated, financial work is bogged down. And, management and planning groups can still face a lack of actionable information with cumbersome querying and reporting processes.

The Solution, and How It Works

You can reverse ledger complexity while increasing efficiencies in both accounting and operational data management.

Leave the statutory data in the general ledger where it belongs and move the purely operational data to Profitability and Cost Management

---
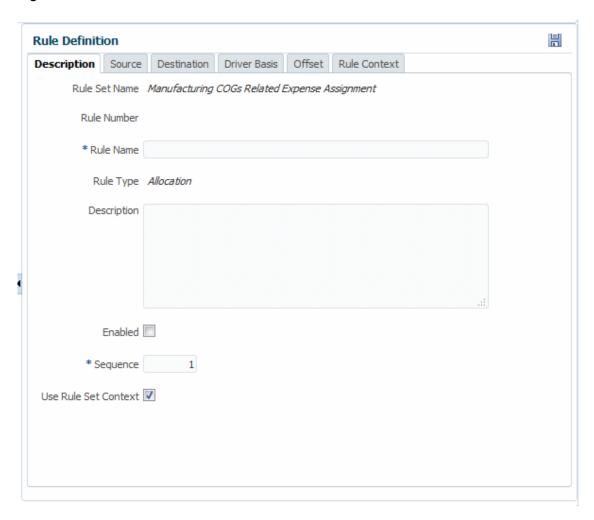
There are several ways to add structure and data to Profitability and Cost Management applications ([Creating, Importing, and Exporting Applications in the Profitability Application Console](#)). See the following sections for more information:

- Create an application shell. Then, import specially formatted flat files containing dimension definitions (see [Creating Applications with Dimensions from Flat Files](#)).

- Add a previously exported application using a template file. Template files contain dimensions, metadata, and other artifacts created by exporting templates from existing Profitability and Cost Management applications (see [Building Applications by Importing Template Files](#)).

Once your general ledger and operational data is added to the system, you use the Profitability and Cost Management rule designer to distribute funds between funding sources and destinations using a simple interface.

Figure C-1   The Rule Definition Area

Use each tab to define a rule:

1. On **Description**, enter a rule name, optional description, sequence number, and other information that determines when and how the rule runs.

2. On **Source**, select dimension members that supply funds to allocate. You can also specify an amount or percentage to allocate and select a calculation segmentation method.
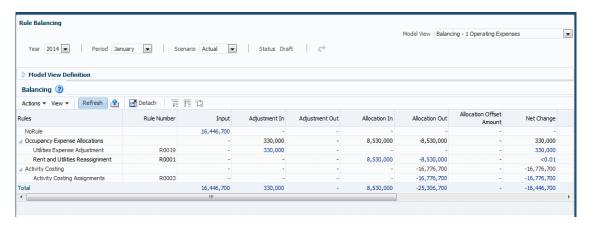
3. **Destination** determines the dimension members that will receive incoming funds.

4. **Driver Basis** indicates whether funds are allocated evenly or allocated with a formula in the specified dimension member.

5. **Offset** supports alternate locations to hold an increase that balances a corresponding decrease in the allocation source.

6. Use **Rule Context** to set up default members for new rules.

For details, see "Working with Oracle Profitability and Cost Management Cloud Rules" in *Administering Oracle Profitability and Cost Management Cloud*.

You can further refine the allocation process by creating rule sets, logical groupings of rules that run together in a desired sequence. You can also define contexts, defaults that form the basis for new rules.

After you deploy the application and calculate the data, you can use the Rule Balancing screen to visually track the flow of allocations through the system. Live links open Oracle Smart View for Office for additional exploration and deeper analysis.

