Model Maker Guide

PV680 SV100

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Overview

Model Maker is a MarketPlace solution that provides a simple and powerful user experience for modeling.

Model Maker is an extension of the OneStream Platform that allows you to perform edge modeling efficiently and in a streamlined way. Bend and flex a model quickly, but also have the governance needed to connect that information to the corporate model.

You can create a complete model from the main screen:

- Create public or private models starting from a corporate standard.
- Create members and hierarchies specific to each model.
- Create reports and data entry forms.
- Create data driven formulas, with no scripting.
- Import data from a .csv file directly into the model.
- Integrate the model with the corporate solution.
- Review multiple reports from the same screen and export them in multiple formats.

Setup and Installation

This section contains important details related to the planning, configuring, and installation of your solution. Before you install the solution, familiarize yourself with these details.

Dependencies

Component	Description
OneStream 6.8.0 or later	Minimum OneStream Platform version required to install this version of Model Maker.
OneStream App for Windows	Model Maker is optimized for the OneStream application for Windows, which provides the same functionality as the browser-based version of OneStream.

Select the Model Maker Development Location

Before beginning installation, decide whether to build the solution directly in the Production OneStream application or in a separate Development OneStream application. This section provides some key considerations for each option.

Production OneStream Application: The primary advantage of building the solution in a Production application is that you will not have to migrate the resulting work from a Development application. However, there are intrinsic risks when making design changes to an application used in a Production capacity and not advised.

> **NOTE:** OneStream strongly recommends that you implement the solution in the Development environment with a fresh copy of the Production application before starting work.

Development OneStream Application: As a best practice, use the Development OneStream application to build the solution.

Create the OneStream Development Application

1. Ensure that all the OneStream artifacts relating to Model Maker, such as entities, are in the Production application. A workflow profile will also be required to import the data back into your corporate model.
2. Copy your Production OneStream application to your Development environment and rename it. Use this Development version for your Model Maker project.

Application Server Settings

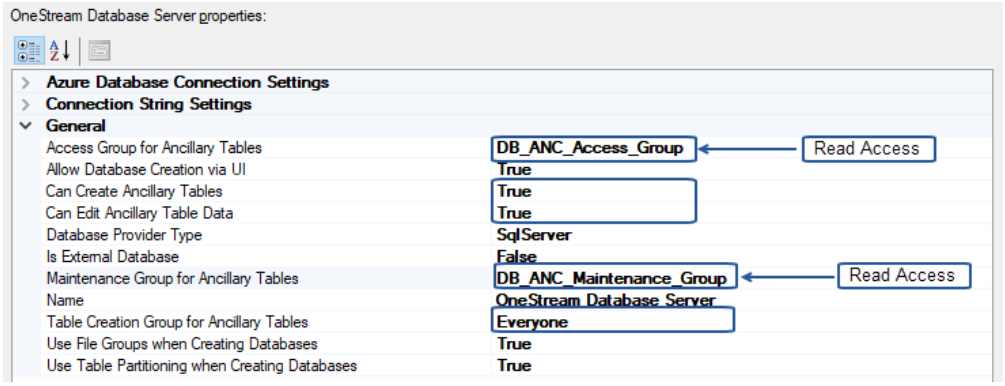
Edit the OneStream Application Server Configuration so users can create and change data in the additional database tables. If other MarketPlace solutions (such as Specialty Planning) are in the application, these adjustments may already exist.

Configure the OneStream Application Server

Be sure that the security group settings include the users set up and use the Model Maker before proceeding.

> **NOTE:** Group settings are applicable to all MarketPlace solutions, so keep group names generic.

1. Start the OneStream Server Configuration Utility as an administrator.
2. Click **Open Application Server Configuration File** > **Database**.
3. Edit the following OneStream Database Server properties:
    - **Access Group for Ancillary Tables**: Select a group that includes those who will access records.
    - **Can Create Ancillary Tables**: **True**
    - **Can Edit Ancillary Table Data**: **True**
    - **Maintenance Group for Ancillary Tables**: Select a group who will edit and maintain tables.
    - **Table Creation Group for Ancillary Tables**: Select a group who can create tables.



4. Restart the Internet Information Server.

Install Model Maker

1. On the OneStream MarketPlace, click **MarketPlace** > **Model Maker**.

2. On the Model Maker solution page, select the appropriate OneStream platform version from the **Minimum Platform Version** drop-down list.

3. Select the most recent version from the **Solution Version** drop-down list and then click **Download**.

4. Log in to OneStream.

5. On the **Application** tab, click **Tools** > **Load/Extract**.

6. On the **Load** tab, locate the solution package using the **Select File** icons and click **Open**.
7. When the solution's file name appears, click **Load**.
8. Click **Close** to complete the installation.

Set Up Model Maker

The first time you run Model Maker, a guided table setup process begins.

In OneStream, click **OnePlace** > **Dashboards** > **Model Maker** > **Model Maker**.

Create Tables

1. Click **Step 1: Create Tables**.

   This step may be necessary when upgrading even if tables are already present. Model Maker will not remove any tables that already exist but will modify table structures and add any new ones if necessary.
2. When setup is complete, click **Step 2: Launch Solution** to open Model Maker.

Package Contents

The Dashboard Maintenance unit provides the user interface for Model Maker and includes the required dashboard groups, components, data adapters, parameters and files.

Data Management

The data management sequences and steps shown in the following image are created to be used with their related business rules. The benefit of running these processes through a data management sequence is that they can run in the background while you continue your work.

Security

After installation, administrators see a drop-down list in the Global Options tab on the Settings page called **Security Role [Access Model Maker]**. It is set to the Administrators security group by default.

Non-administrators, upon installation, will not see Model Maker in the OnePlace tab.

At any point, if the Access Model Maker security group is changed or updated, the administrator will see a validation message stating that the Access Group on all Dashboard Maintenance Units and Dashboard Profile for the Model Maker Solution was also updated.

Administrators can remove and restore any model. Non-administrators can only remove models that they created. Non-administrators cannot restore models that have been removed.

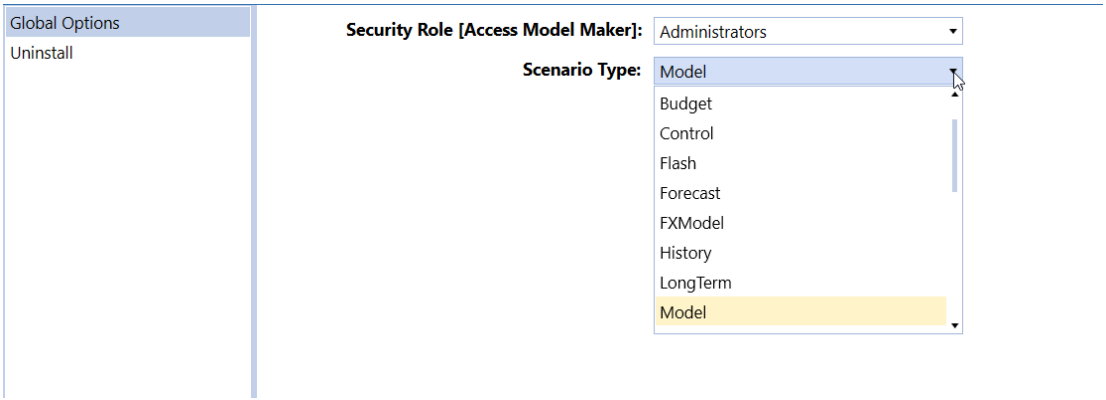
> **NOTE:** Removing a model will also remove the viewing permissions of that model based on security levels other than Private.

Global Options

Use the Global Options settings to set security roles and the scenario type in which every model in Model Maker will use.

> **NOTE:** Global Options are only available to administrators.

If you chose to keep the Access Model Maker Security Role and the Scenario Type defaults, you must click **Save** to register the defaults as your chosen selections.



Access Global Options

1. Click **Settings**.
2. Make sure that Global Options is selected.

Security Settings

After installation, the **Access Model Maker** setting is set to the Administrators security group by default.

Create a Security Group

We recommend that the OneStream administrator creates a security group called *Model Maker* and assigns the administrator in the group and any other group that will use Model Maker for their edge modeling process.

At any time, if additional groups need access to Model Maker, the administrator can update children of the Model Maker security group. This action will streamline solution security.

Scenario Type

The Scenario Type is set to **Model** by default.

Model Maker Dashboard

Administrators can see the Settings page and the Help page. They can see Create, Remove, and Restore (with a drop-down list to choose which model to restore).

For non-administrator users, only the Help page displays. They can only see the Create and Remove icons for model cube definitions. If non-administrators need a model cube definition restored, they must contact an administrator for support.

You will notice that the icon for your active page displays a different color to indicate which page you currently have selected.

For example:

Active Page	Inactive Page
 Views	 Views

Uninstall

The Uninstall feature allows you to uninstall the user interface or all solutions in Model Maker. If performed as part of an upgrade, any modifications that were made to standard solution objects are removed.

> **IMPORTANT:** The Uninstall option uninstalls all solutions integrated in Model Maker.

The uninstall options are:

1. **Uninstall UI** removes all solutions integrated into Model Maker, including related dashboards and business rules but leaves the databases and related tables.

> **IMPORTANT:** This procedure resets the Workspace Dashboard Name to (Unassigned). An administrator must manually reassign the Workspace Dashboard Name after performing an Uninstall UI.

2. **Uninstall Full** removes all the related data tables, data, dashboards, and business rules from all solutions integrated into Model Maker. Select this option to completely remove the solutions or to perform an upgrade that is so significant in its changes to the data tables that this method is required.

> **CAUTION:** Uninstall procedures are irreversible.

IMPORTANT: The standard Uninstall Full process has been modified to also include deletion of any metadata created in or specific to the Model Maker Solution.

Models

Model Maker offers two options for creating new models: extend a base cube or create a new cube. If you extend a base cube, it inherits all of the dimensions from the base cube.

For every model you create, there is a dedicated cube view group. This makes it easier for security setting, publishing, sharing and model deletion. Each new cube view group is automatically added to the Model Maker Cube Views Profile.

You can create, extend or remove a model. The Last Action column shows the status of model cube definitions that has a model cube created for it. If a model cube has not been created, the Last Action column will remain blank. Last Action types include:

- **Created**: Displays when you create a model cube definition.
- **Copied**: Displays when you create a model cube definition from an extension of an existing model.
- **Removed**: Displays when you remove a model cube.
- **Restored**: Displays when an administrator restores a removed model cube. Only administrators can restore a model cube.

Each cube view group follows this naming convention:

```
mlm_[ Model Cube Name ]_Dimension suffix
```

> **NOTE:** If you leave the Base Cube Name field empty, OneStream creates a new cube with new dimensions at the root level.

Model Security

The Security column indicates if the model is Private, Public, or limited to a specific group.

- **Private**: You created the model and only you can see it. Private is the default setting.
- **Public**: Everyone in the Access Group established in Global Options can see the model.
- Other Groups: Specific groups in the Access Group as established in Global Options.

You can assign different security levels on each of your models.

When you navigate to other sub-solutions in Model Maker, such as Formulas or Views, you will only see the Public models and your Private models listed in the model cubes drop-down list. This is the same case for each sub-solution that contains a model cube drop-down list.

If a security group outside of Public or Private is assigned to the model, you will only have permission to view models assigned to that group if you are in that group. For example, if Club Controllers is assigned to the Security of a given model cube, you would only see it if you are a user in Club Controllers.

> **NOTE:** If you are not an administrator, you cannot change security on a model that you did not create.

For more detailed information about Model Maker security, see "Appendix A Security" on page 84.

Create a Model

You can edit the Description and Security columns from the Model Page dashboard after you create a model. However, after you create the model, you cannot edit the Model Cube Name, Base Cube Name, Dimension Suffix, Scenario Type, Last Action, Time Stamp or User Name columns.

No Cube Selected displays above (and to the left) of the Model Cube Definitions table. This is replaced by the model cube name when you create and select a model cube. If you did not create the model cube from the model cube definition, **No Cube Selected** will remain. This indicates model cube definitions that have yet to be created.

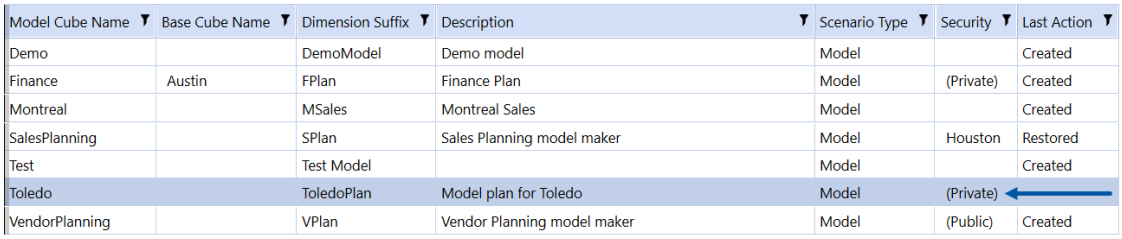
Model cube definitions must be unique. If you try saving a new model cube definition with the same model cube name and dimension suffix for any Last Action state, you receive a validation message.

1. Click **Launch Model Cube Creator Page**.
2. On the Models dashboard, click **Insert Row** and enter the following information:
    a. **Model Cube Name**: Name of the model
    b. **Base Cube Name**: Name of the base cube. Required if you are copying a base cube. To extend from an existing corporate model, see "Extend a Model" on page 16.
    c. **Dimension Suffix**: Required to segregate dimensions created for the new model.
    d. **Description**: Detailed description for the model

e. **Scenario Type**: Defaults to the Global Settings scenario type after saving the model cube definition.

f. **Security**: Defaults to Private. The list in the Security column reflects the group children assigned under the Model Maker security group.

3. Click **Save**.



Model Cube Name	Base Cube Name	Dimension Suffix	Description	Scenario Type	Security	Last Action
Demo		DemoModel	Demo model	Model		Created
Finance	Austin	FPlan	Finance Plan	Model	(Private)	Created
Montreal		MSales	Montreal Sales	Model		Created
SalesPlanning		SPlan	Sales Planning model maker	Model	Houston	Restored
Test		Test Model		Model		Created
Toledo		ToledoPlan	Model plan for Toledo	Model	(Private)	
VendorPlanning		VPlan	Vendor Planning model maker	Model	(Public)	Created

> **NOTE:** When you save a model cube definition, the description is the only editable field.

4. Click **Create**.

5. Add provided dimensions from Platform. Because the model was created from root, establish your members and create hierarchies for the dimensions provided.

   Because you created a new cube, all dimensions are created at the root level except for Entity and Scenario. This cube is separate from the rest of the application and you can add members to new dimensions.

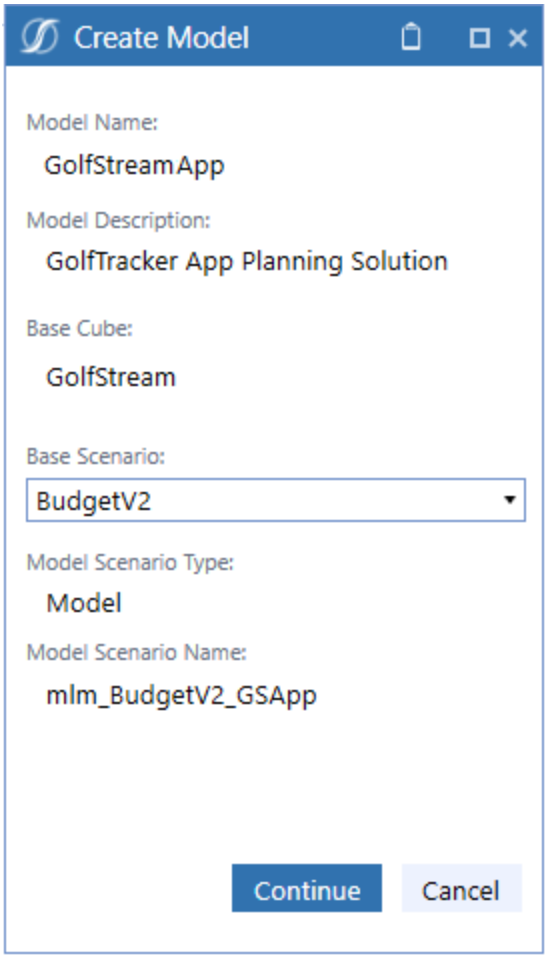
> **NOTE:** The Entity and Scenario dimension are named mlm_EntityDim_*Dimension Suffix* and mlm_ScenarioDim_*Dimension Suffix*, respectively.

Extend a Model

Extending a model allows you to apply extensible dimensionality. The dimension hierarchies in the extended model are inherited in Model Maker so you can modify members specifically for your edge model case. When extending from a corporate model, Model Maker will inherit the corporate design at that point in time.

> **NOTE:** By default, IC Entity is set to False. If you extend a model where the original entity dimension member is set to True, the newly created entity dimension member for IC Entity is False.

1. On the Models dashboard, click **Insert Row** and enter the following information:
    a. **Model Cube Name**: Name of the model
    b. **Base Cube Name**: Name of the base cube based on the cube you would like to extend.
    c. **Dimension Suffix**: Required to segregate dimensions created for the new model.
    d. **Description**: Detailed description for the model
    e. **Scenario Type**: Defaults to the Global Settings scenario type.
    f. **Security**: Defaults to **Private**. The list in the Security column reflects the group children assigned under the Model Maker security group.
2. Click **Save** and then click **Create**.



3. Select the Base Scenario and click **Continue**. A dialog box displays that the cube was created. The dimensions of the base cube name are now inherited.

See "Members" on page 21 for more information.

Remove a Model

When you remove a model cube, all items related to that model are archived and then deleted. These include the following items, removed in this specific order:

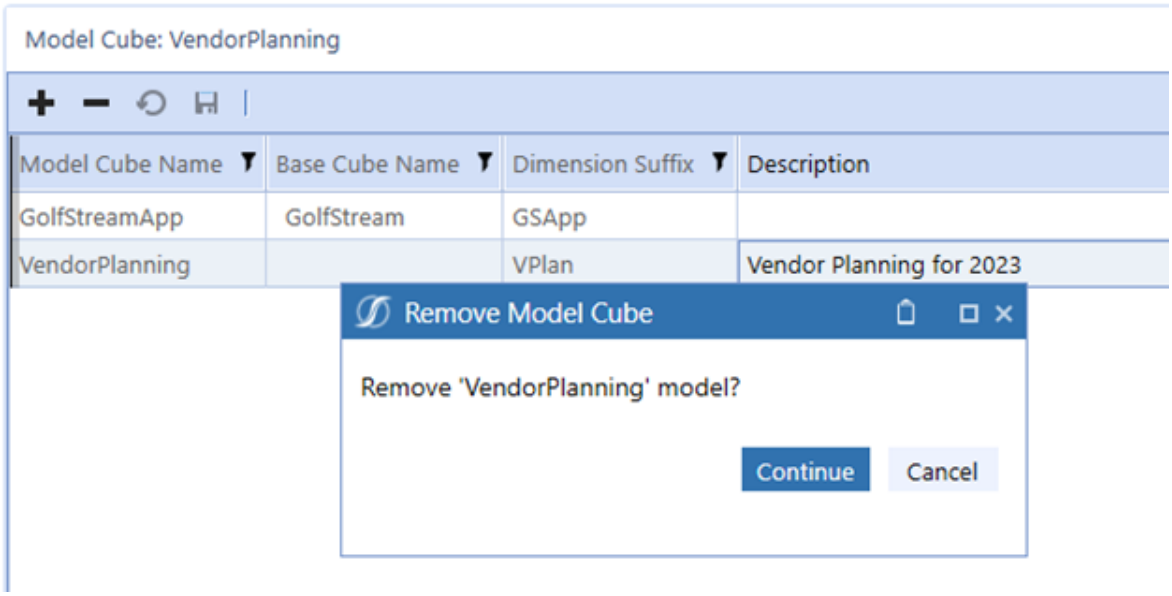
1. Data
2. Parameter sets
3. Cube views
4. Integrations, for example transformation rules, data sources, and connectors
5. Data management jobs
6. Metadata
7. Dimensions and members in the cube

> **NOTE:** If you remove a model by mistake, you can contact your administrator to restore model cube assets. However, data is not restored.

The removed models display in the Model page dashboard but the Last Update column will state **Removed**. If you would like the administrator to restore the model at any time, the model name is available in the list.

> **NOTE:** If you do not want to see the removed models in the list, you can reorder the Last Action column through the column filter.

1. Select a model cube from the list.
2. Click **Remove**.



3. Click **Continue**. The Last Action column updates to Removed.

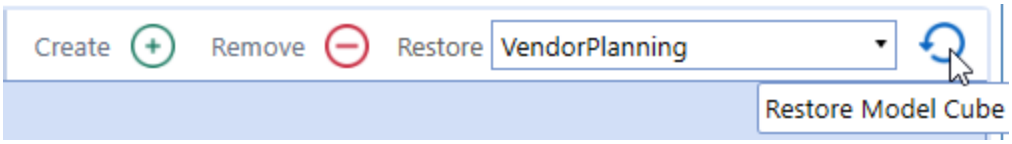
   A data management job runs to remove all artifacts.

> **IMPORTANT:** If you highlight a Removed model cube, click on the "-" icon and save it. The model cube is permanently deleted and the model cannot be restored.

Restore a Model

> **NOTE:** Only users with administrator privileges can restore models.

Click **Restore**. The model appears in the list and the Last Action column updates from Removed to Restore.



Administrators can restore removed model cube definitions from a drop-down list of removed cubes from the Model page.

> **NOTE:** You cannot create a model based on a model that has been removed.

Members

The Members page allows you to create new metadata either for a model created from root or from an extended model. It inherits the corporate structure while allowing downward extension to achieve a higher granularity. It also allows for departmental use cases not implemented in corporate models. You can extend every dimension freely, as long as you choose member names that are not already in use for that dimension type.

Import and Manage Members

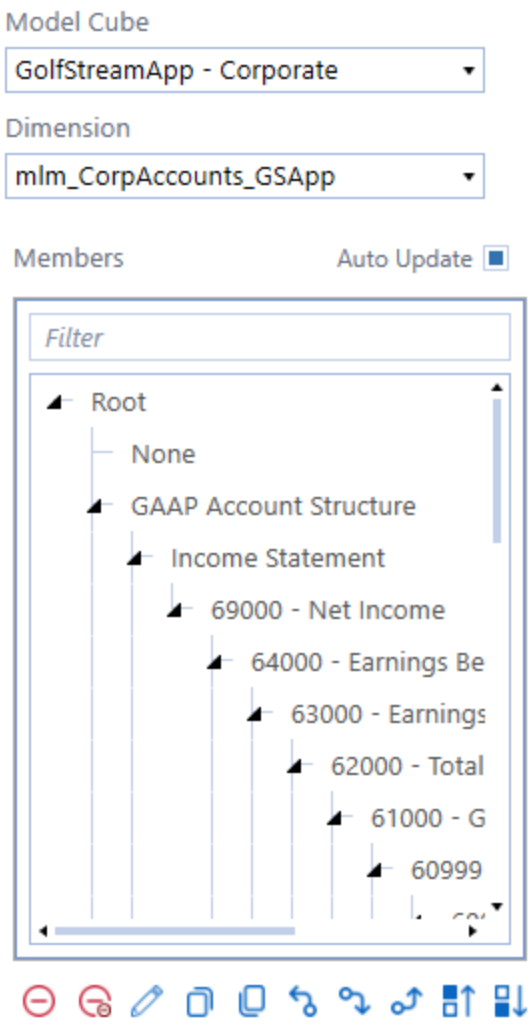
Use the Members page to create or configure metadata and dimensions, or the members you will use in your application.

There are many ways to enter new dimensions and members. You can manually add them or add extended members under existing members. Both ways are valid and will create the metadata needed for your model.

1. Click **Launch Member Manager Page**.
2. In **Model Cube**, select the new cube you created or an existing cube.

   > **NOTE:** If you selected a model on the Models page, that model will be selected.

3. In **Dimension**, choose a dimension type to extend.

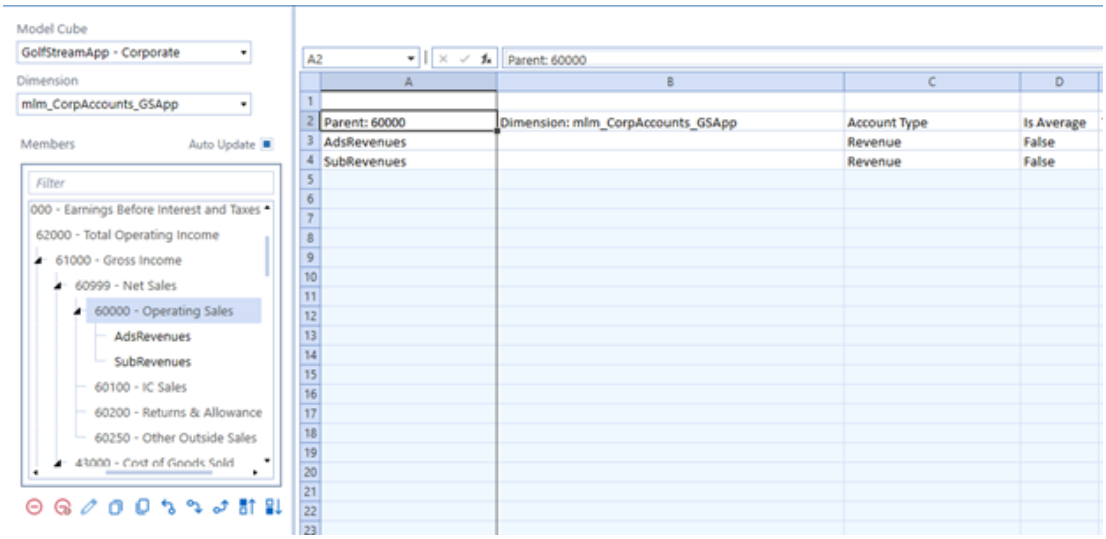


4. Make sure that **Auto Update** is selected.

   This ensures the spreadsheet automatically refreshes. If it is unchecked, you will need to select the Refresh icon to refresh the spreadsheet. Auto Update is enabled by default.

5. Scroll through the Parent hierarchy to see the structure inherited from the application.

6. Use the spreadsheet on the right to edit members. When you highlight a member in the hierarchy, the spreadsheet will refresh with the information last saved for that member. Save minor edits of the member attributes in the spreadsheet component.



7. In the example above, AdsRevenues and SubRevenue were added to the inherited member of account 60000 - Operating Sales.

   The spreadsheet updates with the hierarchy in the Parent field.

8. When you select an item in the Parent hierarchy the spreadsheet view to the right updates.

> **NOTE:** Blue rows in the spreadsheet are for new members.

Action Icons in Member Hierarchy

You can only make modifications to the hierarchy on members that were created in Model Maker. You cannot modify members in gray because they are inherited.

Member Hierarchy Options

Icon	Description
	Delete the member.
	Delete the member and its children.
	Rename the member.
	Copy the member.
	Paste a selected member.
	Move the member to the parent level.
	Move the member down.
	Move the member up.
	Sort the member children up.
	Sort the member children down.

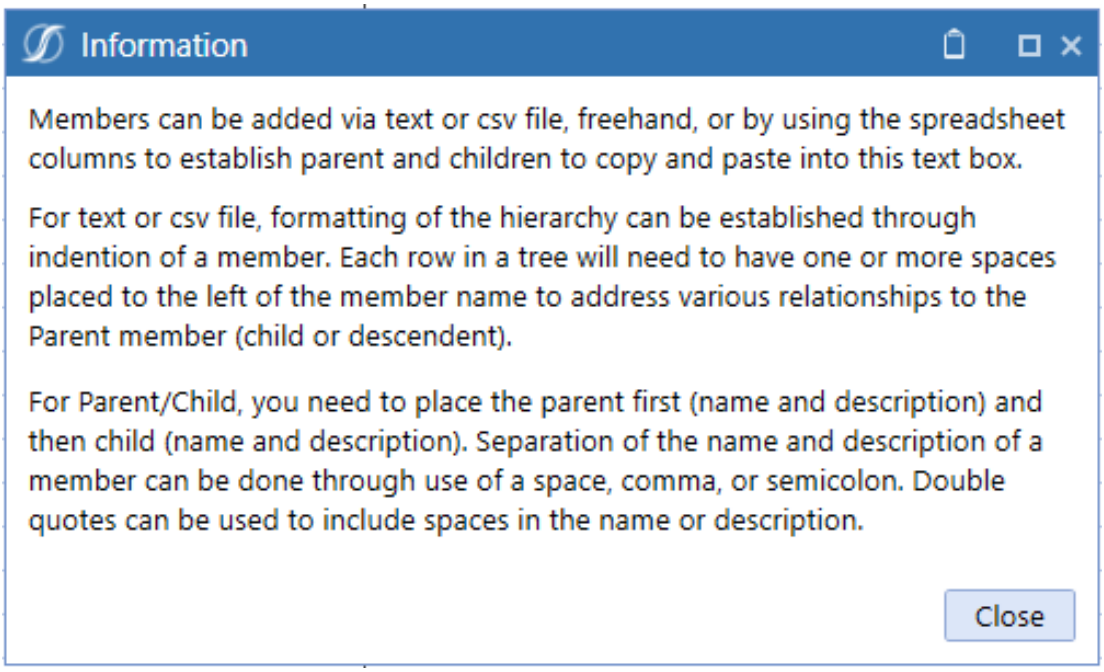
Upload Data from a Text File

The **Load, Type or Drop Here** box is ideal for bulk loads. To make minor changes to bulk metadata, use the spreadsheet to add a member and assign the Account Type if applicable, then click **Save**.

Use Load, Type or Drop Here to populate the hierarchy in multiple ways. You can load members via text or .csv file, freehand, or use the spreadsheet columns to establish parent and children to copy and paste into this text box.

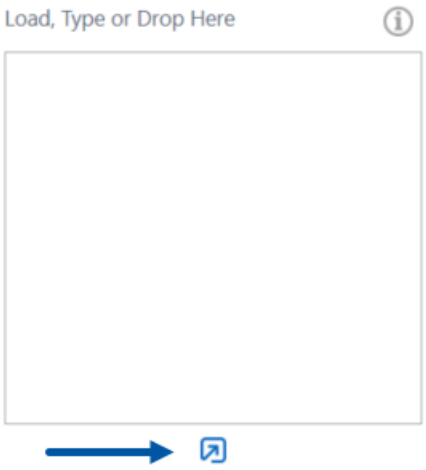
To load from a text or .csv file, select **Upload text file** below the text box to retrieve the file and click **Create New Hierarchy**. When loading an external file, use a space, comma, or semi-colon to separate member name and descriptions. Use double quotes to include spaces in the name or description.

Click the Information icon for more information on using the Upload text box.



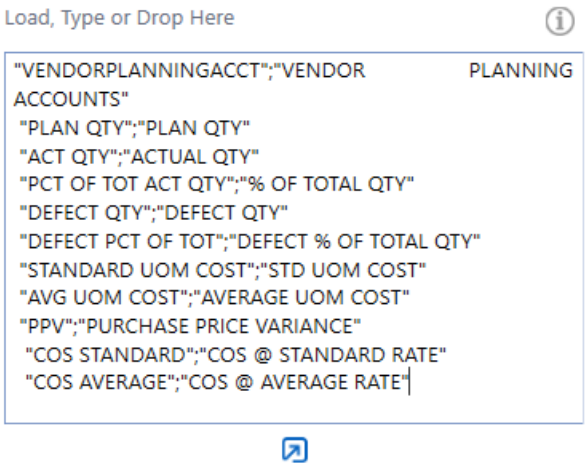
Upload your account information using a semi-colon and indented syntax format into the **Load, Type or Drop Here** box.

1. Click **Upload text file**.



2. Browse to the text file and click **Open**.

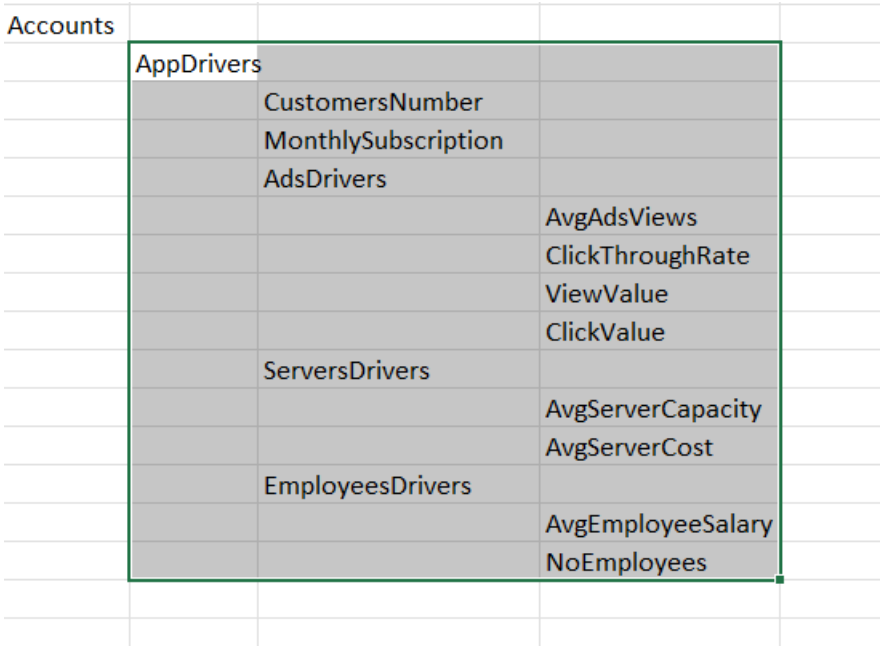
3. The account syntax from the text file populates the box.



4. Click **Create New Hierarchy** to create the group, the accounts and any hierarchies.

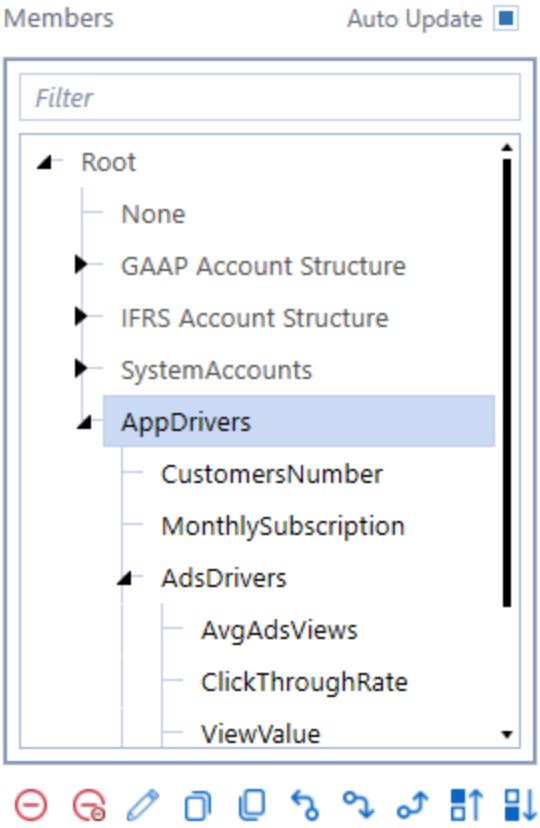
Copy and Paste from Excel

1. If you have a hierarchy of members in Excel, copy the cells.

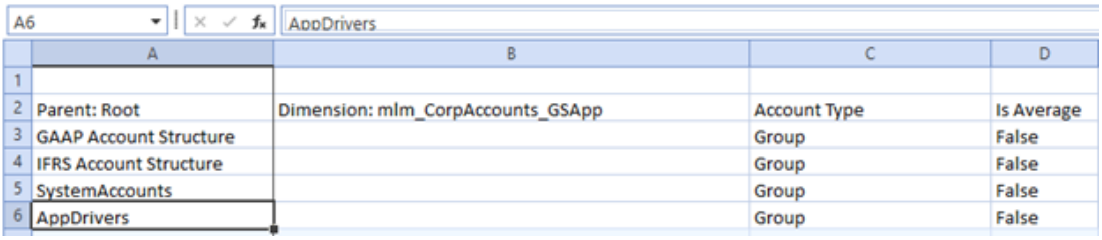


2. Paste the cells in the **Load, Type or Drop Here** box.

3. Click **Create New Hierarchy** to add the members you pasted from Excel into the dimension hierarchy.

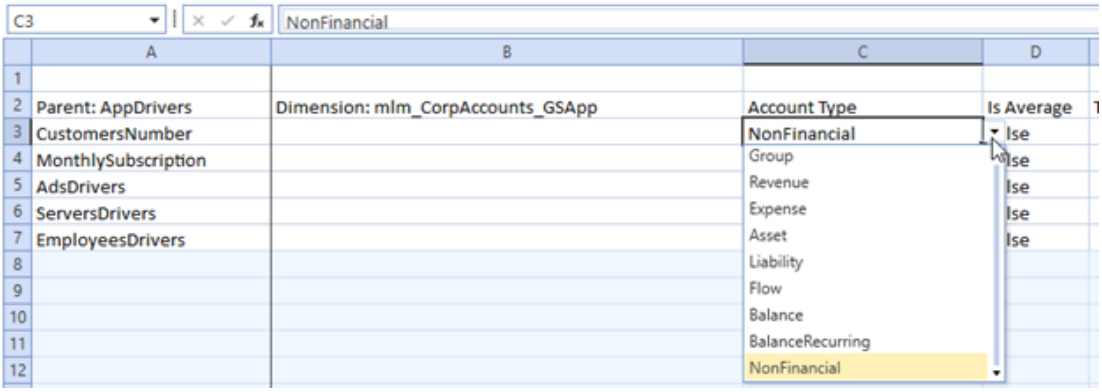


The new content from Excel also displays in the spreadsheet.



4. After you add content from Excel, select a dimension in the Parent hierarchy to make changes in the spreadsheet.

5. Change the Account Type, Is Average, or Weight.



Weight can be:

- 1: Aggregate all the data to the parent.
- 0: Data does not aggregate; it is false.
- -1: Change the data aggregation to negative values. For example, change the account type to expense for a negative value.

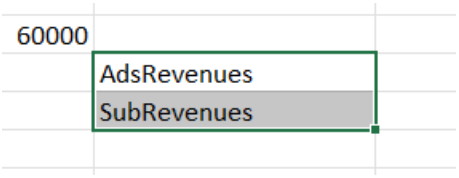
  The Aggregation setting is available in all Account, Flow and UD dimensions. This setting can change for a Base Entity based on its parent. If a member is reused in a dimension, but it does not need to sum up more than once, set the weight to 0 data in this node and it will not allow the member to aggregate to the top.

6. Click **Save**.

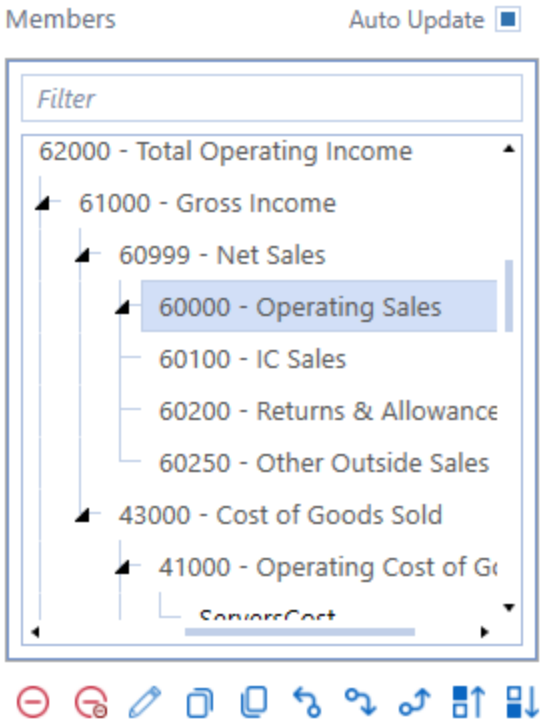
Add Information Directly to the Spreadsheet

If you are making minor changes you can also use the spreadsheet to add a member and assign the Account Type if applicable, then click **Save**.