Figure C-2   Rule Balancing Screen with Data

Allocation tracing provides a graphic view of the relationship among parts of an application.
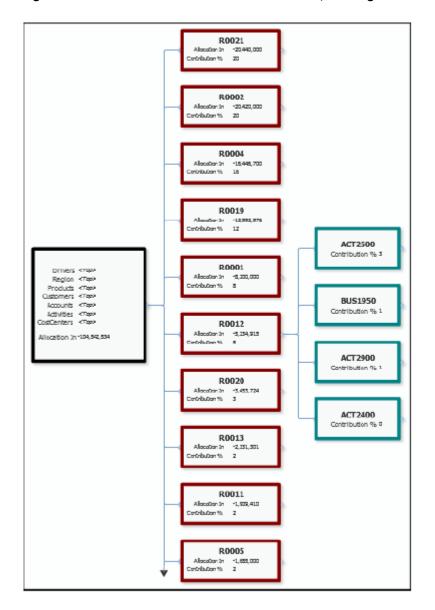
Figure C-3   Trace Allocations Area with Nodes, Tracing Back

Together, rule balancing and allocation tracing help you validate application logic.

The Results

When the application is complete, you can create and view a number of analytic charts and reports whenever you need quick data.

The following table lists them:

Table C-1   Profitability and Cost Management Intelligence Analytics Features

Tab	Description	Link
, Analysis Views	Analysis views provide a way to locate and save sets of data drawn from the database cube for the application.	Working with Analysis Views
, Scatter Analysis Graph	Scatter analysis graphs plot one value against another for the same member.	Working with Scatter Analysis Graphs
, Profit Curves	Profit curves are useful for profitability analysis. A population dimension, such as Customers or Products, displays along the x-axis in descending order by profit yields.	Working with Profit Curves
, Queries	Service Administrators and others with sufficient security provisioning can define queries to gather data for management reporting, segmented profitability analysis, rule analysis, input data verification. You can run queries from the **Intelligence** screen.	Running Queries from the Intelligence Panel

Table C-1 (Cont.) Profitability and Cost Management Intelligence Analytics Features

Tab	Description	Link
, Key Performance Indicators	Key Performance Indicators (KPIs) are display tiles that show one value for one dimension. For example, you might show net income for a customer for the previous quarter.	Working with Key Performance Indicators

You can also create and run reports, and format them in Financial Reporting Web Studio (Working With Profitability and Cost Management Financial Reports).

Key Concepts

Bringing operational data into Profitability and Cost Management offers several benefits.

They include the following:

- You unburden the general ledger, freeing it to perform its primary purpose of statutory GAAP reporting.

- Profitability and Cost Management is optimized to do the "heavy lifting" of moving, categorizing, adjusting, aligning, aggregating, and allocating funds.

- Chart of account maintenance is minimized because you don't have to create entries in the general ledger to accommodate operational changes. You can respond quickly to business, market, and industry changes by modifying performance ledger drivers in Profitability and Cost Management.

- It's not necessary to manipulate numbers in ledgers of record. Complex transformations and allocations are made in performance ledgers that reflect your best practices. This reduces trial balance activities, reconciliations, and data source errors.

- You can close your general ledger faster since it is only performing consolidations for statutory reporting.

While the accounting burden lifts, management analysts can still report on granular levels of data, such as product SKUs, for the analysis that they need for decision-making, and for profit and loss reporting, using:

- Increased transparency and auditability

- Better allocations and alignment

- What-if planning based on different scenarios

- Easy, code-free rule design

- Built-in tracing and balancing

For additional information on this subject, see the following video:

 [Streamlining Your General Ledger](#)

D

Business Scenario: IT Financial Management

The topics in this section discuss how you can use Profitability and Cost Management and the IT Costing and Chargeback Template to model financial data and analyze IT as a business services provider.

For another business scenario, see Business Scenario: Streamlining Your General Ledger with Profitability and Cost Management.

See the following video for an additional use case:

 Overview: Tax Transfer Pricing in Profitability and Cost Management Cloud

IT Financial Management in Cloud EPM

Oracle Fusion Cloud Enterprise Performance Management supports the dual role of a CIO in today's organizations—both on the spending side to run the business, and on the investing side to grow and transform the business.
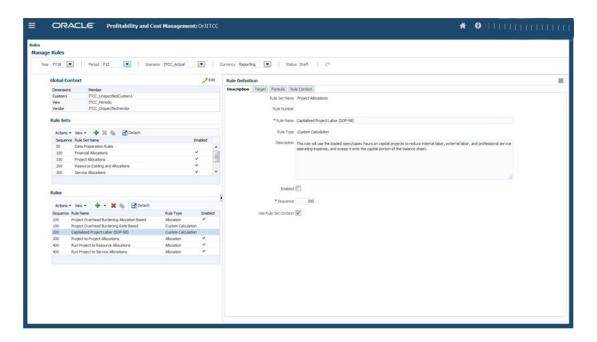
By implementing customized solutions for Profitability and Cost Management and Projects and Financials in Planning Modules, and integrating data from the General Ledger, IT Financial Management planning using Cloud EPM enables IT Finance Departments to be strategic partners with the business.

Using Profitability and Cost Management and the IT Costing and Chargeback Template, you can model financial data and analyze IT as a business services provider. After defining the services your organization provides (using the IT Service Catalog), the IT assets and resources in your organization (such as hardware, software, and people), and importing data from the General Ledger, you define rules for service costing and chargeback. This allows you to determine the cost of IT operations by linking assets to services. Modelling in this way helps you analyze current costs and plan for future costs. If required for your business, you can allocate service or overhead costs to projects or departments and determine the chargeback for IT services or resources for each project or department.
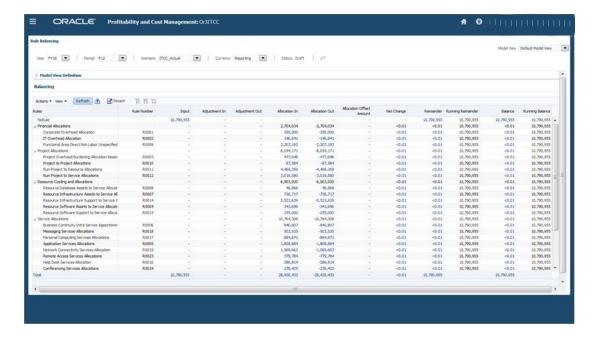
You model the flow of data in Profitability and Cost Management using **Manage Rules**, where you define the rules for modifying and mapping the data. Using dimensions that include Account, Entity, Projects, Resources, Service, and Consumer, modeling data allows you to:

- Allocate overheads to projects.
- Take General Ledger data and projects data and push it to resources or services.
- Take resource costs and push them to services (for example, how many servers does a service use?).
- Optionally, charge back the service costs to a consumer. (The model can either perform chargeback or showback.)
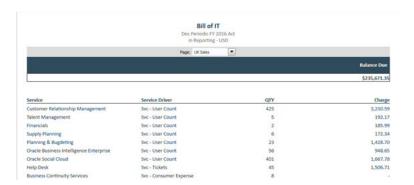
Business users can use **Rule Balancing** to review the rules and their impact on the data. Click the Smart View links to see the details. The ability to perform step by step validation of rules with access to details provides transparency and auditability. It gives you access to the operational data outside of the General Ledger where you can model the data using pre-built analytics, without impacting the General Ledger.

After defining the rules, you can review more than ten reports provided with the IT Costing and Chargeback Template. Reports include:

• Bill of IT Services—Shows chargeback and charge rate and drivers. You can choose whether to charge back to consuming organizations. If you chose to perform chargebacks, you can push the charges back to the General Ledger.

Bill of IT
Dec Periodic FY 2016 Act
in Reporting - USD

Page: UK Sales

	Balance Due
	$235,671.35

Service	Service Driver	QTY	Charge
Customer Relationship Management	Svc - User Count	425	3,230.59
Talent Management	Svc - User Count	5	192.17
Financials	Svc - User Count	2	185.99
Supply Planning	Svc - User Count	6	172.34
Planning & Bugdeting	Svc - User Count	23	1,428.70
Oracle Business Intelligence Enterprise	Svc - User Count	56	948.65
Oracle Social Cloud	Svc - User Count	401	1,667.78
Help Desk	Svc - Tickets	45	1,506.71
Business Continuity Services	Svc - Consumer Expense	8	-

- Service Costing—Shows the cost per supported user and project and resource consumption.