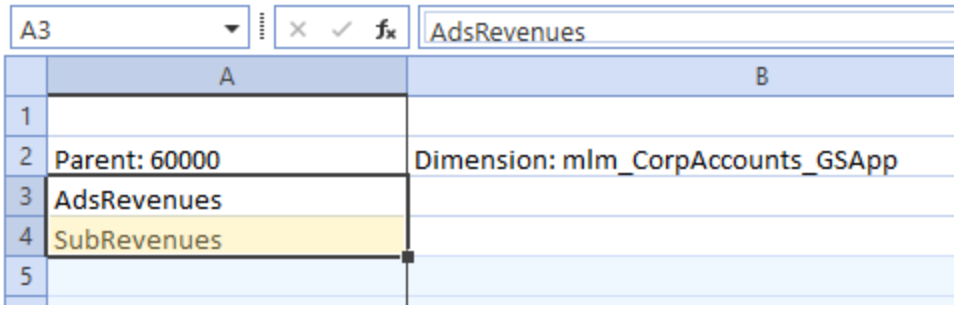
1. Copy a few cells from Excel to extend the account.



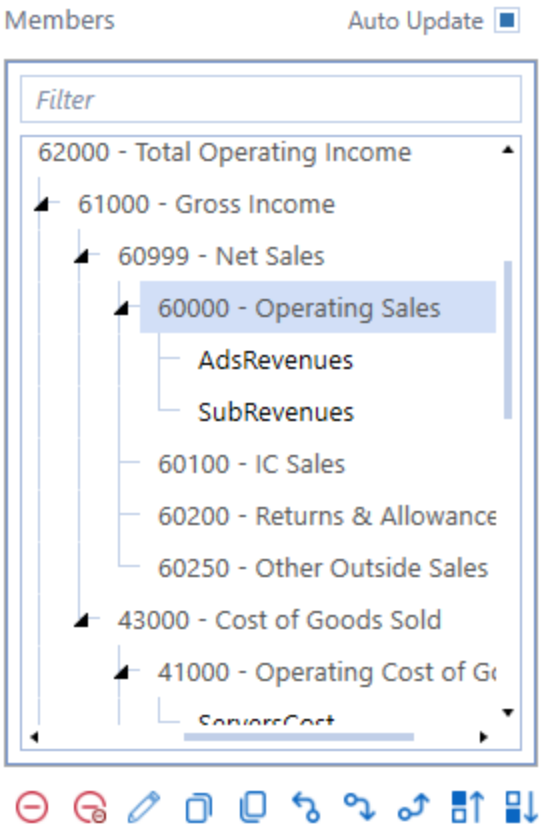
2. Highlight the account in the Member hierarchy. The spreadsheet display updates to show this account.



3. Paste the cells directly into the spreadsheet view.



4. Select the Account Type and click **Save**. The Parent hierarchy dynamically updates to reflect what you changed in the spreadsheet.



Views

Create views for the data in the model for input and reporting.

Select rows, columns, and point of view for what you would like to see in the report. After you build the report, return the results as a web form, spreadsheet, or a PDF. Save the view as either private or public.

You can use views that you have already created as a basis for formulas, data input and reporting.

> **NOTE:** The rows and columns dimension defaults to children and not base.

Design the Cube View

The Views page allows you to design what your cube view will look like. You can save filter values that dictate how your cube view is rendered. Your cube view is not created until you click **Create Cube View**.

After you create your cube view on the user interface you are looking at the visual interpretation of the data at the time the cube view was created. You will see the actual cube view on the Formulas or Review pages.

You can create a cube view for:

- Formula editing on the Formulas page
- General use such as data import and collaboration

After you create a model, cube views that you create in a model are stored in that model's cube group.

> **NOTE:** The Access and Maintenance group in the cube view group inherits the security group assigned in Global Settings Access and Maintenance Group settings upon creation.

Open the Views Page

1. Click **Launch Cube View Builder Page**.
2. Select a cube.

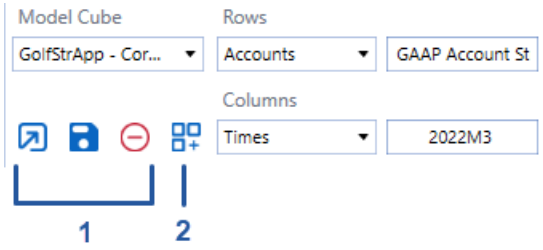
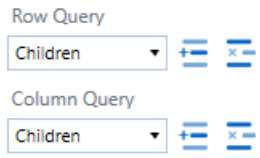
   > **NOTE:** If you selected a cube on the Model page, these filters are pre-selected: Scenario, Entity, Account, UD1-8, and the cube section of the Select Member dialog box.

3. Select specific cube view properties, point of view, and style.

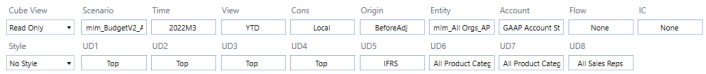
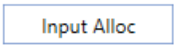
   > **NOTE:** Style applies to Cube View and Spreadsheet.

4. (Optional) For each dimension, choose a point of view member.

Cube View Properties

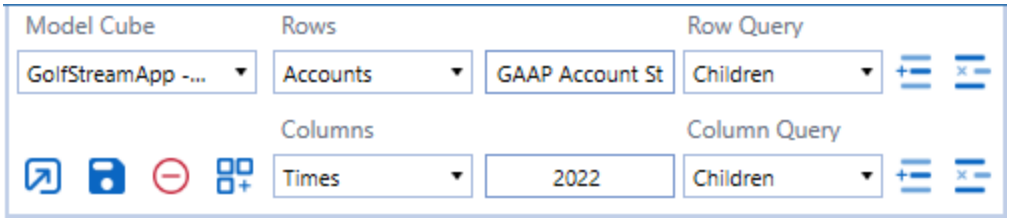
Area in Header Toolbar	Description
	Rows and Columns filters provide the design flexibility needed to determine the granularity of your dimensions in a cube view. **1** - Use the first 3 icons (Open Saved Filter Values, Save Filter Values, and Delete Saved Filter Values) to design and modify your filter definition. **2** - Use the fourth icon (Create Cube View) to create the actual cube view.
	Options to keep or remove specific members Each query has its own keep or remove member filters.

Cube View Properties

Area in Header Toolbar	Description
	Point of View: All dimensions that are neither in row nor column and are instead the Point of View of the cube view.
	Input Allocation: Allocate equal values to children members of a parent. Apply the total value on the parent and the children will get the shared value of that total. **NOTE:** Input Allocation is only displayed if you select **Read Write** from the Cube View dropdown list.

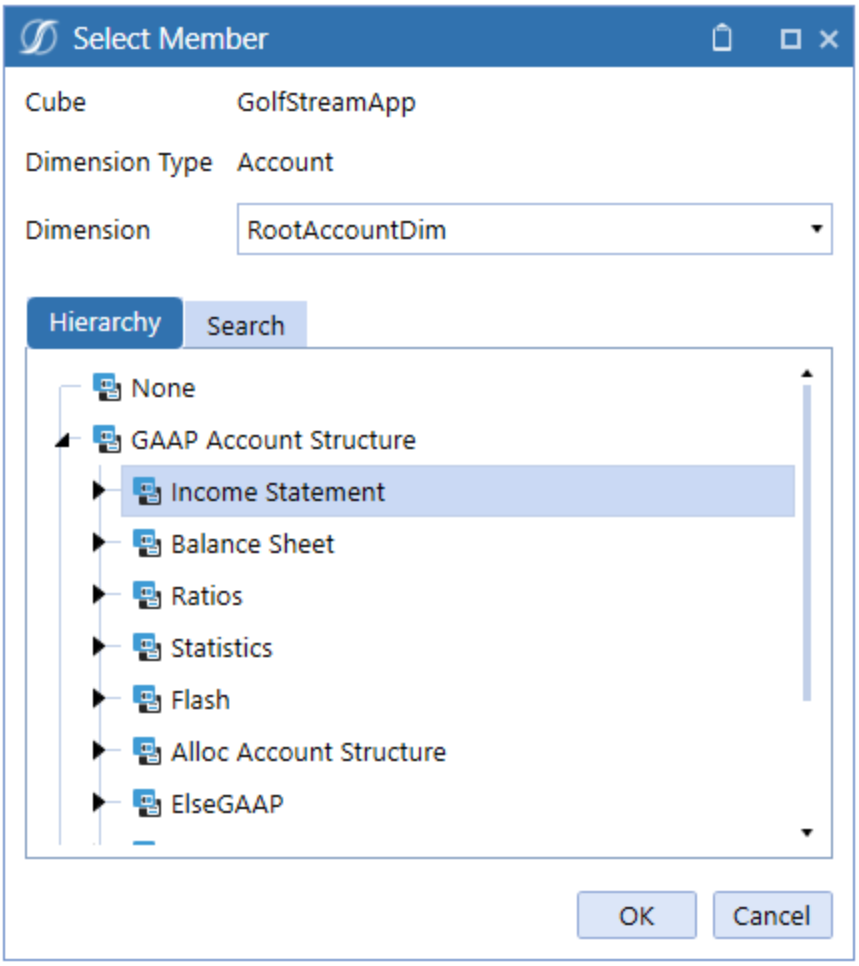
Select Rows and Columns

1. In **Rows** click an option.



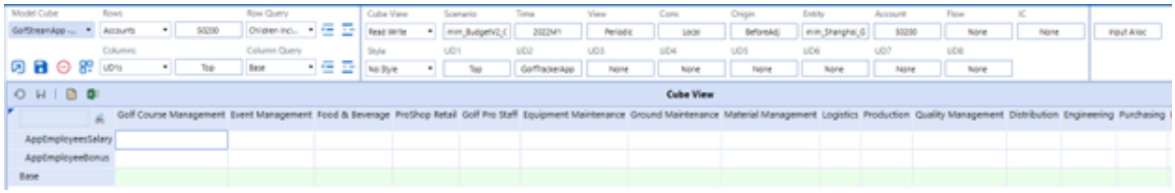
> **NOTE:** If the cube view uses the Account dimension in Row or Column, the drop-down list for the Formulas page will include that cube view and you will be able to write formulas into the accounts chosen.

2. Click a Row or Column name and the Select Member dialog box opens. The filters for each dimension display in a hierarchy.



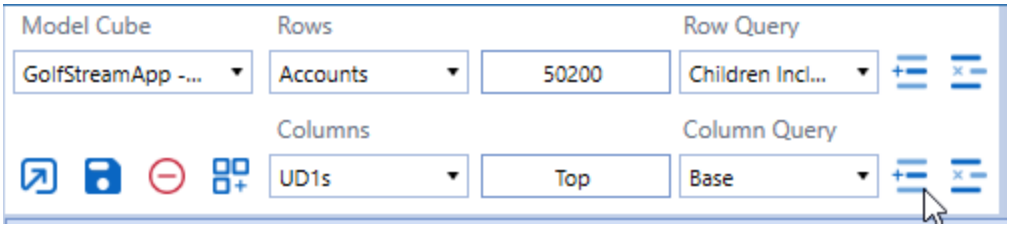
3. Select or search for a member.

4. Click **OK**.

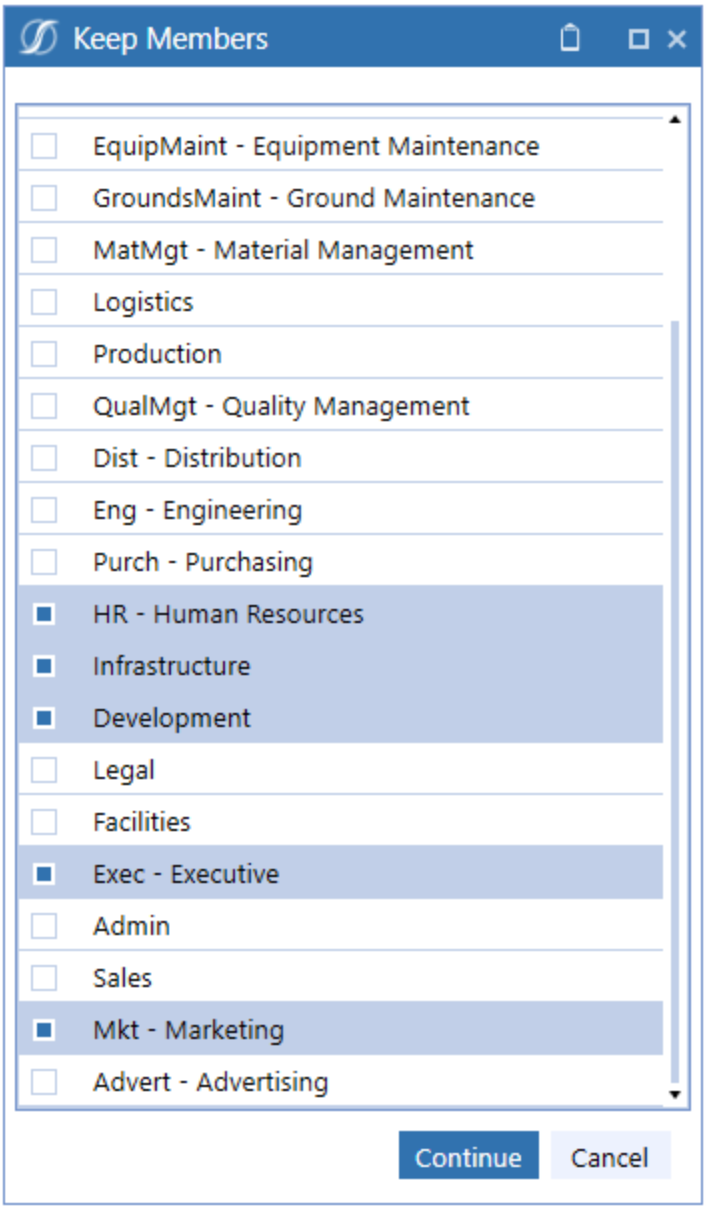


5. To multi-select members to keep for rows and columns:

    a. Click **Keep Row Members** or **Keep Col Members**.

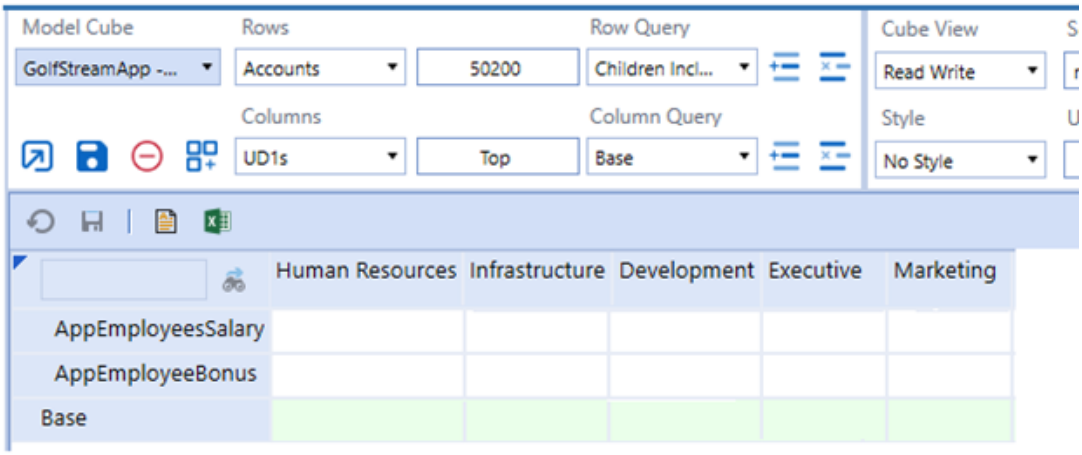


The Keep Members dialog box opens.



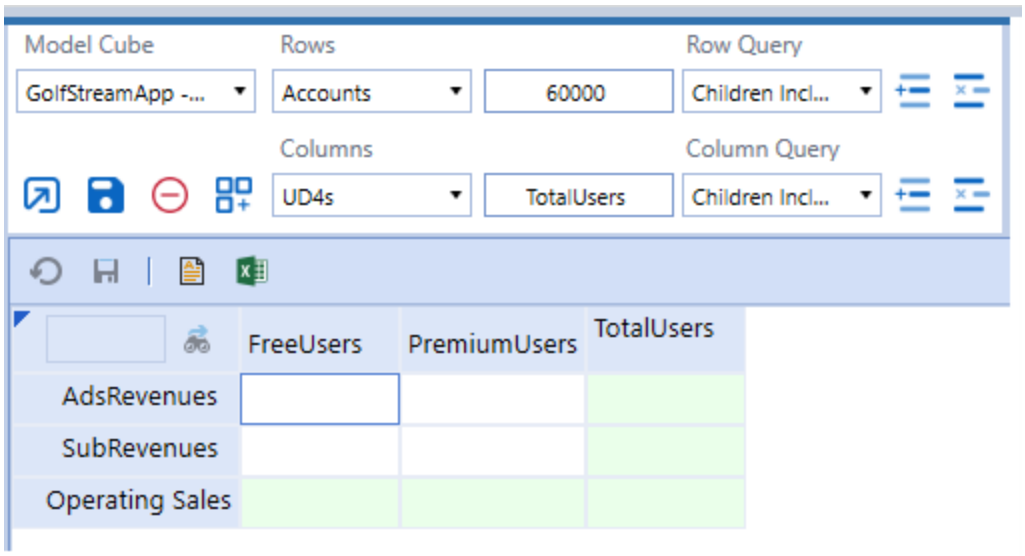
b. Select the members to keep and click **Continue**.

The cube view updates to show the members you selected.

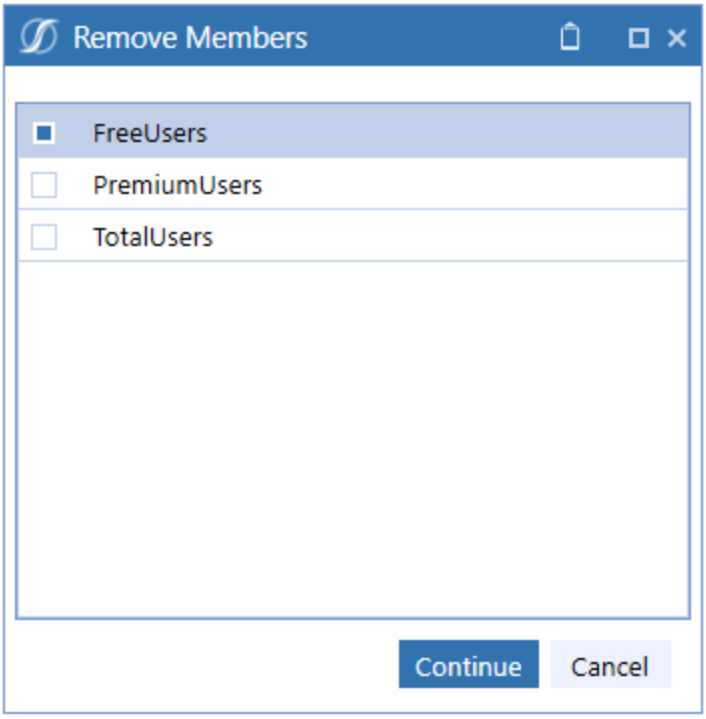


6. To multi-select members to remove for rows and columns:

   a. Click **Remove Row Members** or **Remove Col Members**.

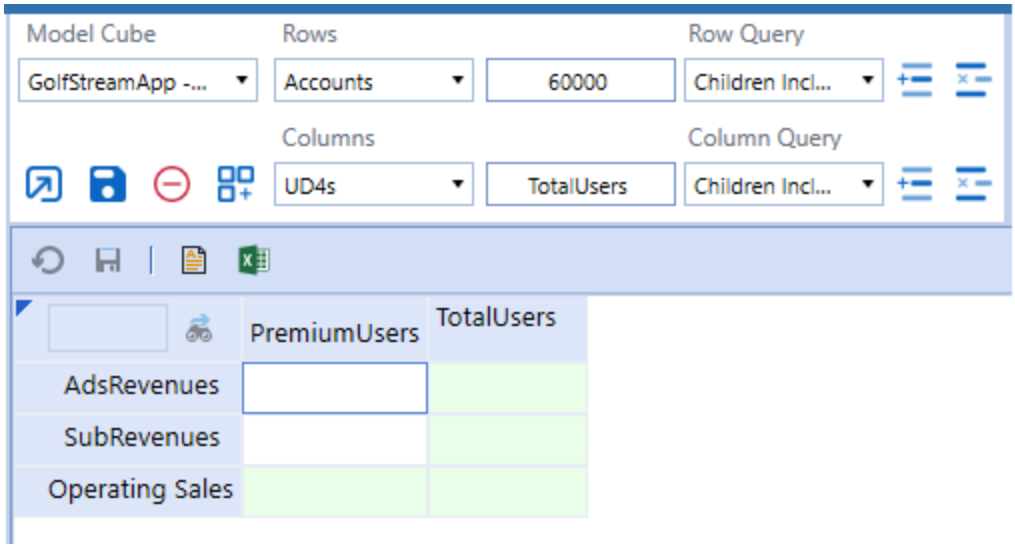


   The Remove Members dialog box opens.



b. Select all of the members to remove and click **Continue**.

c. The cube view updates to show the members you selected no longer appear in the view.

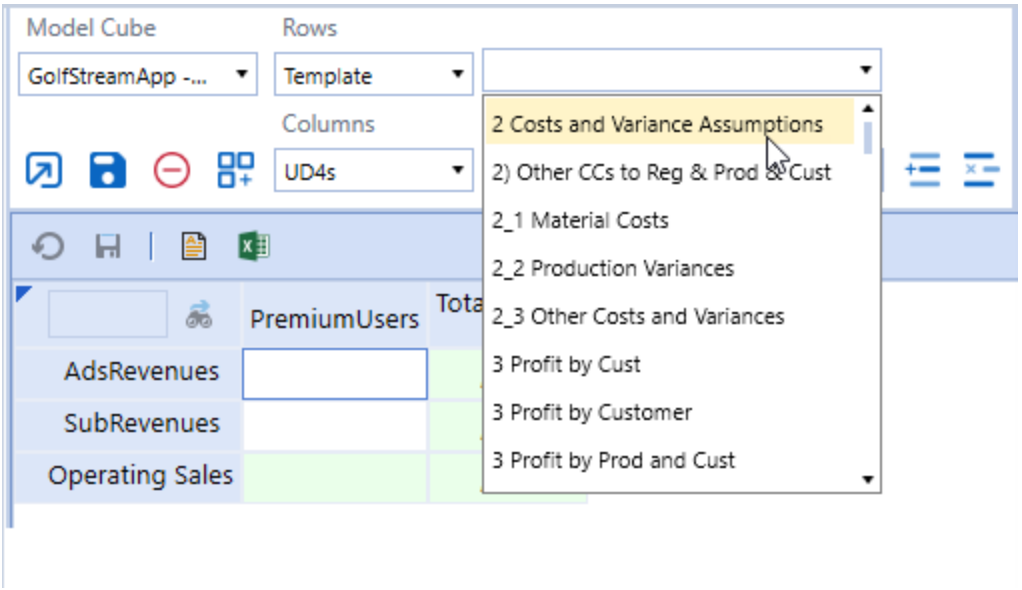


Select a Template

In Rows and Columns choose **Template**. Templates allow you to select another cube view that you have in the application and it will share the rows from that cube view.

Administrators may use templates to provide pre-defined row sets and column sets.

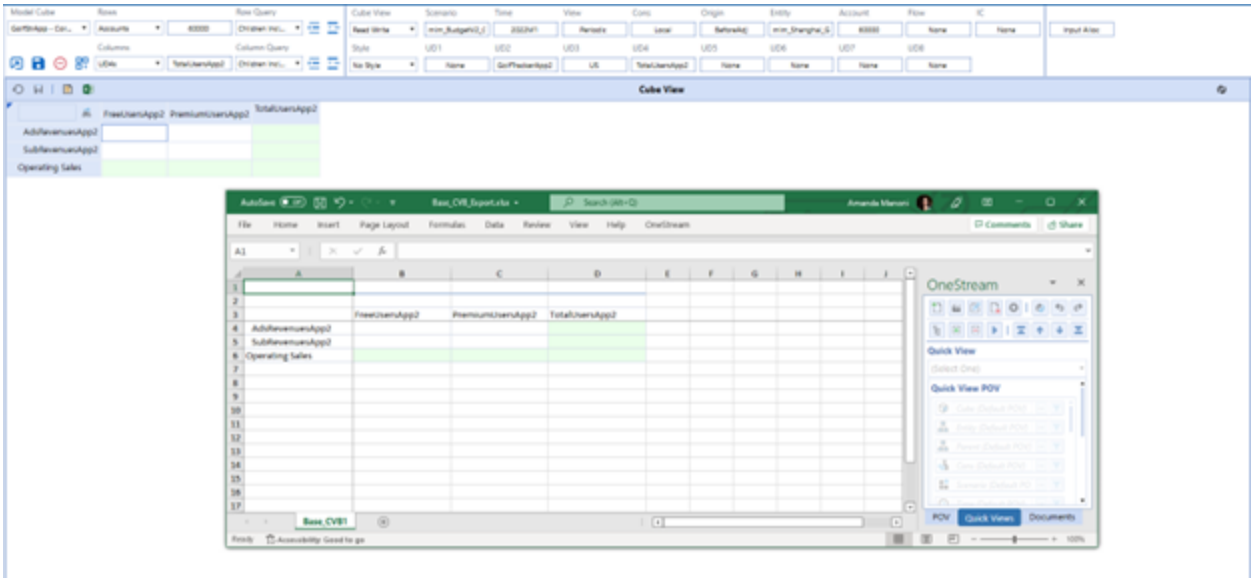
1. In Rows, click **Template**.
2. Select a specific template to apply.



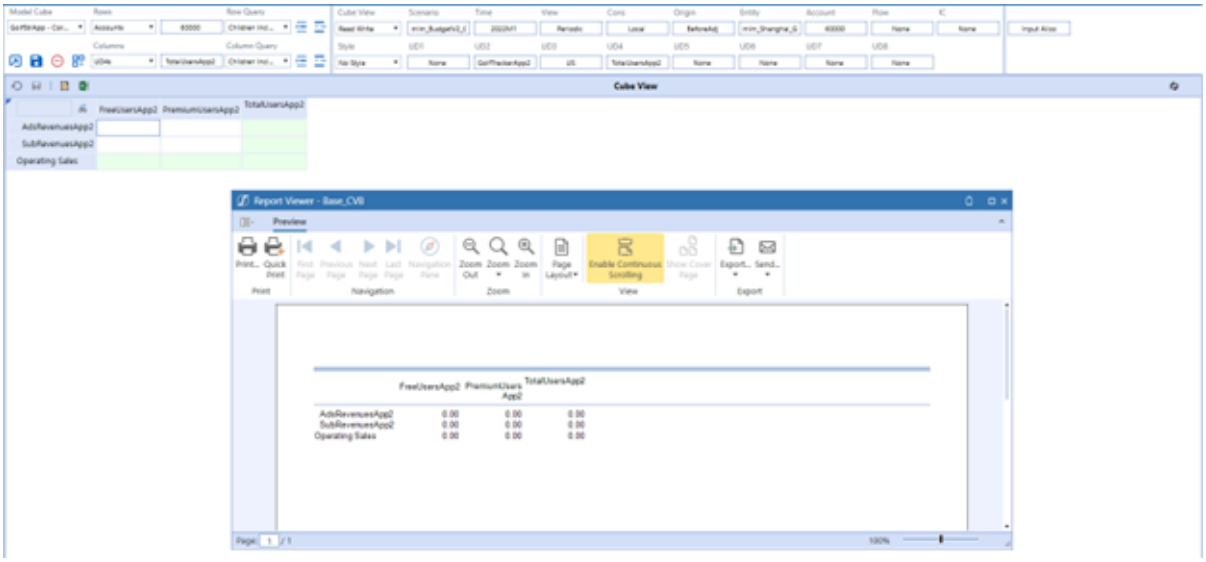
Preview a Cube View in Spreadsheet or Report

While designing your cube view, you can visualize what it will look like prior to creating it using the spreadsheet or report viewer. For more information on using spreadsheets or reports, see Design and Reference.

Click **Spreadsheet**.

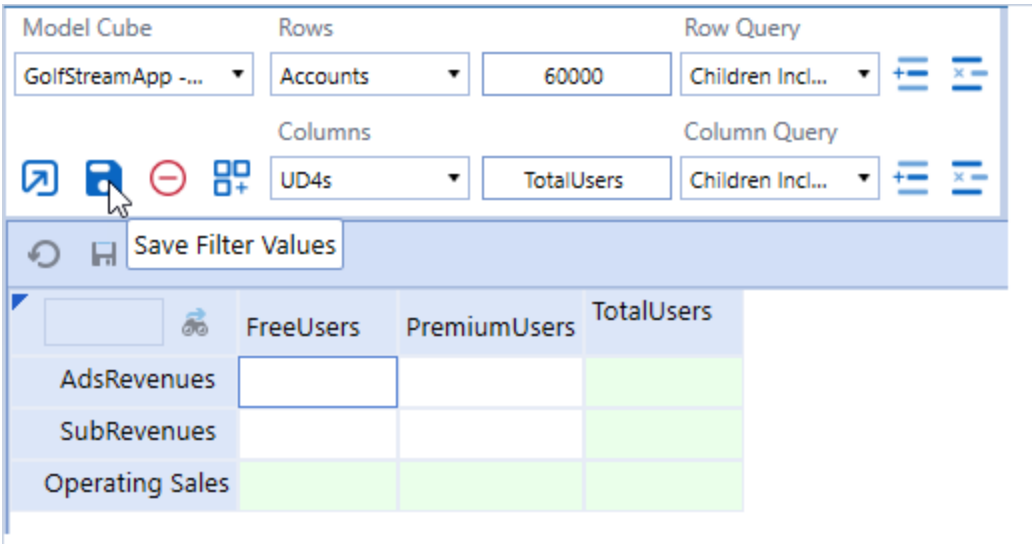


Click **Report**.

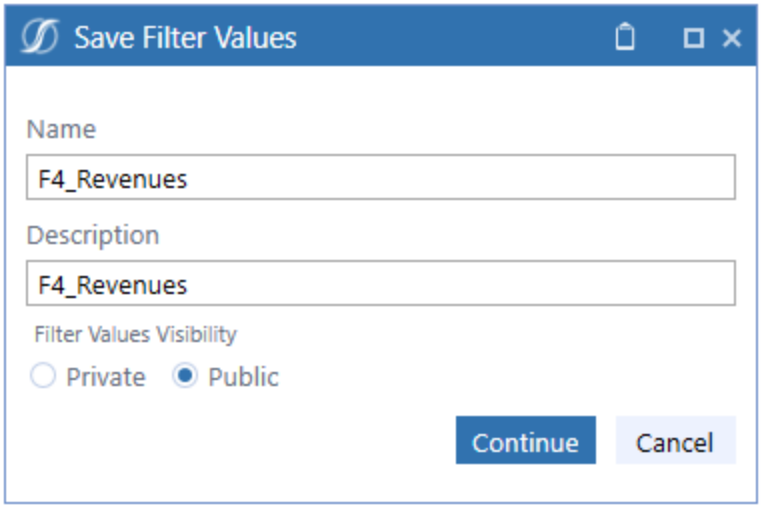


Save Filter Values

1. Click **Save Filter Values**.



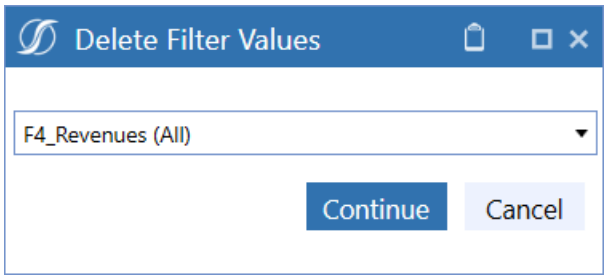
2. In the Save Filter Values dialog box, enter a name and description for this dynamic cube view. For other modelers to see it, select **Public**. It is **Private** by default.



3. Click **Continue**. Your filter value is saved.

Delete Filter Values

1. Click **Delete Saved Filter Values**. The Delete Filter Values dialog box opens.

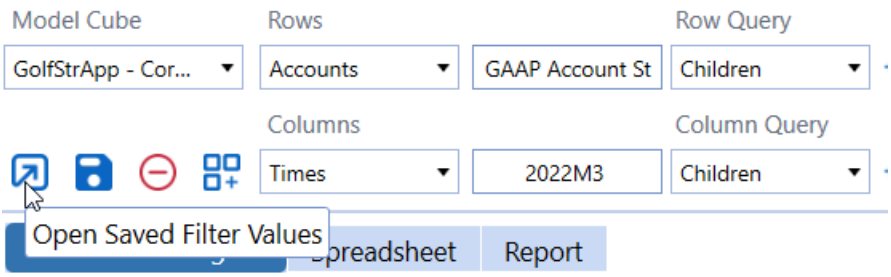


2. Choose the filter value from the list and click **Continue**. The filter is deleted.

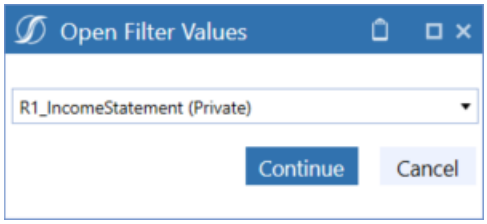
Open Filter Values

When you click Open Saved Filter Values, it is a dynamic cube view. This cube view is not a real cube view but rather set to display column and row data based on selected member filters only.

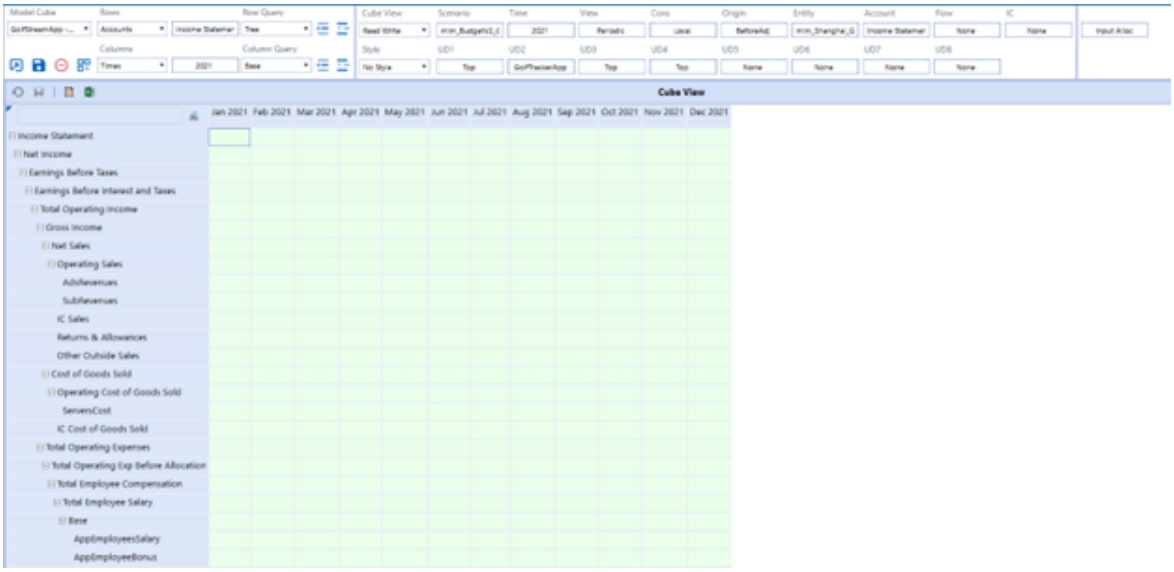
1. Click **Open Saved Filter Values**.



The Open Filter Values dialog box opens.



2. Choose a filter value from the list and click **Continue**. OneStream sets all the variables and shows data.



3. (Optional) In cube view change **Read Only** to **Read Write** if you want to change any of the data.

   At this point it is not saved as a cube view.

Opening a previously saved filter view has its advantages. If there are a few modifications you would like to make for a new cube view, you can use a previously saved filter value as a baseline for those minor adjustments, save those filter values using a new filter value name, and create that modified cube view from your modified parameter set.

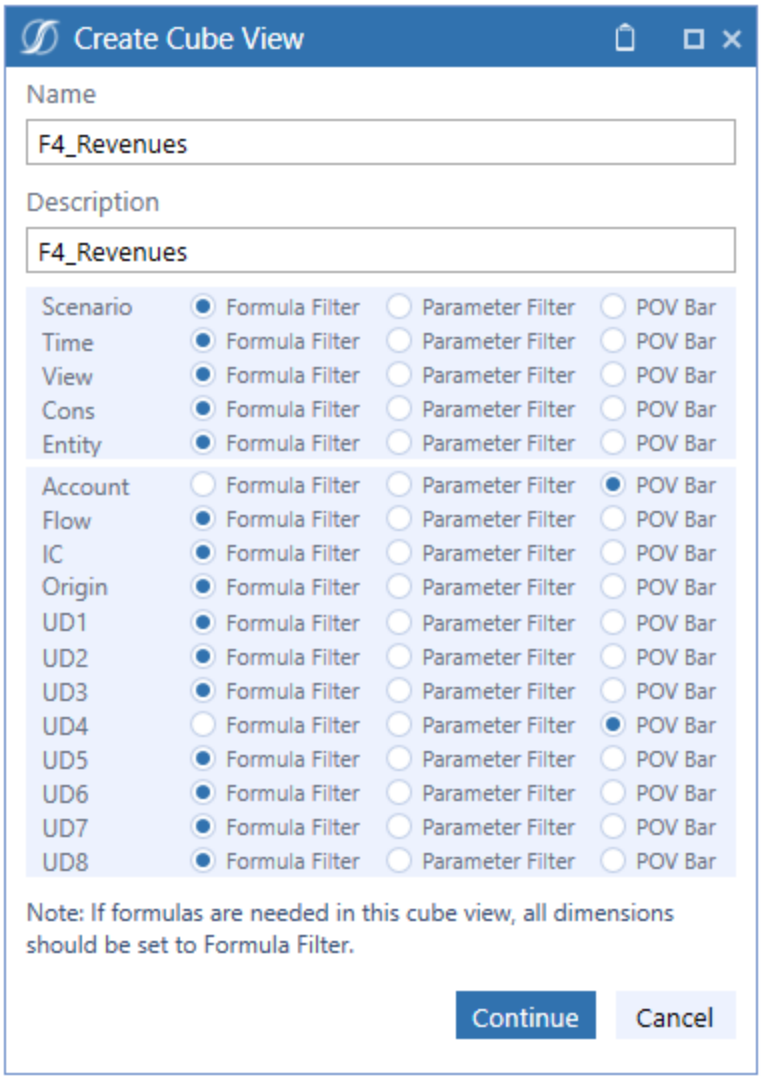
> **NOTE:** If you save a filter value using a previously used name, your filter values will be overridden by the newest value set. However, this action will not override a materialized cube view for the original saved filter value. Filter values are not actual cube views, they are a saved set of parameter filters.

Create the Cube View

Create a cube view for formulas.

> **NOTE:** How you set up the cube view and which settings you choose (**Formula Filter**, **Parameter Filter**, or **POV Bar**) dictate how you will be able to use it in formulas.

1. Click **Create Cube View**.
2. Enter a name and description.
3. Select settings for the cube view member filters. The dimensions you chose for the row and column will automatically default to POV Bar and all the other dimensions will be set to Formula Filter.