Service Cost Summary
Dec Periodic FY 2016 Act
in Reporting - USD

Service	Service Owner	Cost
Customer Relationship Management	Winthrop Ferriell	322,227
Talent Management	Barton Paquette	120,493
Financials	Ferdinande Ricupero	352,088
Supply Planning	Alexandr Solon	277,718
Planning & Bugdeting	Briny Peligrad	153,592
Oracle Business Intelligence Enterprise	Nathaniel Halterman	431,503
Oracle Social Cloud	Winona Puntanen	151,063
Help Desk	Lauritz Geary	286,814
Mobile Device	York Bankston	820,068
Telephone Services	York Bankston	1,378,172
Desktop/Laptop Services	Donnamarie Anthony	750,548

- Project Costing—Lets you analyze the costs for run versus build, and capital expenditures versus operating expenditures.

Project Cost by Entity
Standard Base Image Development | Ernie Lefort
Dec Periodic FY 2016 Act
in Reporting - USD

Entity	Project Cost
Software Management	449,621
Security Systems	3,578
End User Support	113,140
IT Infra and Ops Function	566,339
Application Development	77,756
Application Support	91,762
IT Application Function	169,518
IT Excl Fin & Mgmt	735,857
IT Entity Total	735,857
All Entities	735,857

After modeling the IT costs and allocating costs in Profitability and Cost Management, push the data to Planning Modules using Oracle Fusion Cloud Enterprise Data Management or Data Integration and perform further planning and analysis in Financials and Projects.
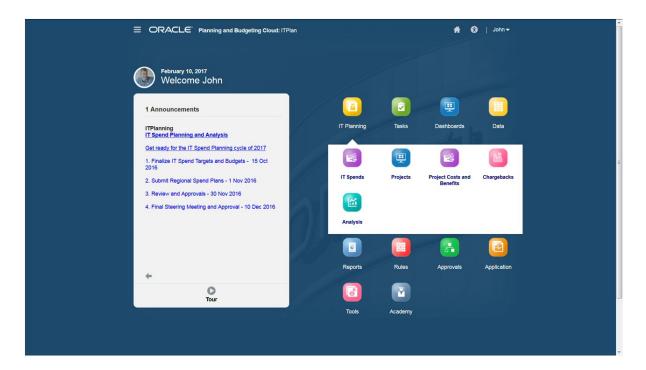
In Financials, you can perform high level IT spend planning, by Services and Applications.

In Projects, you can perform more detailed project planning to plan by resource, and understand project costs and benefits before submitting plans for approval. You can then compare the plan against what is actually spent and review variations and deviations using IT Costing.

Customize Projects for IT with custom forms, dashboards, drivers, and navigation flow. Add a custom dimension for Service, and share the members from the IT Service Catalog in Profitability and Cost Management.

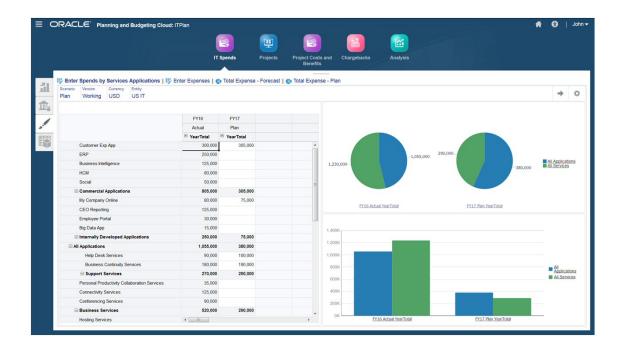Customize the navigation flow to suit your organization's requirements:

For example, this custom navigation flow in Projects provides a workflow for:
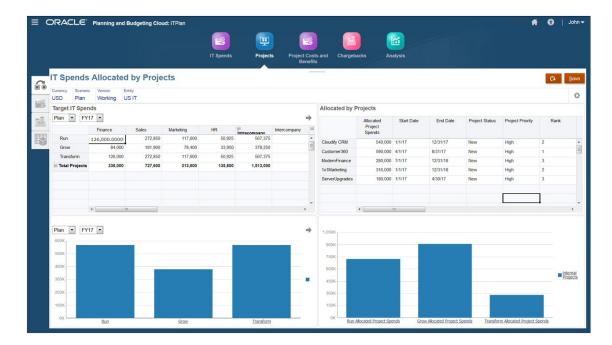
- Entering IT spends for services applications.
- Allocating IT spends to projects.
- Analyzing IT project costs and benefits.
- Performing chargeback planning.
- Reviewing IT Spends overview in a dashboard.

Enter IT spends for services applications in the data entry form:
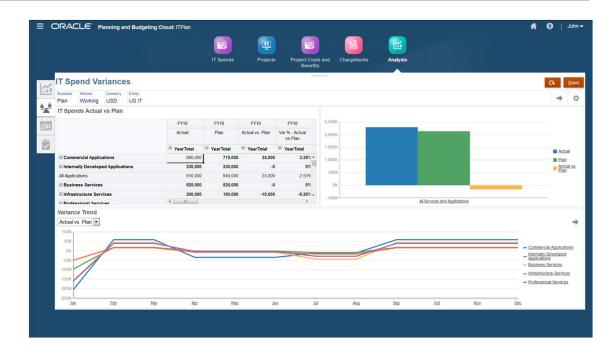
Allocate IT spends to projects:

You can also define project benefits.

Design custom dashboards for an overall view of IT spends and variance analysis:

By importing data from the General Ledger, modeling and allocating costs in Profitability and Cost Management, and then pushing the data to Planning Modules using Oracle Enterprise Data Management Cloud or Data Integration, you create an IT Financial Management system with pre-built analytics that is easy to use, gives you transparency of results and auditability, helps you optimize IT investment decisions, and promotes partnership with the business.

Video

Your Goal	Watch This Video
Learn about IT Financial Management in Cloud EPM.	Overview: IT Financial Management in Cloud EPM

E

Syntax for Custom Calculation Rule Formulas

About Custom Calculation Rule Formula Syntax

This section describes the syntax, or format, to use when creating custom rules in Profitability and Cost Management.

The syntax is summarized as follows:

- The basic formula format is Result equals Formula, where Result and Formula are separated by :=, so Result := Formula.

- The left side of the equation is the Result, a tuple that determines where custom calculated results are written.

> ### ⓘ Note
>
> A tuple is a comma-separated list of members enclosed in parentheses.

The tuple is an MDX specification of one or more members where no two members are in the same dimension. Only member names are allowed in the tuple expression. Member functions are not supported for custom calculations. Dynamic and attribute members are not allowed in the Result. The Result must include a single member from the Result dimension. It must be Level 0 and may be part of a Level 0 tuple, such as `([STA1120], [Feb])`. The Result dimension is defined in the **Target** tab of the **Rule Definition** screen.

> ### ⓘ Note
>
> MDX is a joint specification of the XML for Analysis founding members. For more information about allowable MDX syntax, see [Chapter 7, "MDX"](#), of the *Oracle Essbase Technical Reference*.

- The right side of the equation is the Formula, a simple MDX numeric value expression. It includes the other members, tuples, or constants at any level and the mathematical expression to perform. It must include at least one member from the Result dimension and may be Level 0, upper level, or a tuple.

> ### ⓘ Note
>
> Members on either side of the equation must be enclosed in square brackets, [ ].
>
> Tuples must be enclosed in parentheses, ( ).
>
> The Formula expression must end in a semicolon, ;.

The Formula can use the following:

– **Constants:** `[STAT1120]:=1;`

> ⓘ **Note**
>
> A constant can be a numeric constant such as `7`. It can be an expression that references values from other members in the result dimension, and it can reference values expressed as member tuples.

– **A mathematical operation:** `[STAT1114]:=([STAT1305],[Rule])*([STAT1307], [Rule]);`

> ⓘ **Note**
>
> Mathematical operations must always include a Rule dimension member.

*   Custom calculation rules support the following syntax formats for member names:

    – **No qualification:** Only the member name is provided.