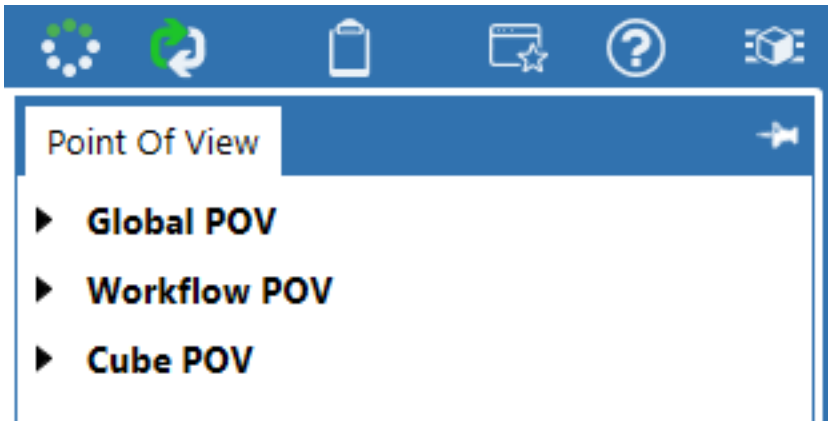
> **NOTE:** If you plan to apply formulas to the cube view, set all dimensions to Formula Filter.

a. **Formula Filter**: Sets the cube view member filters to the exact member in the combo boxes.

> **NOTE:** If you choose **Formula Filter** and you use the cube view to create a formula, the initial formula scope will match the filters in the cube view. However, it is possible to expand the formula scope directly in the formula editor. The cube view will act simply as a template to start from when creating the formula, while the resulting formula can span a larger dataset than what was included in the cube view.

b. **Parameter Filter**: Sets the selected dimensions to run-time parameters. You are prompted to select a member after opening the cube view.

c. **POV Bar**: Uses the correct POV pane selections.



4. Click **Continue**. A dialog box opens to state that you successfully created the cube view.

5. Click **OK**.

Formulas

The Formulas page provides the ability to manipulate amounts of data using a data-driven interface. Formula writing allows for the selection of cells from a single cube view or multiple cube views to be referenced in the actual calculation. Model Maker allows you to preview, save or delete formulas based on your specific needs. When a cube view is selected for formula writing, you can add or remove an account to the selected cube view.

Add Formulas to the Model

Your cube view setup and settings dictate how you will be able to use the cube view in formulas.

Your cube view appears in your Cube View 1 drop-down list if:

- The cube view contains the account dimension in either the row or column.
- Upon materialization of the cube view, all dimensions were set to formula filter.

When using two cube views for formula writing, the right panel only lists cube views created in Model Maker. Cube View 1 is set to cube views created in the specific model cube selected.

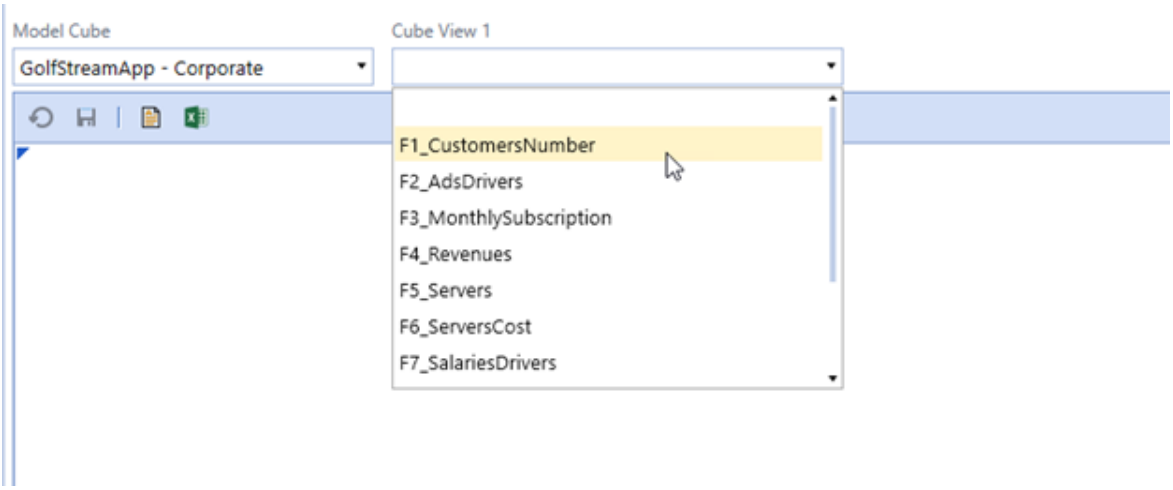
- > **NOTE:** If you create a cube view outside Model Maker, the cube view will not appear in the Cube View 2 list on the Formula page.
- > **NOTE:** You cannot add formulas to inherited members in your OneStream

application.

- **NOTE:** You cannot write formulas against a parent member.

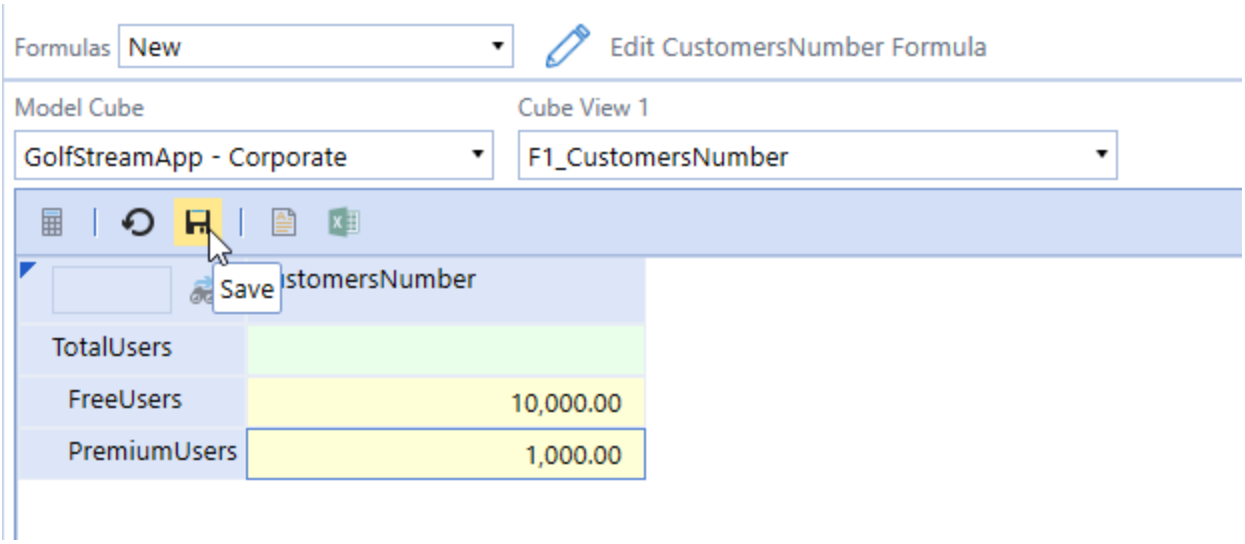
Open the Formulas Page

1. Click **Launch Account Formula Builder Page** to open the Formulas dashboard. By default, in **Model Cube** the model you chose previously is selected.
2. In **Cube View 1** select a cube view.

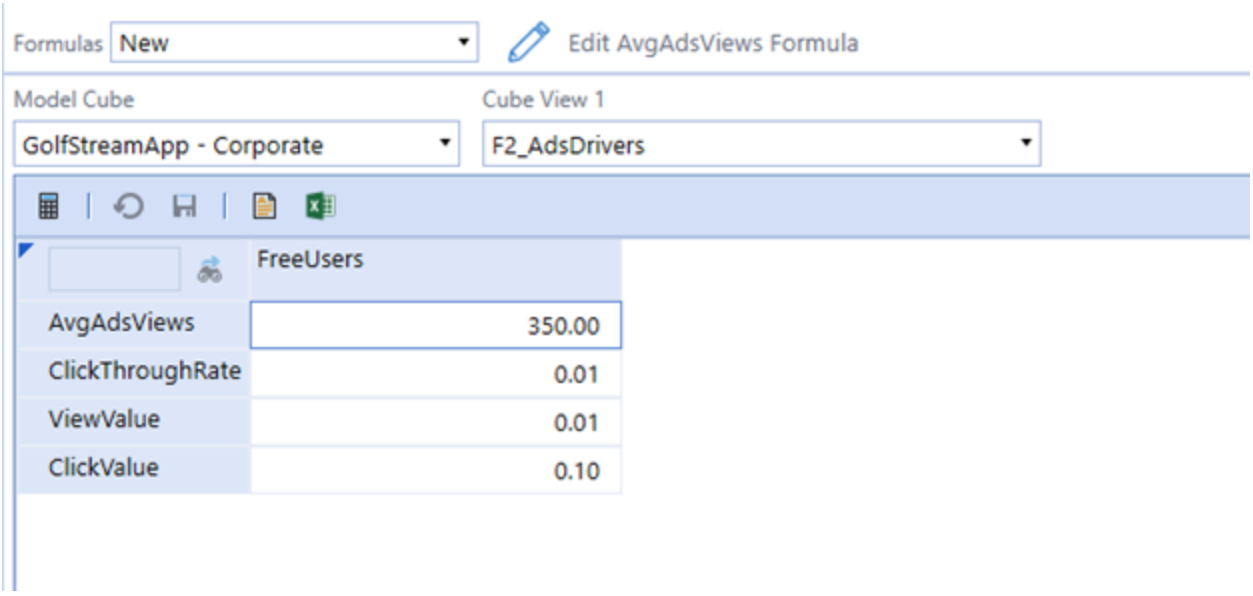


Prior to creating formulas, if you have created cube views that should contain driver information, you can add that data through the formulas page.

Enter data into the white cells that indicate valid intersections of the cube view and click **Save**. The example below shows the number of customers that are FreeUsers and PremiumUsers.



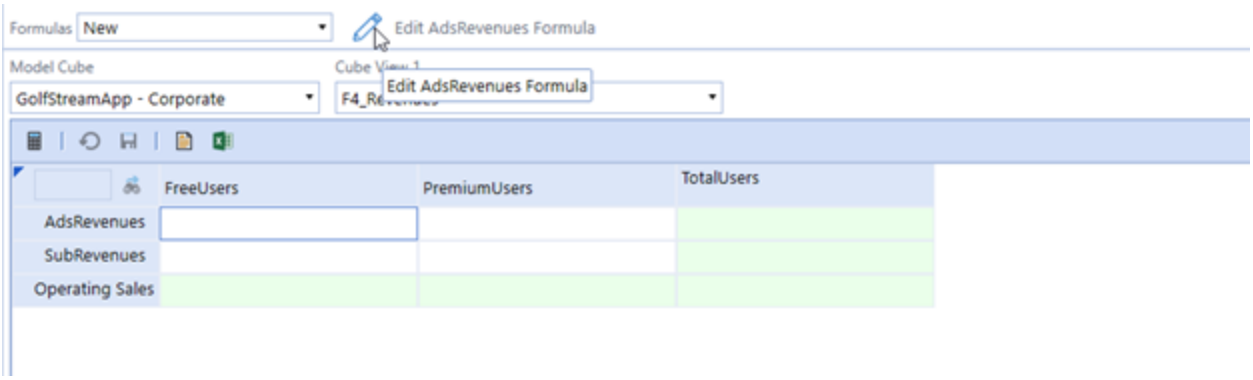
Additional drivers that help calculate the AdsRevenue is the AdsDrivers. The example below shows the populated data for average advertisement views, click through rates, view value and click value.



You have established your data drivers. The next section will create the AdsRevenue formulas using the Revenue cube view. See "Create a Formula" below.

Create a Formula

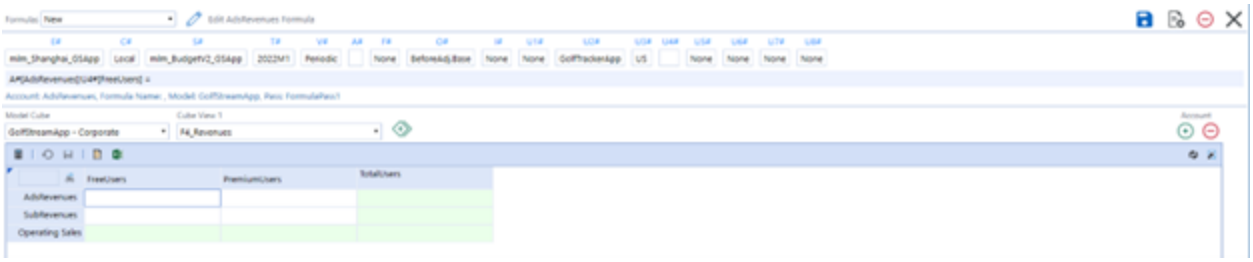
1. Select any cell within your cube view where your formula will be required.
2. Click the button next to Edit Formula. Notice that in the example below Edit Formula updates to the column selected, AdsRevenues.



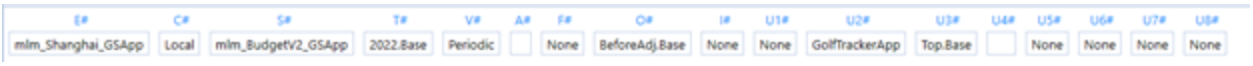
3. A formula editor opens below the formulas dropdown list that allows you to see the formula filters and edit the formula if needed.

   The formula to the left of the = sign will populate initially based on the first cell defaulted on the cube view. If you select a different cell and click Edit Formula again, the formula will update to the left of the = sign to reflect the selected cell.

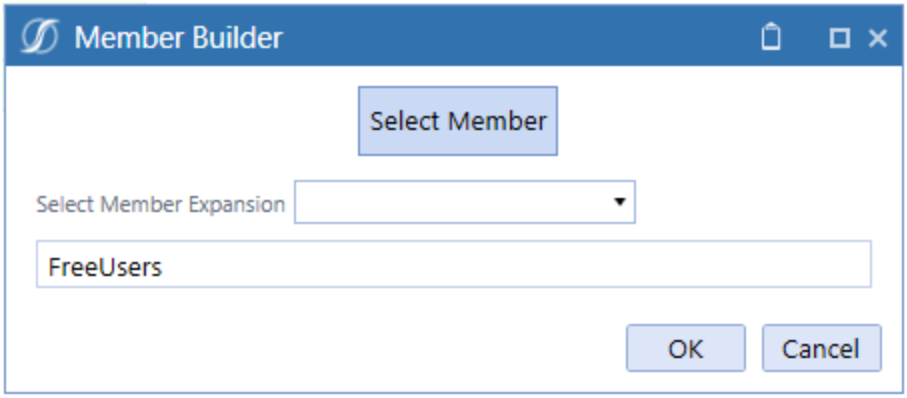
   If you change the dimension filter, the formula will update based on your new criteria.



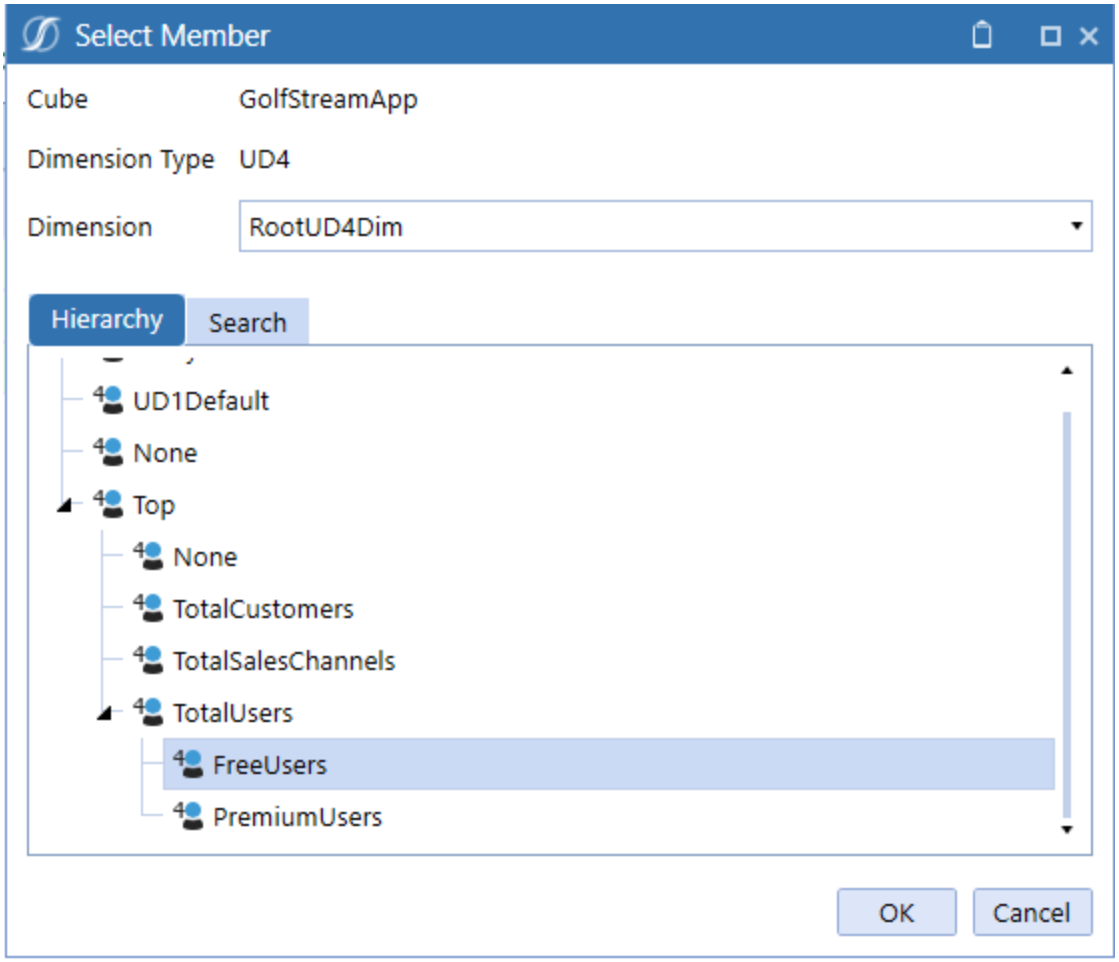
When the formula editor opens, a few items will default for each dimension. These dimension filters are calculation filters representing all the dimensions on which the formula will run without any relevant change. These represent the scope for this formula.



4. Click any dimension icon to open a Member Builder dialog box. In this example, the modeler clicked U4#.

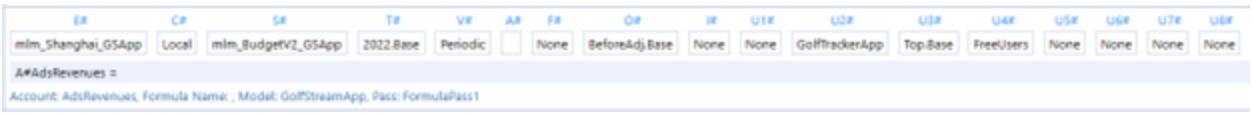


5. Click **Select Member**. The Select Member dialog box opens.



6. Choose a member from within the UD4 dimension type and click **OK**.

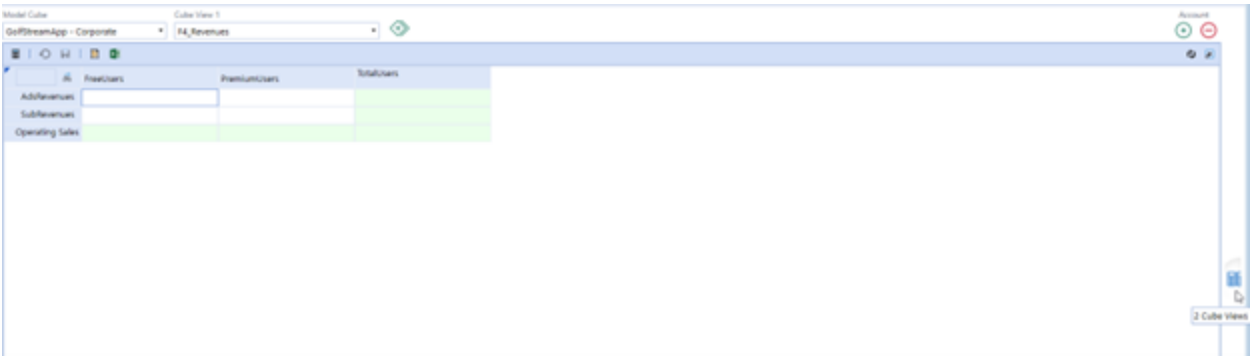
   In this example the formula updated to consider FreeUsers from the dimension filter and is not directly noted to the left of the = sign. Also, the modeler modified T# to reflect 2022.Base instead of 2022M1. The cube view is fixed, so you would not see the updates in the cube view itself. However, it is part of the formula. To see the results, create a variation of the cube view to analyze the full year as opposed to focusing on 2022M1.



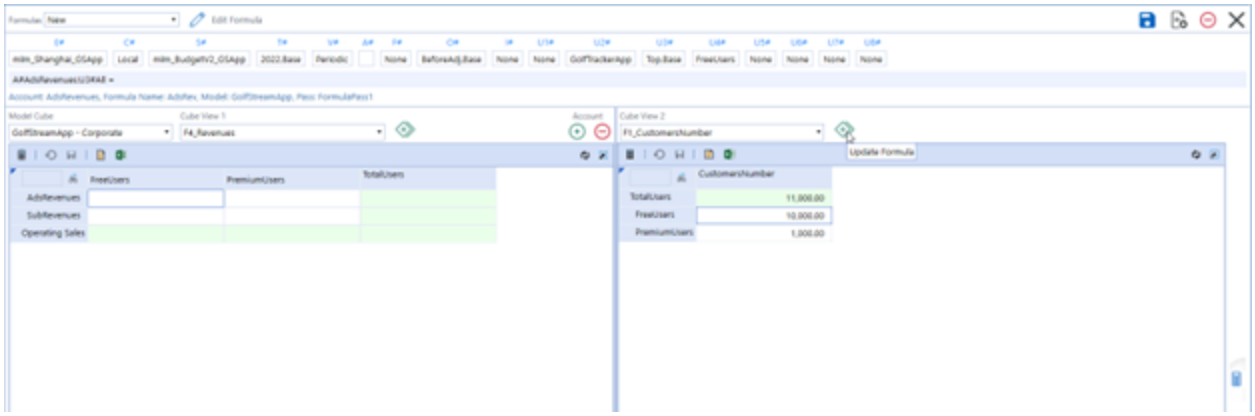
7. To incorporate data drivers from another cube view, see "Open a Second Cube View" below.

Open a Second Cube View

1. To incorporate data drivers from another cube view, click **2 Cube Views** located on the right side of the cube view. A list for Cube View 2 displays all cube views that have been created in Model Maker.



2. Select your desired cube with driver information, highlight the cell that contains the data you need, and click **Update Formula**.



> **NOTE:** Toggling between the 2 Cube View and 1 Cube View icons will change the user interface to show either 1 or 2 cube views.

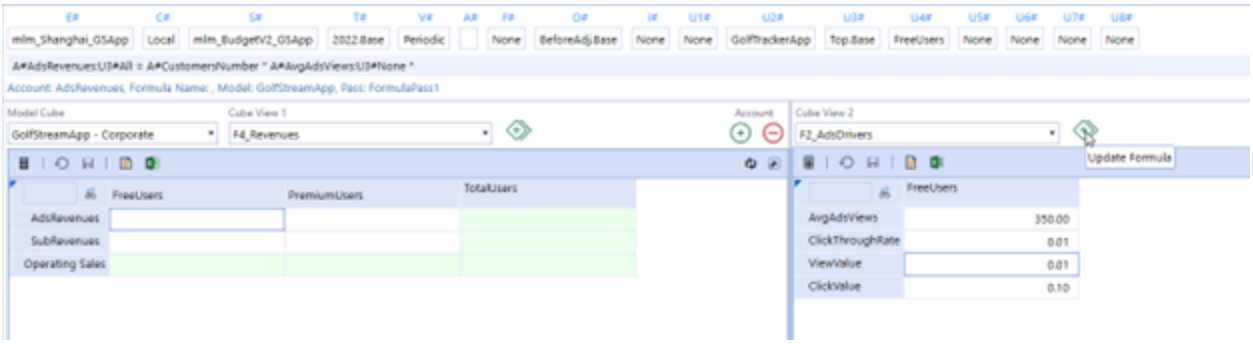
3. Enter *, +, /, or – and add more cells to complete the formula.

```
A#AdsRevenues = A#CustomersNumber
```

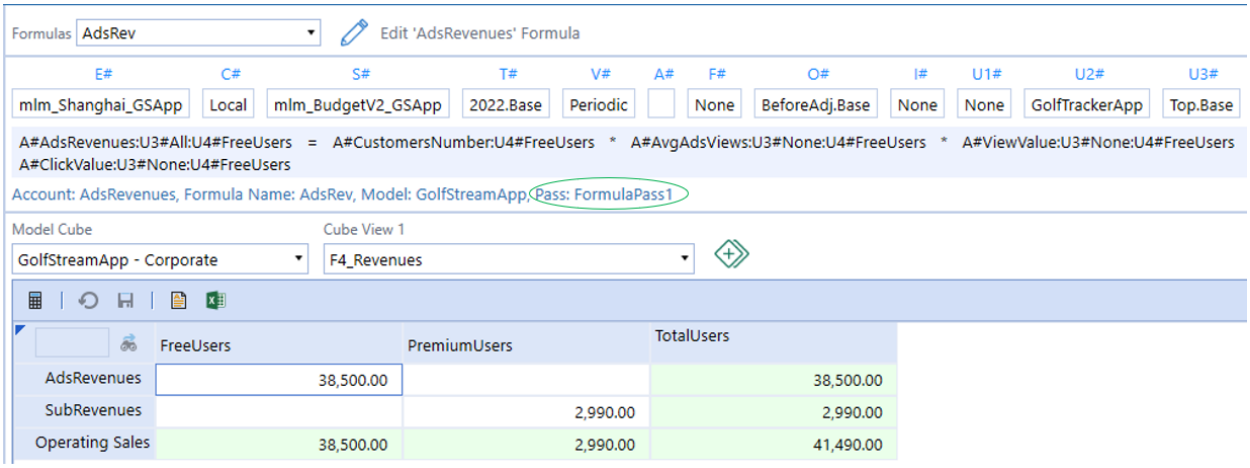
4. As you add more cells to the formula, you will see that the account formula changes based on the relationship between the dimensionality of cube view 1 and cube view 2.

```
A#AdsRevenues:U3#All:U4#FreeUsers = A#CustomersNumber:U4#FreeUsers * A#AvgAdsViews:U3#None:U4#FreeUsers * A#ViewValue:U3#None:U4#FreeUsers
```

5. Continue to add data into the formula from as many cube views as you need. The image below shows that the modeler added a second half of the formula using the F2_ AdsDrivers rates for FreeUsers.



6. Model Maker will read the dependencies within your formula script and identify the formula pass within the highlighted area below. Since there are no dependencies in this example, Pass: FormulaPass1 is shown.

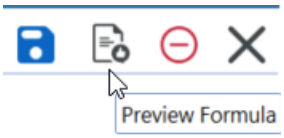


7. When your formula is complete, you can preview the results prior to saving. Refer to "Preview the Formula" below.

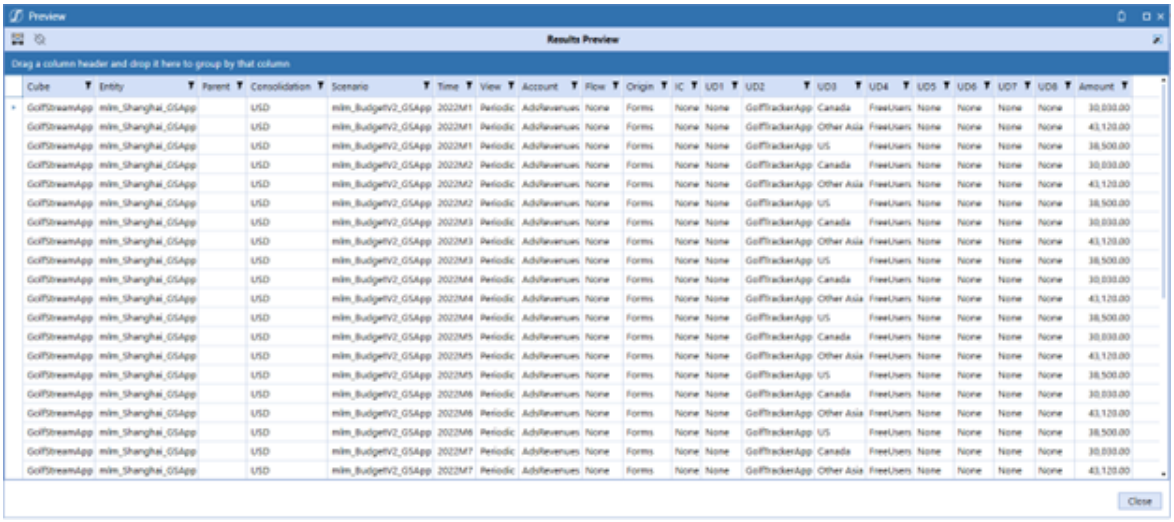
Preview the Formula

The preview allows you to see the data that the formula will return, based on your specific dimension filters, without running a calculation.

1. Click **Preview Formula**. The Results Preview opens.



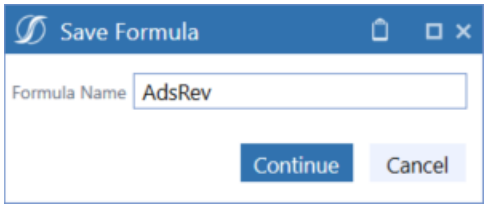
It contains a data table as shown below. In this example, time is calculated for all months instead of 2022M1 and UD4 shows results for FreeUsers only.



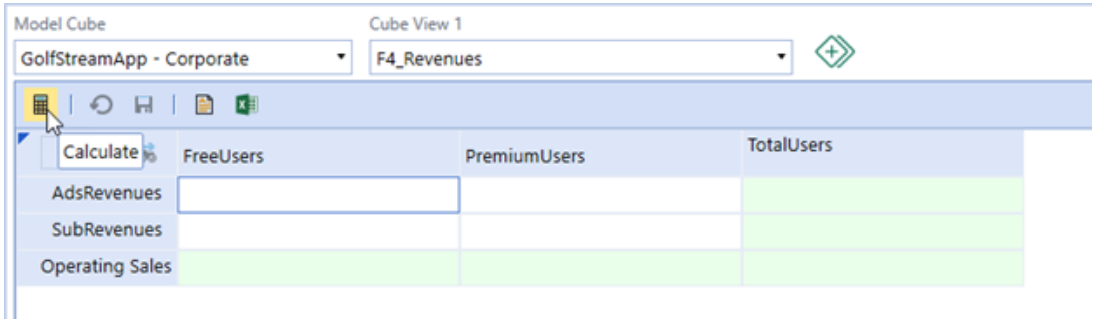
2. After the formula is established, save the formula, and calculate to see results in the cube view.

    a. Click **Save Formula**.

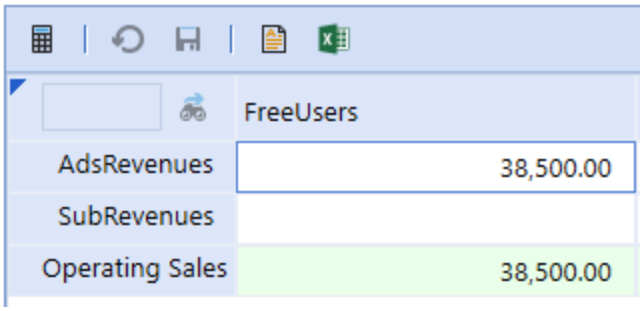
    b. In the Save Formula dialog box, enter a name and click **Continue**.



c. Click **Calculate**.



The formula is calculated.



Add Multiple Formulas to One Account

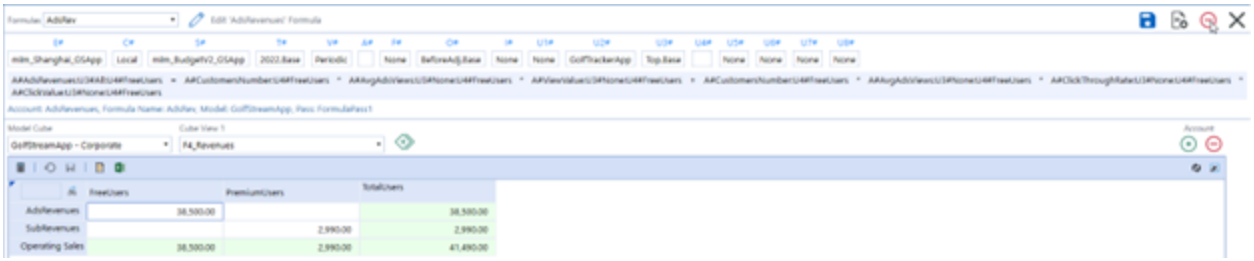
Model Maker provides the flexibility of saving multiple formulas to one account.

1. Select the POV cell.
2. In Formulas, select **New**.
3. Add components to the formula and click **Update Formula**.
4. Click **Save Formula**.

Delete a Saved Formula

Delete formulas that are no longer relevant.

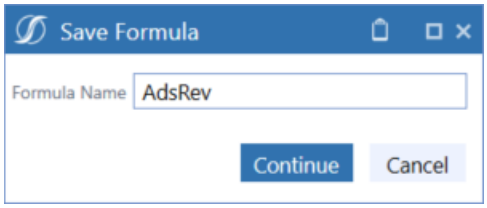
1. Navigate to the cell that contains the formula from your cube view.
2. Select the saved formula from the **Formula** drop-down list.
3. Click **Delete** and refresh your cube view.



> **NOTE:** Once a formula is deleted, the data will remain based on the last calculation.

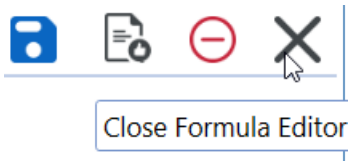
Save the Formula

1. Click **Save Formula**.
2. Enter a formula name and click **Continue**.



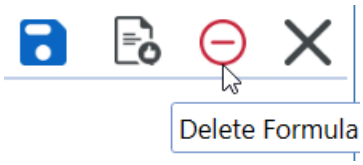
Close the Formula Editor

Click **Close Formula Editor**.



Delete the Formula

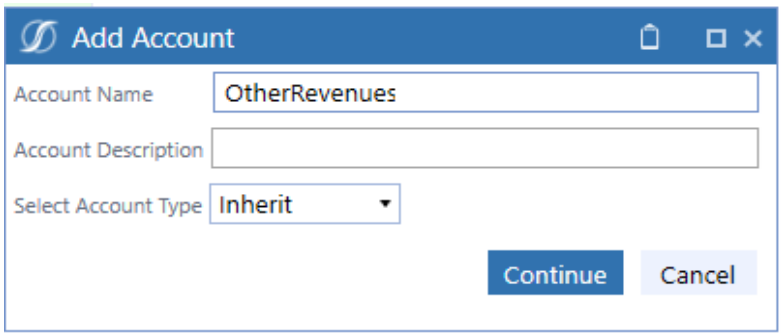
Click **Delete Formula**.



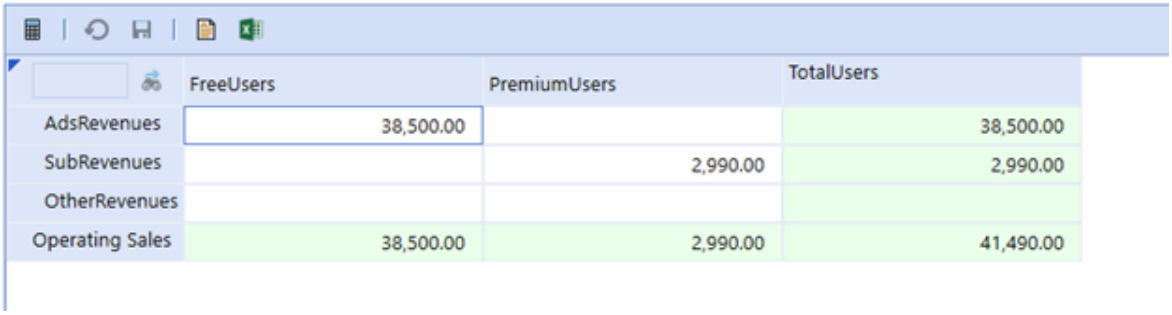
Add an Account

Add an account to an existing cube view and assign the account type from the Add Account dialog box. The addition or removal of an account can only be performed on the left cube view, Cube View 1. In the following example, we inherit the account type that is a child member of Operating Sales.

1. Click **Add Account**. The Add Account dialog box opens.
2. Enter the following information:
    - Account Name
    - Account Description
3. Select an Account Type and click **Continue**.



The new account appears in the list.



	FreeUsers	PremiumUsers	TotalUsers
AdsRevenues	38,500.00		38,500.00
SubRevenues		2,990.00	2,990.00
OtherRevenues			
Operating Sales	38,500.00	2,990.00	41,490.00

You can add formulas to the new account and save it. Going forward, the new account is included in your account dimension.

Delete an Account

1. Select an account from the list.
2. Click **Remove Account**.

> **NOTE:** If there is data in the account, a message will ask if you want to delete the account.

Data Import

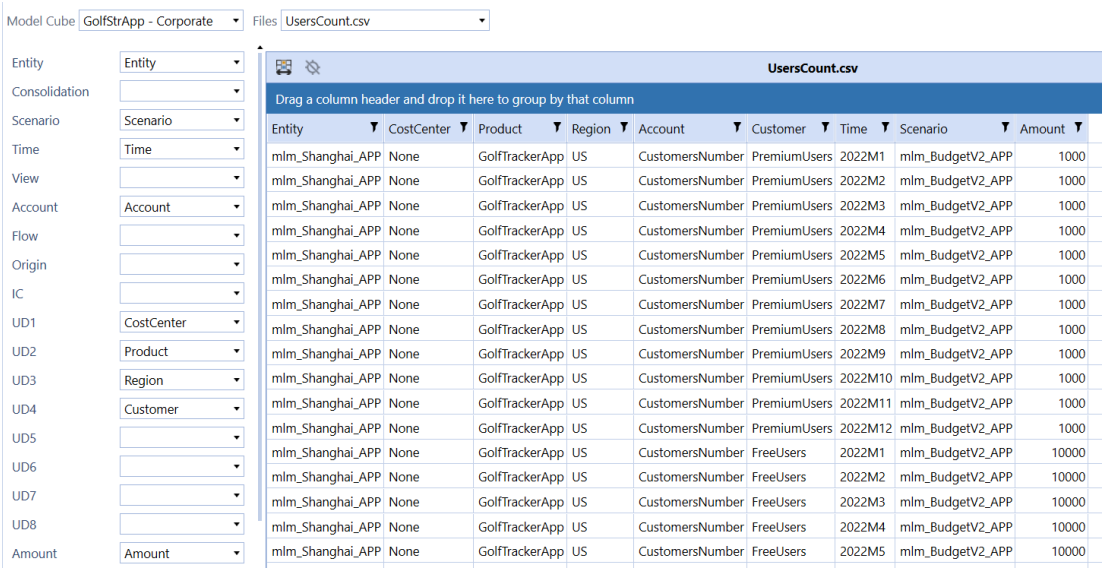
Model Maker has streamlined the data loading process for modelers. You can import large amounts of data via the Data Import page using a .csv file. Once the .csv file is in the correct format, you can upload the file to the OneStream File Explorer using the Import icon. Dimension members that default to None include: all UDs, IC, and Flow. Consolidation will default to Local. The only required columns needed for your .csv file import are Entity, Scenario, Account, and Time.

The OneStream application also has a Validate button that checks each line of data to ensure data quality.