        Example: `[MemberName]`

    – **Full qualification:** The fully qualified name (FQN) for the member.

        Example: `[Dimension].[Gen2].[Gen3].[Gen4]...[MemberName]`

> ⓘ **Note**
>
> For information about optimizing performance when defining custom calculation rules, see Skipping Empty Tuples to Optimize Custom Calculations.

Skipping Empty Tuples to Optimize Custom Calculations

Data sets can be very sparse and calculating empty result sets can noticeably degrade performance.

To avoid calculating empty result sets, you can use the NONEMPTYTUPLE property clause in custom calculation formulas. Using NONEMPTYTUPLE restricts where the system attempts to calculate. To set this up, you define a tuple that will only be calculated if it isn't empty. Then, you define a simple numeric operation to be applied to the tuple.

Syntax

The syntax for using NONEMPTYTUPLE is as follows:

`tuple := [NONEMPTYTUPLE (nonempty_member_list)] numeric_value_expression;`

Where:

*   `tuple` -- An MDX specification of one or more members, where no two members can be from the same dimension

- `NONEMPTYTUPLE` -- An optional property you can use to optimize calculation performance. If used, then you must follow this literal property with `nonempty_member_list`.

- `nonempty_member_list` -- One or more comma-separated member names from different dimensions. A tuple must be present in `numeric_value_expression`.

- `numeric_value_expression` -- A simple MDX numeric value expression, such as a number or an arithmetic operation

  The expression must be on the right side of the equation. You must use only arithmetic operators. An error is returned if you use non-arithmetic operators such as AND, OR, or IF.

For example:

```
[UnitCost] := NONEMPTYTUPLE ([TotalExpense], [NetBalance]) ([TotalExpense],
[NetBalance]) / ([Units], [CostPool]);
```

This example says the following:

1. Look at the tuple `([TotalExpense], [NetBalance])`.

2. If that tuple, or intersection, is not empty (that is, it contains a real value), then perform the following operation:

   Take the tuple `([TotalExpense], [NetBalance])` and divide it by the tuple `([Units], [CostPool])` to yield `UnitCost`.

3. If the tuple is empty, skip it and evaluate the next instance.

Rules for Use

A tuple is a combination of members from some set of different dimensions, for example:

```
([product2], [account5], customer3])
```

```
([myactivity], [yourdepartment])
```

The requirements for adding NONEMPTYTUPLE to the formula of Profitability and Cost Management custom calculation rules are as follows, where A, B, and C represent tuples:

- You can use NONEMPTYTUPLE only when a tuple has some value. Otherwise, the result could be unexpected. Suppose the following:

  - `A=B+C` -- You can't use NONEMPTYTUPLE on either `B` or `C`. If `B` or `C` is missing, the result will be None, which is incorrect.

    > ⓘ **Note**
    >
    > To calculate A=B+C using NONEMPTYTUPLE, use two rules:
    >
    > * Rule 1: `A=A+B` with NONEMPTYTUPLE on `B`
    >
    > * Rule 2: `A=A+C` (or `A=A-C`) with NONEMPTYTUPLE on `C`
    >
    > In this case, whenever the value for `B` is *not* missing, it will be added to `A`; and whenever the value for `C` is *not* missing, it will be added to `A`.

  - `A=B-C` -- You can't use NONEMPTYTUPLE on either `B` or `C`. If `B` or `C` is missing, the result will be None, which is incorrect (unless you use two rules as described previously).

- You can use NONEMPTYTUPLE when the result is the same whether the tuple is missing or not. Suppose the following:

- `A=B` -- You can use NONEMPTYTUPLE on `B`.

- `A=B*C` -- You can use NONEMPTYTUPLE on either `B` or `C`.

- `A=B/C` -- You can use NONEMPTYTUPLE on either `B` or `C`.

> ⓘ **Note**
>
> To summarize, you can safely use NONEMPTYTUPLE in multiplication or division operations. For addition or subtraction, you must evaluate its use for each separate case to avoid unexpected results.

For more information about writing custom calculation rules, see About Custom Calculation Rule Formula Syntax and the documents referenced there.