Import Data

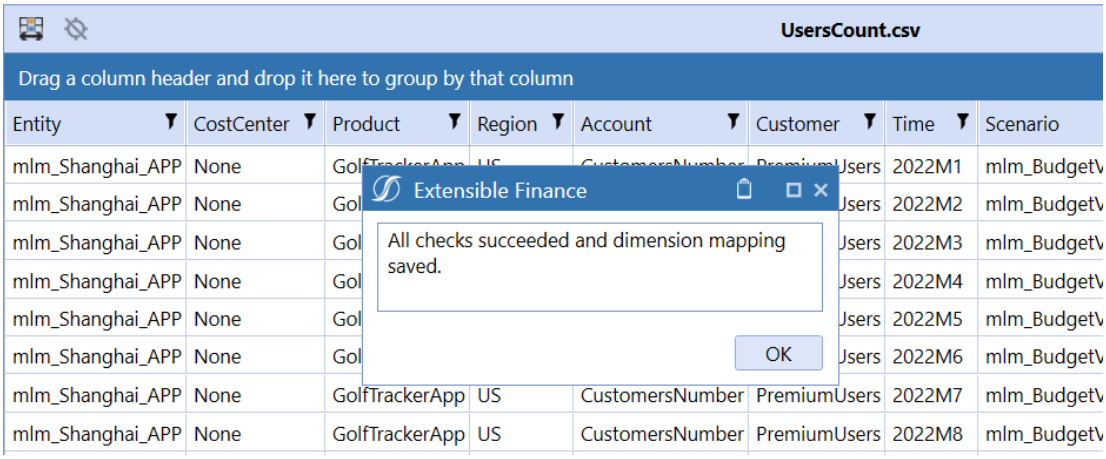
1. Click **Launch Data Import Page**. If you selected a model cube, the Model Cube field will be pre-populated. If not, select the model into which you want to import data into from the drop-down list.
2. Click **Import** and select the external .csv file that contains the information to load. Once imported, you will receive confirmation that the file is in the OneStream File Explorer.
3. Once the file is imported, select it from the **File** drop-down list and begin mapping your columns to the dimensions to the left.

> **NOTE:** If you have already used the file, the dimension mapping will populate for you.



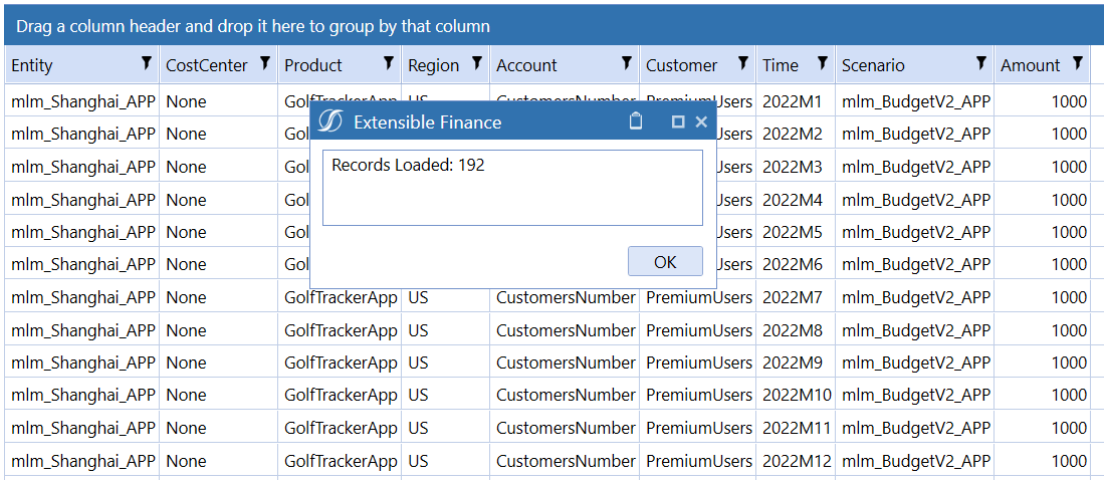
4. Once the mapping is defined , click **Validate**.

> **NOTE:** Validate ensures that all members in the file are part of your model cube and saves the fields and dimension mapping of the file. If you have members on the .csv file that are not part of your model, you will receive a message and the data will not load for those specific members.



5. When validation is complete, click **Load**. When load is complete, you will get confirmation on the number of records that have successfully imported to your model.

> **NOTE: Load** only displays after you click **Validate** and the validation was successful. You must validate before loading.



Entity	CostCenter	Product	Region	Account	Customer	Time	Scenario	Amount
mlm_Shanghai_APP	None	GolfTrackerApp	US	CustomersNumber	PremiumUsers	2022M1	mlm_BudgetV2_APP	1000
mlm_Shanghai_APP	None	GolfTrackerApp	US	CustomersNumber	PremiumUsers	2022M2	mlm_BudgetV2_APP	1000
mlm_Shanghai_APP	None	GolfTrackerApp	US	CustomersNumber	PremiumUsers	2022M3	mlm_BudgetV2_APP	1000
mlm_Shanghai_APP	None	GolfTrackerApp	US	CustomersNumber	PremiumUsers	2022M4	mlm_BudgetV2_APP	1000
mlm_Shanghai_APP	None	GolfTrackerApp	US	CustomersNumber	PremiumUsers	2022M5	mlm_BudgetV2_APP	1000
mlm_Shanghai_APP	None	GolfTrackerApp	US	CustomersNumber	PremiumUsers	2022M6	mlm_BudgetV2_APP	1000
mlm_Shanghai_APP	None	GolfTrackerApp	US	CustomersNumber	PremiumUsers	2022M7	mlm_BudgetV2_APP	1000
mlm_Shanghai_APP	None	GolfTrackerApp	US	CustomersNumber	PremiumUsers	2022M8	mlm_BudgetV2_APP	1000
mlm_Shanghai_APP	None	GolfTrackerApp	US	CustomersNumber	PremiumUsers	2022M9	mlm_BudgetV2_APP	1000
mlm_Shanghai_APP	None	GolfTrackerApp	US	CustomersNumber	PremiumUsers	2022M10	mlm_BudgetV2_APP	1000
mlm_Shanghai_APP	None	GolfTrackerApp	US	CustomersNumber	PremiumUsers	2022M11	mlm_BudgetV2_APP	1000
mlm_Shanghai_APP	None	GolfTrackerApp	US	CustomersNumber	PremiumUsers	2022M12	mlm_BudgetV2_APP	1000

6. Repeat the previous steps to load more files.

   If a dimension is not mapped to any column, OneStream will use the default of None for all UDs, IC, and Flow dimensions. If Consolidation is not mapped, it will use the default of Local. If forms is not mapped, it will use the default of Origin.

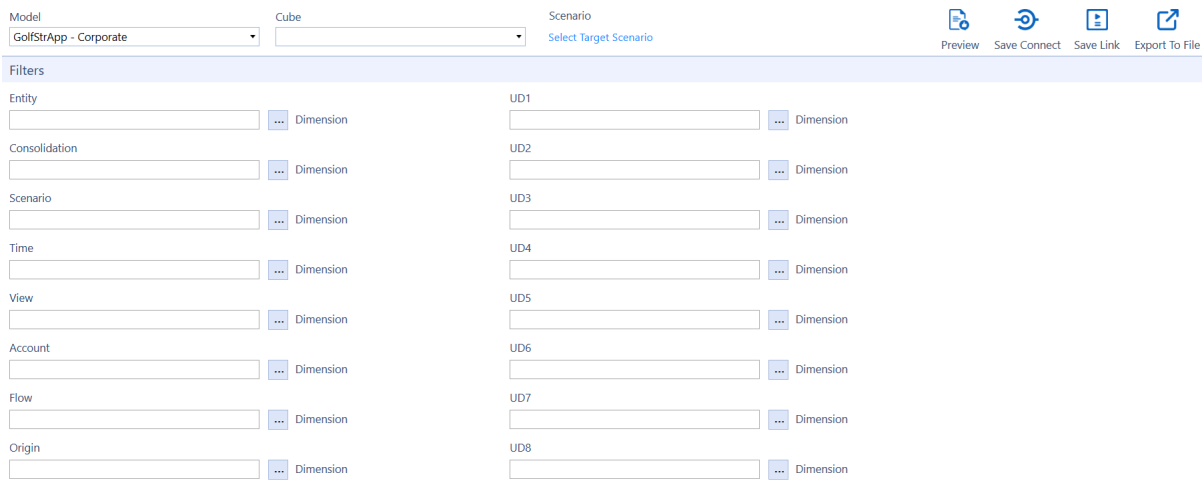
7. To verify, review the data and the results of your calculations. See "Review" on page 79.

Data Export

Leverage extensibility to automatically integrate the newly created model to the corporate standard model.

Select the portion of data to synchronize and choose one of the following options:

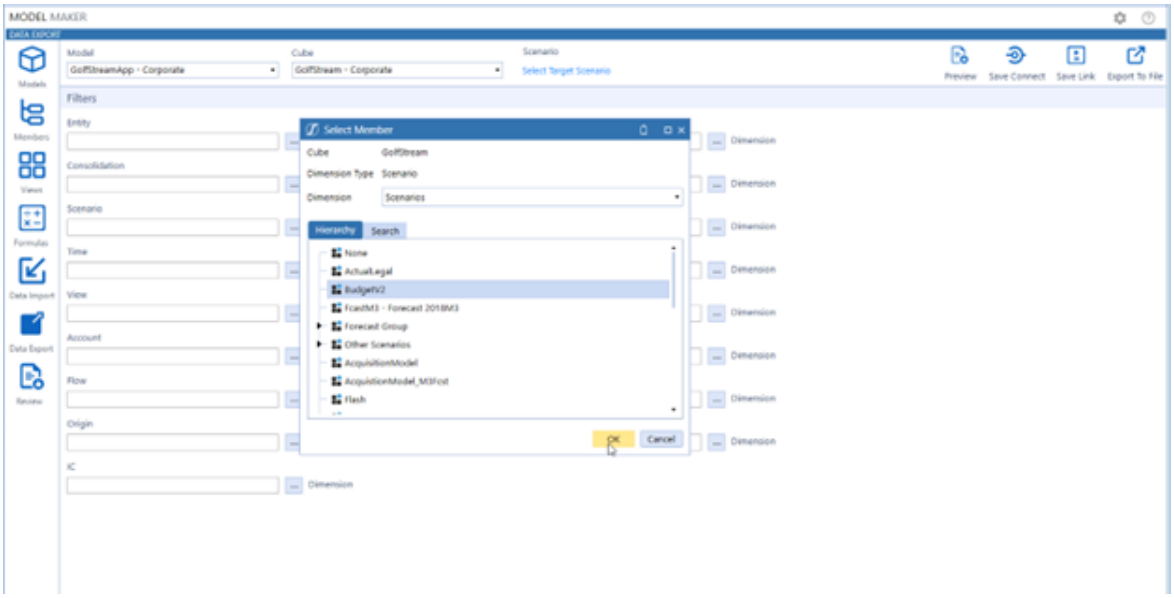
- **Preview**: Allows you to preview your export prior to generating transformation rules or any other data source.
- **Save Connect**: Create a connector or mapping of your model.
- **Save Link**: Link it directly to the corporate model by generating a data management job.
- **Export to File**: Export the result to a .csv file for use by other systems.



> **NOTE:** Performing any of the above actions will not directly impact your corporate model immediately. If you choose to use Save Connect or Save Link to export your edge case, additional steps external to Model Maker are necessary to incorporate into your corporate plan and can only be done by those who have the appropriate security permissions. Export to File will allow you to share your edge case without impacting your corporate model.

Export Data

1. Click **Launch Data Export Page**. If you selected a model cube, the model cube field is pre-populated. If not, select the model from which you want to export data. This will be the source of all the information you want exported into your corporate application.
2. Select a cube from the drop-down list, which contains all the models available in your OneStream application. Select the cube in which you want to add model information.
3. Click **Select Target Scenario**. The target scenario is in the target cube you selected. The Select Member dialog box opens.



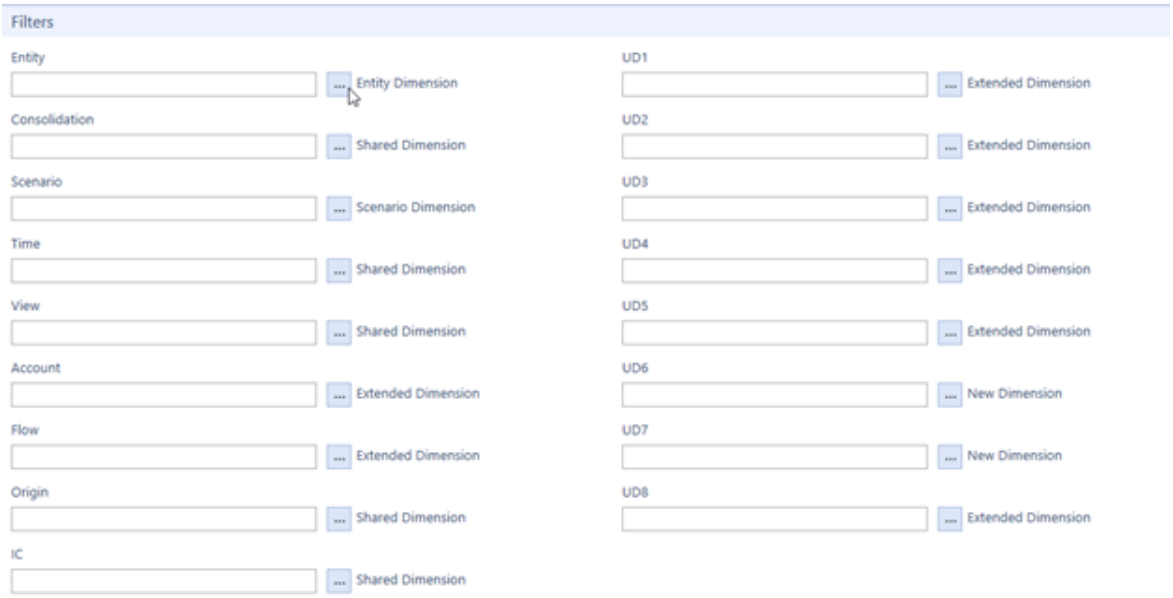
4. Select your scenario and click **OK**.

Select Dimension Filters

All dimensions that could be included in a model are provided in Filters on the Data Export page. Here you have the flexibility of adding text freehand or using a Member Builder dialog box to identify filters applicable to your edge model.

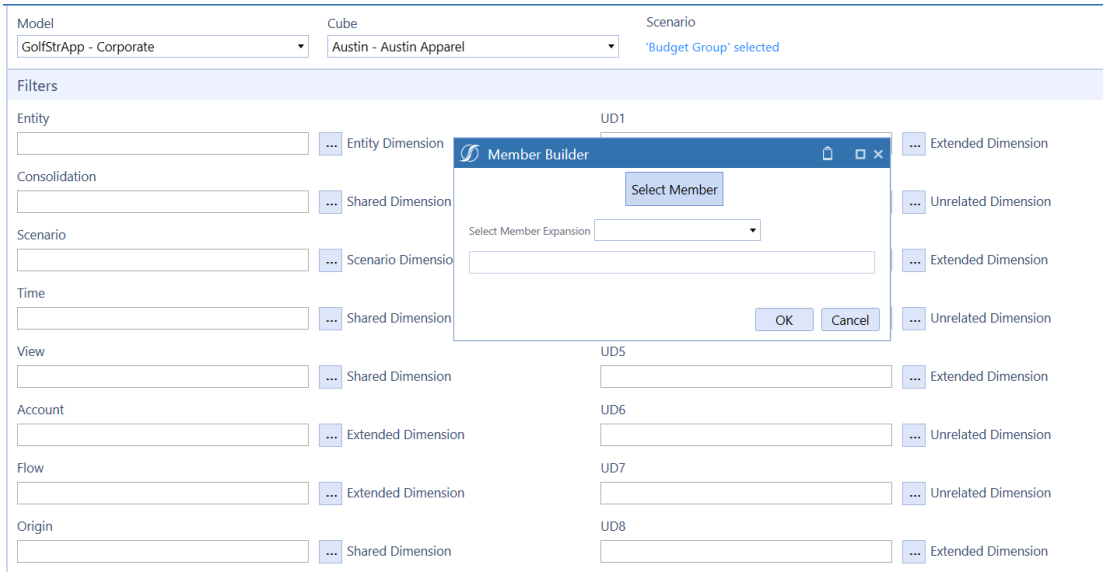
1. Select dimension filters by clicking the ellipses. The Member Builder dialog box opens to guide you to select the filter for each dimension.

   There is a relationship identifier for each dimension when comparing the Model Maker model to your selected target cube. See "Dimension Filters" on page 77 for more information.



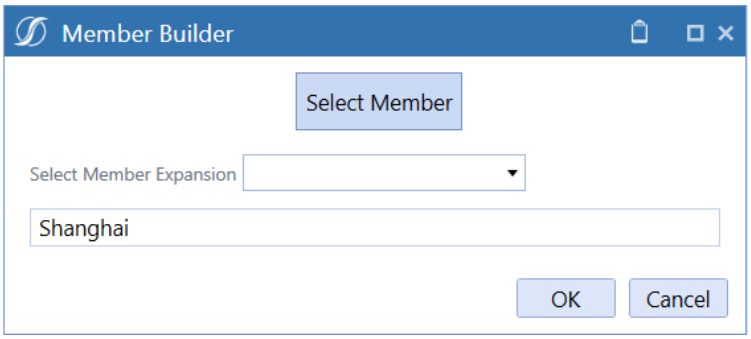
NOTE: If a dimension is not being used in your model, the default is None.

2. Click **Select Member**.

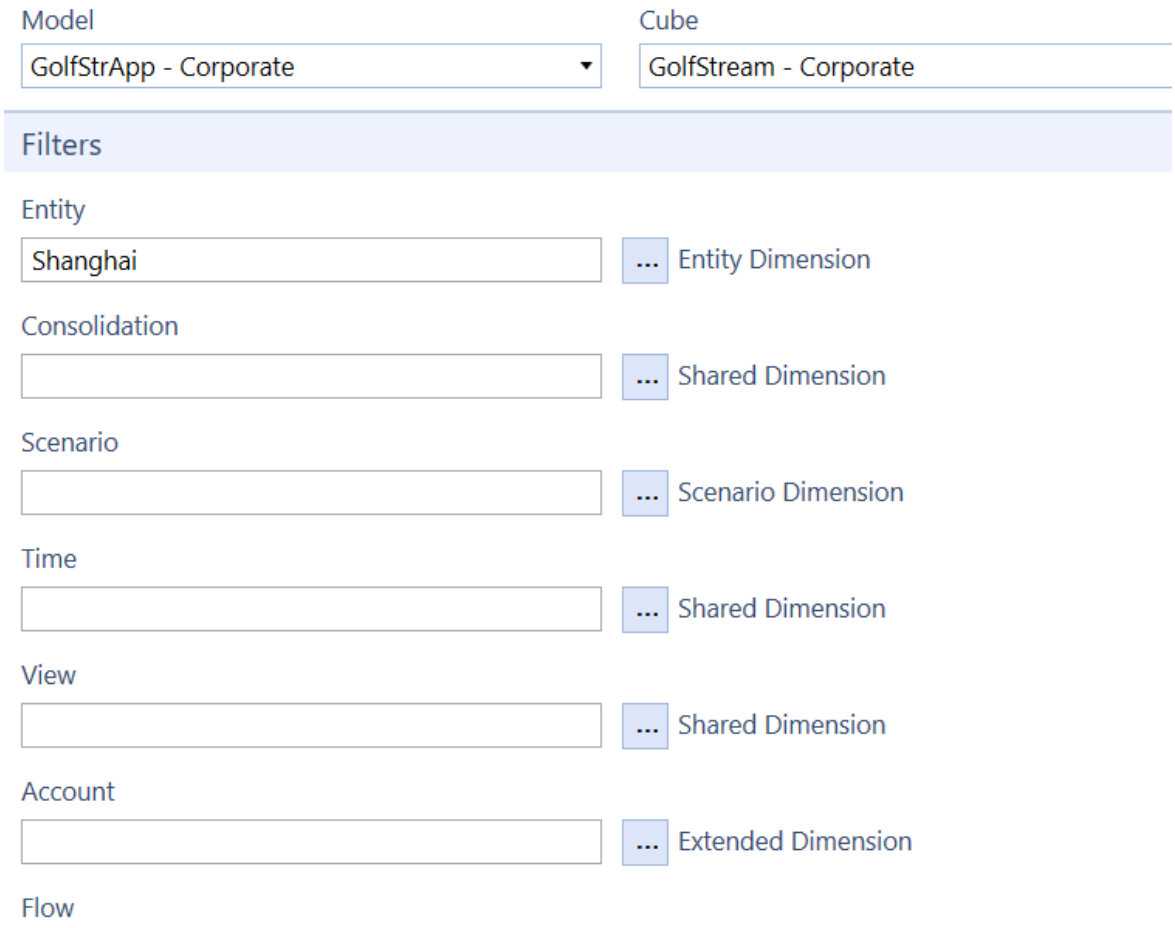


3. Navigate the hierarchy or use the Search to select an entity dimension and click **OK**.

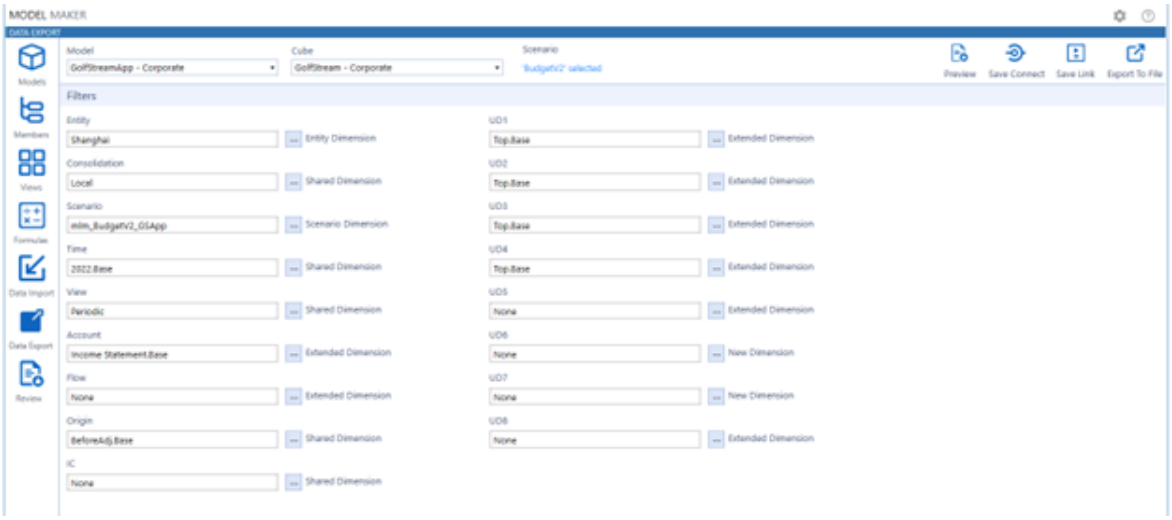
   The Member Builder dialog box populates with your selection.



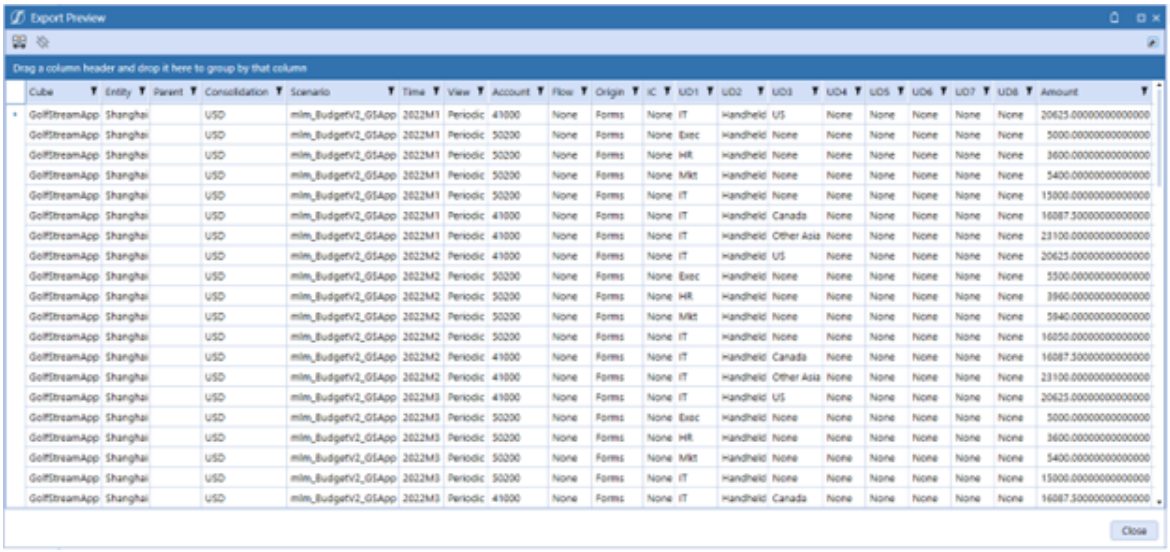
4. The filter populates with your selection.



5. Repeat the previous steps to assign other dimensions. The example below shows the dimensions populated specific to this use case.



6. Click **Preview** to view the data as it will be exported.



7. OneStream pre-aggregates the data using extensibility and provides a data set, which is already mapped correctly to the cube.

Dimension Filters

Dimension Filter	Description
Entity	Specific to your target cube to which you are adding model information. Select a base entity. All other filters identify the dimension information from the source model, so the filters you choose will vary based on how your use case was built and the data that was applied to your model.
Shared	Indicates that the dimension is shared and a mask type transformation rule automatically generates once the export is complete. A pass-through rule may be generated and a star for the rule expression and target value is assigned depending on the dimension. This ensures data passes from the source model to the target cube for that dimension.
Scenario	Always unrelated and the mapping is treated as a one-to-one relationship.
Unrelated	Indicates that the information for this dimension is exported as a source and you must map manually. The information from the source model is not aggregated and the granularity of the information will remain.
New	Indicates that the dimension in the source model is not used in the target cube. The data in the new dimension used in Model Maker forces the information to aggregate in None in the target cube since that is the only valid area of OneStream to place data for that dimension.
Extended	Data will aggregate according to the hierarchical structure of the extended dimension.

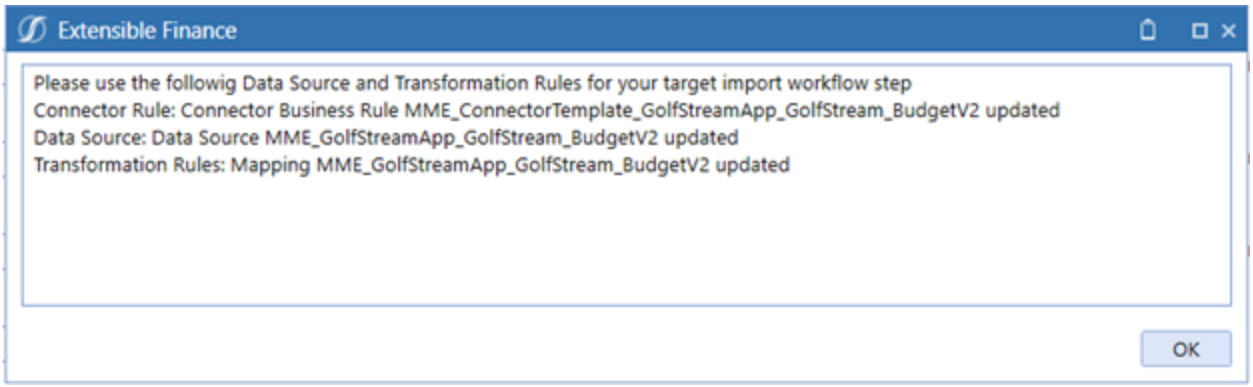
Save a Connector

Use the dimension settings you configured as a connector for your cube.

Click **Save Connect**.

OneStream creates the following:

- A connector rule
- A data source with all of the dimensions
- Transformation rules for mapping



Everything you need to add the model to a workflow import process is created.

> **NOTE:** The Connector Rule, Data Source and Transformation Rule naming conventions are prefixed with *MME_* .

When performing a data export on a model cube, any additional exports done on the same model cube will override transformation rules and connectors from the original export. Essentially each model cube exported will have one connector rule, one data source and one transformation rule for that group of data.

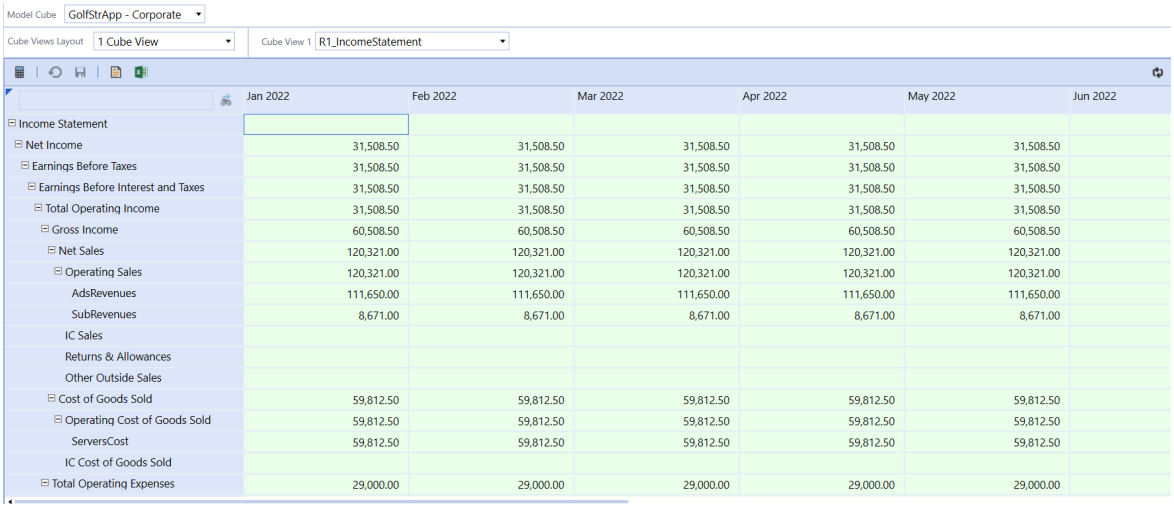
Review

Analyze the model with reports you created by choosing different screen layouts or combining private and public reports in a single report page.

The Review page of Model Maker provides a dashboard area to review models with others. You can view two models in a horizontal or vertical format.

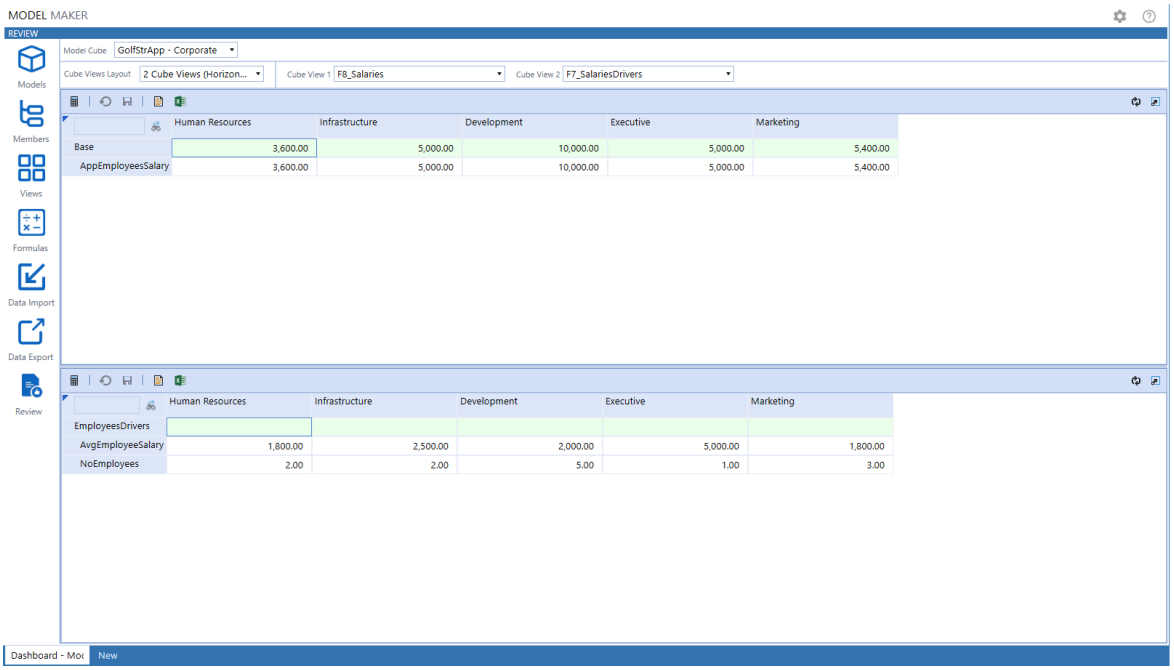
Review Model Data

1. Click **Launch Cube View Review Page**.
2. Select a model cube if one is not selected. If you already selected a model cube, the model cube field is pre-populated.
3. In **Cube Views Layout**, select one of the following:
    - 1 Cube View
    - 2 Cube Views (Vertical)
    - 2 Cube Views (Horizontal)
4. Select **1 Cube View**.
5. In Cube View 1, select a cube view. The cube views in this drop-down list are specific to your selected model cube.



	Jan 2022	Feb 2022	Mar 2022	Apr 2022	May 2022	Jun 2022
Income Statement						
Net Income	31,508.50	31,508.50	31,508.50	31,508.50	31,508.50	
Earnings Before Taxes	31,508.50	31,508.50	31,508.50	31,508.50	31,508.50	
Earnings Before Interest and Taxes	31,508.50	31,508.50	31,508.50	31,508.50	31,508.50	
Total Operating Income	31,508.50	31,508.50	31,508.50	31,508.50	31,508.50	
Gross Income	60,508.50	60,508.50	60,508.50	60,508.50	60,508.50	
Net Sales	120,321.00	120,321.00	120,321.00	120,321.00	120,321.00	
Operating Sales	120,321.00	120,321.00	120,321.00	120,321.00	120,321.00	
AdsRevenues	111,650.00	111,650.00	111,650.00	111,650.00	111,650.00	
SubRevenues	8,671.00	8,671.00	8,671.00	8,671.00	8,671.00	
IC Sales						
Returns & Allowances						
Other Outside Sales						
Cost of Goods Sold	59,812.50	59,812.50	59,812.50	59,812.50	59,812.50	
Operating Cost of Goods Sold	59,812.50	59,812.50	59,812.50	59,812.50	59,812.50	
ServersCost	59,812.50	59,812.50	59,812.50	59,812.50	59,812.50	
IC Cost of Goods Sold						
Total Operating Expenses	29,000.00	29,000.00	29,000.00	29,000.00	29,000.00	

6. (Optional) If you chose 2 Cube Views, select **Cube View 2**. The Cube View 2 drop-down lists all cube views created in Model Maker.



	Human Resources	Infrastructure	Development	Executive	Marketing
Base	3,600.00	5,000.00	10,000.00	5,000.00	5,400.00
AppEmployeesSalary	3,600.00	5,000.00	10,000.00	5,000.00	5,400.00

	Human Resources	Infrastructure	Development	Executive	Marketing
EmployeesDrivers					
AvgEmployeeSalary	1,800.00	2,500.00	2,000.00	5,000.00	1,800.00
NoEmployees	2.00	2.00	5.00	1.00	3.00

Help and Miscellaneous Information

This page contains solution documentation.

Display Settings

OneStream and MarketPlace solutions frequently require the display of multiple data elements for proper data entry and analysis. Therefore, the recommended screen resolution is a minimum of 1920 x 1080 for optimal rendering of forms and reports.

Additionally, OneStream recommends that you adjust the Windows System Display text setting to 100% and do not apply any Custom Scaling options.

Package Contents and Naming Conventions

The package file name contains multiple identifiers that correspond with the Platform. Renaming any of the elements contained in a package is discouraged to preserve the integrity of the naming conventions.

Example Package Name: MLM_PV6.8.0_SV100_PackageContents.zip

Identifier	Description
MLM	Solution ID
PV6.8.0	Minimum Platform version required to run solution

Identifier	Description
SV100	Solution version
PackageContents	File name

Solution Database Migration Advice

A development OneStream application is the safest method for building out a solution with custom tables such as this one. The relationship between OneStream objects such as workflow profiles and custom solution tables is that they point to the underlying identifier numbers and not the object names as seen in the user interface. Prior to the solution configuration and to ensure the identifiers match within the development and production applications, the development application should be a recent copy of the production application. Once the development application is created, install the solution and begin design. The following process below will help migrate the solution tables properly.

See also: *Managing a OneStream Environment* in the *Design and Reference Guide*.

MarketPlace Solution Modification Considerations

A few cautions and considerations regarding modification of MarketPlace solutions:

- Major changes to business rules or custom tables within a MarketPlace solution will not be supported through normal channels as the resulting solution is significantly different from the core solution.
- If changes are made to any dashboard object or business rule, consider renaming it or copying it to a new object first. This is important because if there is an upgrade to the MarketPlace solution in the future and the customer applies the upgrade, this will overlay and wipe out the changes. This also applies when updating any of the standard reports and dashboards.
- If modifications are made to a MarketPlace solution, upgrading to later versions will be more complex depending on the degree of customization. Simple changes such as changing a logo or colors on a dashboard do not impact upgrades significantly. Making changes to the custom database tables and business rules, which should be avoided, will make an upgrade even more complicated.

Appendix A Security

Solution Security

Below is a matrix that represents the high-level solution security upon install of the Model Maker solution. We strongly encourage administrators to create a security group called Model Maker as mentioned in "Global Options" on page 8. The Model Security section represents what a user is able to modify upon security level access on the model in a more granular level.

High level

	Access Group	Maintenance Group
Upon installation (Global Settings Access Group)	Administrators	Administrators
Model Maker Dashboard Maintenance Units:		
Models	Administrators	Administrators
Members	Administrators	Administrators
Views	Administrators	Administrators
Formulas	Administrators	Administrators
Data Import	Administrators	Administrators
Data Export	Administrators	Administrators
Review	Administrators	Administrators
Model Maker Dashboard Maintenance Profile:		
Model Maker	Administrators	Administrators

Change Access Group to Model Maker (Global Settings)	Model Maker	Administrators
Model Maker Dashboard Maintenance Units:		
Models	Model Maker	Administrators
Members	Model Maker	Model Maker
Views	Model Maker	Administrators
Formulas	Model Maker	Administrators
Data Import	Model Maker	Administrators
Data Export	Model Maker	Administrators
Review	Model Maker	Administrators
Model Maker Dashboard Maintenance Profile:		
Model Maker	Model Maker	Administrators

NOTE: The Model Maker security group is comprised of child groups containing administrators and non-administrators (power users).

Model Security

		Public	Other (any security group within the Access Group in Global Options)
MODEL PAGE:			
	Modify Model Cube Definition	no	no
	Create Model Cube	no	no
	Copy Model Cube	yes	yes
	Remove Model Cube	*no	*no
MEMBERS PAGE:			
	Modify existing Parent members	no	no
	Delete existing members	no	no
	Add members to hierarchy	yes	yes
	Delete or modify added members	yes	yes
VIEWS PAGE:			
	Open saved filters used/created in model cube	no	no
	Create new cube view	yes	yes
FORMULA PAGE:			
Created by original modeler:			
	Use existing cube view	yes	yes
	Edit formulas in cube view	yes	yes
	Remove formulas in cube view	yes	yes
	Create new formulas in cube view	yes	yes
Additional edits:			
	Create new formulas in cube views	yes	yes
	Save new formulas in cube views	yes	yes
	Delete new formulas created by public user in cube views	yes	yes
DATA IMPORT:			
	Overlay or change data on a created cube view	yes	yes
DATA EXPORT:			
	Generate Connector	yes	yes
	Generate Data Management Job	yes	yes
	Export to File	yes	yes
REVIEW:			
	Review and edit all cube views created in shared Model Cube	yes	yes

Public: Open to the Security group and its child groups assigned in Global Settings.

Private: Only the administrator or modeler who created the model cube can modify it.

Other group: A modeler can only view or copy a cube that is available to them.